Fostering Inclusive IT Leadership in U.S. Higher Education:

A Qualitative Phenomenological Study

A Dissertation Presented in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Management

by

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September 2026

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Abstract

This qualitative phenomenological study explored how higher education information technology professionals experienced middle-management engagement, mentorship, sponsorship, and artificial intelligence-enabled human resources tools as mechanisms shaping recruitment, retention, and advancement outcomes. The problem addressed was persistent disparity in recruitment, retention, and advancement for racially and gender-underrepresented professionals in U.S. higher education IT despite formal diversity, equity, and inclusion commitments. Data were collected through semi-structured interviews with 15 higher education IT professionals, mid-level IT managers, and human resources or equity partners. Reflexive thematic analysis produced 10 themes: middle management as gatekeeping, visibility as access, mentorship as development, sponsorship as advocacy, bias as structural and experiential, inclusion as multi-dimensional, opportunity as advancement, artificial intelligence as filtering and support, emotional intelligence and mindset as selection and development factors, and resources and structural constraints as limiting factors. Opportunity emerged as the central mechanism through which routines, relationships, systems, and structures shaped participant experiences. Findings indicate that equity-related outcomes in higher education IT are produced through everyday organizational processes rather than formal policy commitments alone. Practice implications include strengthening middle-management accountability, formalizing sponsorship and visibility pathways, governing artificial intelligence-enabled HR tools, and addressing resource and structural constraints that limit career mobility.
Keywords: higher education information technology, inclusive leadership, mentorship, sponsorship, artificial intelligence, human resources, equity, advancement, phenomenology

Acknowledgments

I would first like to thank my wife for her patience, love, encouragement, and unwavering support throughout this journey. Completing a dissertation requires a significant commitment of time, attention, and energy, and her understanding made it possible for me to remain focused during the most demanding periods. Her support gave me the strength and space needed to continue moving forward, especially when balancing academic responsibilities with the demands of professional and personal life.

I am also deeply grateful to my family for their continued encouragement and belief in me. Their patience, understanding, and confidence remained a constant source of motivation. They accepted the missed time, long evenings, and competing priorities that accompanied this process. This accomplishment reflects not only my effort, but also the support of the people who stood beside me throughout the journey.

I would also like to thank my dissertation chair, committee members, faculty, and others who provided guidance, constructive feedback, and encouragement. Their perspectives strengthened this study and challenged me to become a more disciplined researcher and scholar-practitioner.

Finally, I extend my sincere appreciation to the individuals who participated in this study. Their willingness to share their experiences made this research possible. I am grateful to everyone who contributed to this journey and helped me reach this important academic and personal milestone.

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Chapter 1: Introduction

Higher education information technology (IT) organizations function as sociotechnical systems that shape institutional missions related to teaching, learning, research, and administration, while also influencing workforce access, opportunity, and career advancement. Despite formal institutional commitments to equity, women and racial or ethnic minorities remain underrepresented in higher education IT, particularly in administrative roles (Pritchard et al., 2019). Recent IT leadership workforce data also show that mobility and growth opportunities are strongly related to leaders' intentions to seek other positions, highlighting the importance of career pathways for retention (McCormack, 2024).

Prior research suggests that inequities in higher education workplaces are shaped less by formal policy alone and more by everyday organizational routines and decision-making processes. This study examines three interrelated mechanisms through which equity outcomes may be shaped in higher education IT units: middle-management engagement in routine decision making, access to mentorship and sponsorship relationships that confer visibility and advocacy, and the use of artificial intelligence (AI)-enabled human resources tools in hiring, evaluation, and advancement processes. Prior studies associate organizational accountability with diversity outcomes and psychological safety with voice, learning, and participation. However, the literature reviewed for this study provides limited evidence about how higher education IT professionals experience middle-management routines, developmental relationships, and Artificial intelligence-enabled HR tools as interacting mechanisms (Kalev et al., 2006; Newman et al., 2017).

Study Problem

The problem addressed in this study is the persistent disparity in recruitment, retention, and advancement for racially and gender-underrepresented professionals in U.S. higher education information technology (IT) units, a gap that remains despite institutional diversity, equity, and inclusion commitments. National higher education IT workforce data show persistent underrepresentation: women comprised 26% and racial or ethnic minorities 21% of the workforce, while Black and Hispanic women together represented approximately 0.5% of IT administrative positions (Pritchard et al., 2019). Separate EDUCAUSE data show that mobility and growth opportunities are among the aspects of work most strongly associated with IT leaders' intentions to apply for other positions (McCormack, 2024). Recent diversity, equity, and inclusion implementation research emphasizes that equity-related practices are more likely to move beyond symbolic commitment when organizations establish accountability structures, align practices with culture and communication, and monitor outcomes over time (Burnett & Aguinis, 2024; U.S. Government Accountability Office, 2024). In this study, middle managers are examined as the organizational actors who allocate assignments, provide feedback, and influence access to developmental opportunities. At the same time, organizations are adopting AI-enabled tools for recruitment and other HR processes. Recent algorithmic-hiring and recruitment research indicates that artificial intelligence-enabled tools may support screening and information processing, but their equity effects depend on data quality, system design, validation, human oversight, and the organizational context in which the tools are implemented (Fabris et al., 2025; Soleimani et al., 2025).

However, a critical gap exists in understanding the sociotechnical interaction between these AI systems and the managerial “gatekeepers” who use them. Although algorithmic-bias

scholarship has examined how automated hiring systems may reproduce inequities, fewer studies examine how organizational actors interpret, override, or normalize AI-generated recommendations within higher education IT talent processes (Raghavan et al., 2020; Raji et al., 2020). Without qualitative inquiry into the lived experiences of IT professionals and the decision-making logic of managers, institutions lack the insight needed to translate high-level DEI policies into equitable operational realities.

Study Purpose

The purpose of this qualitative phenomenological study was to explore how higher education information technology (IT) professionals, including professionals from underrepresented racial and gender groups, along with mid-level IT managers and human resources (HR) or equity partners, experienced middle-management engagement, mentorship, sponsorship, and artificial intelligence-enabled HR tools as mechanisms shaping recruitment, retention, and advancement outcomes. This study focused on the central phenomenon of equity-shaping sociotechnical interactions, examining how participants make meaning of their lived experiences within these systems.

The research was conducted within the setting of U.S. higher education IT organizations. The target population included IT staff, managers, and HR partners currently employed at four-year public and private institutions. Using purposive and snowball sampling, the study included 15 participants who met specific criteria for professional role and relationship to higher education IT talent processes. Data were collected through semi-structured, one-on-one interviews conducted via secure video conferencing.

Data were analyzed using reflexive thematic analysis to identify patterned meanings related to opportunity, exclusion, and career mobility. By centering lived experience, this study sought to clarify how managerial routines and AI-mediated decision systems interact to influence equity outcomes, providing scholarly insight and practice implications.

Study Research Question

This question aligns directly with the practice problem of uneven mobility for racial and gender-diverse IT professionals and the study's purpose of explaining how managerial, developmental, and technological mechanisms influence equity outcomes. It is intentionally descriptive and exploratory, focusing on participants' lived experiences rather than testing a preconceived solution. Key constructs in the question, including middle-management engagement, mentorship, sponsorship, and AI-enabled HR tools, are defined in the Definition of Terms section to support consistent interpretation across the study. The problem establishes a specific, practice-based gap: while U.S. higher education institutions have formal diversity, equity, and inclusion (DEI) policies, underrepresented IT professionals still face advancement barriers because of the unexamined interaction between human managerial gatekeeping and AI-enabled HR tools.

The purpose directly addressed this problem by using a qualitative phenomenological design to explore how participants experienced these sociotechnical systems, with reflexive thematic analysis used to identify patterned meanings across their accounts. Finally, the research question aligns with both by asking "how" these professionals describe their lived experiences, ensuring the inquiry is strictly bound to the specific mechanisms and population defined in the problem and purpose. This consistency ensures the study is methodologically

sound and follows the professional conventions of both IT and organizational leadership disciplines. The central research question for this qualitative phenomenological study is:

Q1

How do underrepresented higher education information technology professionals, mid-level IT managers, and human resources (HR) or equity partners working in U.S. higher education institutions experience middle-management engagement, mentorship, and sponsorship, and AI-enabled HR tools as mechanisms that shape recruitment, retention, and advancement outcomes?

To provide additional analytic focus, the research question is supported by three sub-questions that organize data collection and analysis:

RQ1a. How do higher education IT staff and mid-level IT managers describe middle-management engagement in inclusive practices such as stretch assignment allocation, participation in decision-making meetings, performance calibration, and coaching, and how do these practices relate to perceived recruitment, retention, and advancement outcomes?

RQ1b. In what ways do underrepresented IT professionals and their leaders experience mentorship and sponsorship, including access, advocacy, and developmental support, and how do intersecting identities in IT career progression shape these experiences?

RQ1c. How do participants perceive the equity implications of artificial intelligence-enabled human resources tools used in hiring, evaluation, and advancement decisions within higher education information technology?

These research questions provide the organizing structure for this qualitative phenomenological study and frame the examination of participants' lived experiences in higher

education IT contexts. Together, the central question and sub-questions focus attention on how middle-management engagement, mentorship and sponsorship, and AI-enabled HR tools are experienced in relation to recruitment, retention, and advancement. The questions are intentionally descriptive and exploratory, consistent with a phenomenological approach that prioritizes meaning-making rather than hypothesis testing. The methodological approach used to address these research questions is described in Chapter 3.

Conceptual Framework

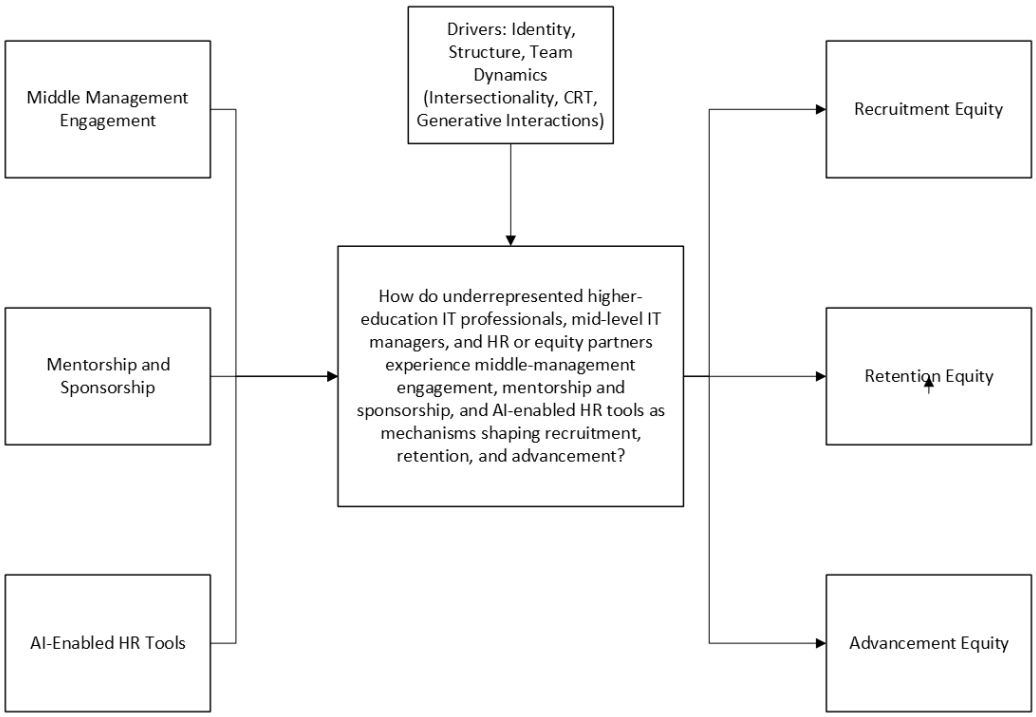
This study was guided by three complementary analytic lenses: intersectionality theory, critical race theory, and generative interactions theory. Intersectionality theory supports examination of how multiple social identities shape access to opportunity and constraint within organizational contexts (Cho et al., 2013; Crenshaw, 1989, 1991). Empirical research on workplace advancement further supports this intersectional lens by showing that race and gender shape representation differently across middle- and senior-management levels (Bloch et al., 2021). Critical race theory supports examination of how institutional routines and decision systems can reproduce inequities even when organizations articulate equity commitments (Delgado & Stefancic, 2017; Ray, 2019; Solórzano & Yosso, 2002). Generative interactions theory supports examination of how everyday organizational routines and interactions translate formal equity commitments into lived experience within teams and units (Bernstein et al., 2020).

Together, these lenses guide interpretation of participants' experiences with three mechanism domains examined in this study: middle-management engagement, mentorship and sponsorship access, and artificial intelligence-enabled human resources tools. Intersectionality

theory and critical race theory inform how participants describe identity-shaped experiences of credibility, access, and advancement, while generative interactions theory informs how routine managerial behaviors and decision processes enable or constrain developmental opportunity. These lenses also support interpretation of how participants experience AI-enabled human resources tools, including whether such tools are perceived as reinforcing or mitigating inequities depending on implementation and governance. Figure 1 illustrates the conceptual relationships among leadership routines, developmental access, and AI-mediated decision systems as they shape recruitment, retention, and advancement outcomes in higher education information technology. The figure also shows how middle-management engagement, mentorship and sponsorship, and AI-enabled HR tools are conceptualized as core mechanisms that operate within institutional, policy, and cultural contexts to shape recruitment, retention, and advancement outcomes for underrepresented IT professionals.

Figure 1

Conceptual Framework.



This integrated framework aligns directly with the study's phenomenological design by linking participants' lived experiences to the structural, relational, and technological mechanisms examined in the research question. Intersectionality and critical race theory illuminate how identity and power shape participants' access to opportunity, while generative interactions explains how day-to-day managerial and team routines translate those structures into career outcomes. Together, these lenses guided data collection and analysis by helping identify where inequities emerge, how they are experienced, and how participants interpret their effects. The framework, therefore, supported rather than predetermined the thematic patterns developed in the analysis and provides a coherent structure for interpreting how

middle-management engagement, mentorship, sponsorship, and AI-enabled HR tools influence recruitment, retention, and advancement in higher education IT units.

Significance of the Study

Dobbin and Kalev (2022) demonstrated that diversity outcomes are shaped by organizational accountability and routine decision processes rather than policy statements alone. National workforce evidence documents underrepresentation of women and racial or ethnic minorities in higher education IT, including especially low representation of Black and Hispanic women in IT administrative roles (Pritchard et al., 2019). At the same time, AI-enabled tools are used to support recruitment and related HR decisions, and their outputs can reproduce discrimination when historical data, model design, validation, or organizational governance are biased or insufficiently controlled (Chen, 2023; Raghavan et al., 2020; Rodgers et al., 2023).

However, these bodies of scholarship are typically examined in isolation, leaving limited insight into how leadership routines, mentorship and sponsorship access, and AI-enabled human resources tools interact in practice within higher education information technology environments. This study addressed that gap by integrating these mechanisms within a single qualitative phenomenological inquiry centered on lived experience across role groups. Findings from this study were intended to contribute to scholarship on inclusive IT leadership and inform equity-focused leadership practice and talent governance in higher education.

Researcher Positionality and Reflexivity

I approached this study as a scholar-practitioner with extensive experience in higher education information technology leadership. My professional background as a chief

information officer informed my interest in how equity commitments are operationalized through managerial routines, developmental relationships, and technology-enabled decision systems. This positionality provides practical insight into IT governance dynamics while requiring deliberate reflexive practices to mitigate the influence of my professional assumptions. To address these risks, I engaged in ongoing reflexive practice throughout the research process. Analytic decisions prioritized participant language and meaning, particularly when accounts challenge dominant leadership narratives or my own expectations. Reflexive journaling and peer debriefing supported transparency and helped ensure that findings remained grounded in participants' lived experiences rather than my preferences. Given my professional background in higher education information technology leadership, reflexive practices such as analytic memoing and peer debriefing were used to mitigate the risk of privileging governance-level interpretations over participants' lived experiences.

Delimitations and Limitations

This study was delimited to professionals working in U.S. higher education information technology contexts and focused on three mechanisms shaping equity outcomes: middle-management engagement, mentorship and sponsorship access, and artificial intelligence-enabled human resources tools. The study included IT professionals, mid-level IT managers, and human resources or equity partners and relied exclusively on semi-structured interviews as the sole data source.

This study was limited by reliance on self-reported data, which may have been influenced by recall bias or social desirability. Participation was voluntary and may have reflected the perspectives of individuals more willing to discuss equity-related issues. The study

did not include technical audits of artificial intelligence systems and therefore captured perceptions of AI-enabled tools rather than their underlying algorithms. Findings were not intended to be statistically generalizable beyond the study context.

Definition of Terms

This section provides operational definitions for key concepts used throughout the study so readers can interpret the problem, purpose, and findings with precision. Terms are presented in alphabetical order. Definitions focus on how each construct is applied in this research rather than on methodological usage.

Advancement Equity

Advancement equity refers to equitable access to promotion, leadership pathways, stretch assignments, and sponsorship opportunities within higher education IT organizations. Social-capital and diversity-management research supports examining whether career mobility depends on consistent criteria and access to influential networks rather than on informal advantage (Seibert et al., 2001). In this study, advancement equity focuses on performance evaluation, visibility in decision-making forums, managerial advocacy, and access to career-building assignments.

AI-Enabled HR Tools

Artificial intelligence-enabled HR tools are algorithmic or automated systems used to support recruitment, screening, evaluation, promotion, or related personnel decisions. In this study, the term includes automated resume screeners, candidate-ranking systems, and performance analytics whose outputs depend on data quality, design choices, validation, and human governance (Chen, 2023; Raghavan et al., 2020; Rodgers et al., 2023).

Diversity, Equity, and Inclusion (DEI)

Diversity, equity, and inclusion refer to organizational efforts to broaden representation, improve fairness in processes and outcomes, and foster belonging and valued participation (Dobbin & Kalev, 2022; Randel et al., 2018). In this study, equity outcomes refer specifically to patterns in recruitment, retention, evaluation, and advancement across identity groups within higher education IT units.

Generative Interactions

Generative interactions describe team-level practices through which people across differences build trust, exchange perspectives, and produce more equitable and effective collective outcomes (Bernstein et al., 2020). In this study, the concept is used as a lens for interpreting how everyday managerial and team interactions shape access to opportunity in higher education IT.

Intersectionality

Intersectionality refers to how overlapping social identities and structures of power produce experiences that cannot be understood adequately through a single identity category (Cho et al., 2013; Crenshaw, 1991). In this study, intersectionality frames how participants describe inclusion, exclusion, and opportunity in higher education IT careers.

Mentorship

Mentorship is a developmental relationship in which a more experienced professional provides guidance, feedback, and psychosocial support to a colleague. In this study, mentorship is examined in terms of its availability, quality, and perceived effectiveness for underrepresented professionals in higher education IT organizations.

Middle-Management Engagement

Middle-management engagement refers to the extent to which mid-level IT leaders enact inclusive practices within daily talent processes. In this study, these practices include assignment allocation, meeting participation, feedback, mentorship and sponsorship support, and responses to AI-enabled HR outputs. Research on diversity accountability supports examining managerial responsibility for day-to-day implementation (Dobbin & Kalev, 2022; Kalev et al., 2006).

Recruitment Equity

Recruitment equity refers to fair access to hiring opportunities, screening processes, and selection decisions across identity groups. Research on organizational diversity and accountability supports examining whether ostensibly neutral hiring routines reproduce historical exclusion (Dobbin & Kalev, 2022). In this study, recruitment equity concerns whether qualified candidates receive comparable consideration regardless of race or gender within higher education IT hiring processes.

Retention Equity

Retention equity refers to equitable organizational conditions that support continued employment, engagement, and career sustainability for underrepresented IT professionals in higher education settings. In this study, retention equity is reflected in whether everyday managerial routines, developmental support, and work climates provide comparable conditions for belonging, psychological safety, and continued employment across identity groups. Psychological safety is included because it is associated with employees' willingness to speak, learn, and participate at work (Newman et al., 2017).

Sponsorship

Sponsorship is an advocacy relationship in which a leader uses positional influence to increase a protege's visibility and access to career opportunities. In this study, sponsorship is distinguished from mentorship by its emphasis on active advocacy and access to opportunity rather than advice alone (Ibarra et al., 2010).

Stretch Assignment

A stretch assignment is a project or responsibility that expands an employee's skills, scope, or visibility beyond routine duties. In this study, access to such assignments is treated as an indicator of developmental opportunity.

Underrepresented Professionals

Underrepresented professionals are employees whose identity groups are numerically underrepresented relative to the relevant workforce or labor market. In this study, the term refers primarily to racially and gender-diverse IT staff and leaders in U.S. higher education, consistent with documented representation gaps in the sector (Pritchard et al., 2019).

Chapter Summary

Chapter 1 introduced the practice-based problem of persistent inequities in recruitment, retention, and advancement within higher education information technology organizations, articulated the purpose of the study, and presented the research questions guiding the inquiry. The chapter also outlined the conceptual framework, significance, and scope of the study. Chapter 2 reviews relevant literature related to inclusive leadership, mentorship and sponsorship, and artificial intelligence-enabled decision systems to further contextualize the research problem.

Chapter 2: Review of the Literature

This chapter reviews scholarship relevant to how recruitment, retention, and advancement outcomes are shaped within U.S. higher education IT organizations. The review is organized around three equity-shaping mechanisms examined in this study: inclusive leadership and organizational culture, mentorship and sponsorship, and artificial intelligence (AI)-enabled decision systems used in hiring, evaluation, and advancement. The problem addressed in this study was the persistent disparity in recruitment, retention, and advancement outcomes for racially and gender underrepresented professionals within U.S. higher education information technology (IT) units. With the purpose and problem of this study in mind, the intention of this chapter reviewed scholarly literature relevant to understanding how equity outcomes are shaped within higher education information technology organizations. The problem was the persistence of uneven recruitment, retention, and advancement outcomes for underrepresented professionals in U.S. higher education information technology units, despite formal institutional commitments to diversity, equity, and inclusion. The purpose of this qualitative phenomenological study was to explore how underrepresented higher education information technology professionals, mid-level IT managers, and human resources (HR) or equity partners in U.S. higher education institutions experienced middle-management engagement, mentorship and sponsorship, and artificial intelligence (AI)-enabled HR tools as mechanisms shaping recruitment, retention, and advancement outcomes. Although institutions increasingly articulate commitments to diversity, equity, and inclusion, higher education IT workforce data continue to show underrepresentation of women and racial or ethnic minorities, particularly in administrative roles (Pritchard et al., 2019). Prior research suggests

that these outcomes are influenced less by formal policy and more by routine organizational practices and decision processes.

Existing scholarship relevant to this study spanned three primary domains: inclusive leadership and organizational culture, mentorship, and sponsorship as mechanisms of developmental access, and artificial intelligence-enabled decision systems used in hiring, evaluation, and advancement. These three bodies of literature are reviewed together here because prior studies usually address organizational diversity, developmental networks, or algorithmic decision systems as distinct topics (Dobrow et al., 2012; Raghavan et al., 2020). The resulting synthesis is intended to clarify where their practical interaction in higher education IT remains underexamined. This review was therefore organized around three equity-shaping mechanisms examined in this study: middle management engagement, mentorship and sponsorship, and AI-enabled HR tools, to synthesize what is known, identify limitations in existing scholarship, and establish the need for qualitative inquiry focused on lived experience.

Literature Search Strategies

An integrative review design was adopted to synthesize empirical studies, theoretical works, and sector frameworks across information systems, higher education, organizational behavior, and computing ethics. This approach supports the combination of qualitative and quantitative evidence and is appropriate where practice choices depend on cross-disciplinary constructs such as leadership behavior, mentorship infrastructure, and algorithmic governance (Torraco, 2005; Whittemore & Knafl, 2005). The search covered Scopus, Web of Science, ERIC, PsycINFO, Business Source Complete, IEEE Xplore, and the ACM Digital Library across the review

period, capturing the maturation of DEI scholarship in higher education and the emergence of applied AI in HR and learning analytics.

Keywords combined population, setting, and mechanism, for example, higher education and information technology with diversity, equity, and inclusion; mentorship or sponsorship with IT and career; algorithmic or automated bias with hiring or promotion; and learning analytics with fairness or disparate impact. Inclusion criteria included peer-reviewed empirical or theoretical work addressing higher education IT leadership, workforce development, DEI interventions, or AI-mediated decisions affecting hiring, evaluation, promotion, or student support. Quality appraisal focused on design clarity, sampling rigor, analytic transparency, limitations, and subgroup analysis when equity was relevant. Qualitative studies were appraised using the Critical Appraisal Skills Programme checklist, and mixed-methods studies were appraised using the Mixed Methods Appraisal Tool and related appraisal guidance (Critical Appraisal Skills Programme, 2018; Hong et al., 2018; Tang et al., 2026).

The first review section addresses leadership and culture as the context in which DEI either becomes routine or remains symbolic. The following section, therefore, addresses inclusive leadership and organizational culture as the context in which DEI either becomes routine or remains symbolic. This restatement links the search logic to the analysis of leadership practices that enable or inhibit equity in day-to-day IT work. Grey literature was included selectively when peer-reviewed evidence was limited and was used primarily to contextualize higher education IT workforce conditions. Sector sources included EDUCAUSE and CUPA-HR workforce reports (Brooks et al., 2019; McCormack, 2024; Pritchard et al., 2019).

Inclusive Leadership and Organizational Culture in Higher Education IT

Inclusive leadership and the cultures it supports are important organizational conditions through which equity commitments may become embedded in daily higher education IT practice. In campus IT units, these elements shape whether diversity initiatives remain symbolic or become embedded in daily work. Policies, artificial intelligence tools, and hiring targets matter, but current inclusion and diversity implementation research emphasizes that equitable outcomes require accountability structures, supportive climate, access to participation, and attention to how inclusion is experienced in daily organizational life (Burnett & Aguinis, 2024; Randel, 2025). This section synthesizes scholarship on inclusive leadership, organizational culture as a system of gatekeeping, and the structural levers that turn equity efforts into durable practice within IT organizations. Together, these studies position leadership and culture as mutually reinforcing mechanisms that determine who is heard, who is developed, and who advances.

Inclusive leadership is conceptualized as leader behavior that supports belonging, voice, equitable participation, and recognition of individual uniqueness (Meier, 2025; Randel et al., 2018; Schiltmans & Davies, 2023). In higher education, inclusive leadership is especially relevant because it connects leadership practice to broader institutional goals related to equity, diversity, inclusion, democratic participation, inclusive learning environments, and social transformation (Schiltmans & Davies, 2023). Core inclusive-leadership behaviors include inviting participation, enabling voice, supporting psychological safety, and communicating that team members are valued for both belonging and uniqueness (Lee & Dahinten, 2021; Newman et al., 2017; Randel et al., 2018). Research on culturally diverse work groups indicates that diversity has mixed effects on team outcomes and that process conditions such as inclusion,

coordination, and participation shape whether diversity contributes positively (Stahl et al., 2010).

Research on psychological safety and inclusive climates indicates that leaders can strengthen voice, learning, and participation when they create conditions for staff to raise concerns and contribute without interpersonal penalty (Edmondson & Bransby, 2023; Randel, 2025). Li and Tang (2022) similarly found that inclusive leadership was positively associated with innovative performance through psychological safety at both individual and team levels, reinforcing the importance of leadership practices that enable voice, participation, and interpersonal safety. These practices support organizational climates in which inclusion is experienced through participation, recognition, and access to opportunity rather than through formal diversity statements alone. Studies of transformational leadership show similar patterns. In a study of 163 employees and managers across 43 Turkish software firms, transformational leadership was positively associated with employee creativity through psychological empowerment and with organizational innovation (Gumusluoglu & Ilsev, 2009). These findings provide adjacent evidence about leadership in software settings but do not establish effects on problem solving, psychological capital, or perceived support. However, these transformational leadership findings should not be treated as evidence that leadership style alone produces equity outcomes in higher education IT. Leadership behaviors may be more durable and more reviewable when reinforced through organizational accountability and routine decision processes rather than left to individual preference (Dobbin & Kalev, 2022; Randel et al., 2018).

Inclusive and transformational leadership behaviors are not sufficient by themselves to produce equity outcomes. Kalev et al. (2006) found that diversity structures assigning

responsibility and accountability were more consistently associated with workforce diversity than training and evaluation programs alone. Rivera (2012) showed that hiring decisions can also be shaped by cultural similarity and informal judgments of fit. Together, these findings support examining how leader behavior is embedded in accountable and reviewable organizational processes rather than assuming that positive intent alone changes access or outcomes.

Organizational culture provides the context in which these leadership behaviors either gain traction or are neutralized. Schein (2010) conceptualizes culture as a hierarchy of artifacts, espoused values, and basic assumptions that together signal what is rewarded and who is seen as competent. Within higher education IT, culture is often miscast as technical or apolitical, with emphasis on infrastructure, uptime, and project delivery. Although higher education IT is often framed as technical and apolitical, organizational research shows that hiring and evaluation systems can reproduce broader racialized and classed patterns through routine practices and cultural matching (Ray, 2019; Rivera, 2012). Applying that insight specifically to higher education IT is an analytic inference examined in this study rather than a direct finding of those sources. Adjacent STEM education scholarship shows that racialized educational environments shape access, belonging, cultural capital, and perceptions of who receives a "seat at the table," reinforcing the need to examine inclusion as an institutional condition rather than an individual attitude alone (Friedrich & Jenkins, 2021). As an analytic metaphor for this study, culture can be understood as an implicit allocation system that may shape status, credibility, and access, influencing how staff are positioned for innovation, leadership, or peripheral service roles (Powell, 2008; Schein, 2010).

Research on cultural fit illustrates how culture can mask exclusion. Rivera (2012) documented cultural matching in hiring at elite professional service firms. Employers evaluated candidates partly through similarities in leisure pursuits, experiences, and self-presentation, and those lifestyle markers could outweigh assessments of productivity. Such practices are often defended as safeguarding team cohesion or client comfort, yet they function as racialized and classed filters that restrict entry for candidates from non-dominant backgrounds (Ray, 2019; Rivera, 2012). Powell (2008) argued that racialized outcomes can be produced through the interaction of institutions and formally neutral practices, even without explicit discriminatory intent. Critical race theory frames these dynamics as examples of ostensibly neutral standards that institutionalize racial hierarchy under the language of merit (Delgado & Stefancic, 2017; Ray, 2019).

In this study's analytic framing, these cultural logics may appear in higher education IT through job descriptions, competency models, performance review templates, and informal narratives about what a "strong" leader looks like. Higher education IT workforce data nevertheless show marked demographic concentration. In 2019, White men accounted for 59% of higher education IT professionals, while women and racial or ethnic minorities remained underrepresented, especially in administrative roles (Pritchard et al., 2019). Crook (2022) surveyed 74 African American women in U.S. higher education leadership and found that mentorship significantly predicted reported career advancement. Although the study did not focus on IT or committee access, it provides adjacent evidence that developmental relationships matter for advancement among Black women in higher education. In this study's synthesis, culture functions as both a gate and a mirror. It reflects existing power structures and

reinforces them by rewarding those already positioned near the center of networks while leaving others at the margins (Cho et al., 2013; Crenshaw, 1991; Schein, 2010).

Intersectional scholarship indicates that employees located at the intersection of multiple marginalized identities may experience exclusion differently than employees whose experiences are captured through single-axis diversity categories (Cho et al., 2013; Crenshaw, 1991). Developmental relationships should account for identity, power, and access because mentoring and sponsorship are shaped by organizational networks and social capital (Dobrow et al., 2012; Ibarra et al., 2010; Seibert et al., 2001). Nkrumah and Scott (2022) cautioned that STEM mentoring models can reproduce deficit assumptions when they focus on fixing excluded women of color rather than examining the institutional structures that marginalize their experiences. Taken together, these studies caution that aggregate diversity measures can obscure differences in how inclusion and exclusion are experienced at the intersection of multiple identities (Cho et al., 2013; Crenshaw, 1991; Randel et al., 2018).

Given these dynamics, the literature identifies several structural levers that link leadership behavior and culture to observable equity outcomes. One structural lever identified in diversity implementation research is assigning clear responsibility for outcomes, making decision processes reviewable, and monitoring whether equity-related practices produce intended effects (Burnett & Aguinis, 2024; U.S. Government Accountability Office, 2024). In higher education IT, this accountability logic can be applied through explicit role expectations, documented promotion criteria, and written decision rationales. Intersectionality scholarship cautions that aggregate categories can conceal differences among people located at multiple identity intersections (Cho et al., 2013; Crenshaw, 1991). A practical implication is to

disaggregate representation and career-mobility data where sample size and privacy protections permit.

Middle-manager implementation capacity emerges as another important concern in the literature. This emphasis is important because middle managers often carry the practical burden of implementing DEI commitments while navigating competing priorities, emotional demands, and organizational tensions (Boroș & Gorbatai, 2024). Accountability structures are more likely to affect diversity outcomes than awareness-based interventions alone because they attach responsibility for equity-related outcomes to organizational decision makers (Dobbin & Kalev, 2022). A practice implication of this literature is that inclusive leadership can be treated as a performance expectation supported by reviewable indicators and accountability processes.

The literature emphasizes that these levers are most effective when embedded in consistent organizational routines. In a nursing context, inclusive leadership was positively related to psychological safety, which in turn was associated with employee voice and error reporting (Lee & Dahinten, 2021). A systematic review likewise identifies psychological safety as relevant to voice, learning, and performance across organizational settings (Newman et al., 2017). Applying the accountability logic identified in diversity research, higher education IT units could document how visible project roles are assigned and periodically review who receives them (Dobbin & Kalev, 2022).

Large-scale organizational research highlights the difference between symbolic and structural approaches. Kalev et al. (2006) found that diversity programs assigning responsibility for change, including affirmative-action plans, diversity staff, and task forces, were more

strongly associated with increases in managerial diversity than diversity training or evaluation programs alone. This evidence supports distinguishing symbolic activity from structures that alter responsibility and decision processes. These findings support the argument that culture change is less about persuasion and more about engineering a coherent set of signals and routines that align behavior with stated values (Bernstein et al., 2020; Schein, 2010).

The governance literature on AI and analytics further reinforces the importance of linking leadership and culture to formal controls. Frameworks such as the National Institute of Standards and Technology (NIST) AI Risk Management Framework and International Organization for Standardization / International Electrotechnical Commission (ISO/IEC) 42001 emphasize the need for clear ownership, documented processes, and continuous monitoring for socio-technical systems that affect people (International Organization for Standardization & International Electrotechnical Commission, 2023; Tabassi, 2023). When higher education IT leaders apply similar governance logic to talent systems, they could establish regular forums where equity metrics are reviewed, exceptions are documented, and corrective actions are assigned. Applying comparable review routines to talent systems can connect inclusive-leadership expectations to accountability by requiring leaders to examine evidence, document exceptions, and assign corrective action. This is an analytic implication drawn from the governance and accountability literature rather than a direct finding from any single source.

An international example also illustrates culture as a managed system rather than a diffuse concept. Canada's Tri-Agency Equity, Diversity and Inclusion Action Plan focuses on fair access to research support, collection and monitoring of self-identification data, bias mitigation in funding processes, and more inclusive peer-review and governance structures (Canadian

Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2018). Although legal and governance contexts differ, the Canadian plan illustrates how equity commitments can be operationalized through defined rules, measures, and accountability rather than left solely to voluntary effort.

Across these studies, several points are evident about inclusive leadership and organizational culture in higher education IT. First, inclusive leadership is best understood as a set of behaviors that supports psychological safety, voice, belonging, and being valued for uniqueness, not merely as a favorable attitude toward diversity (Newman et al., 2017; Randel et al., 2018). Second, culture functions as a code that encodes and reproduces organizational hierarchies; without deliberate redesign, cultural fit and merit standards tend to favor historically dominant groups (Powell, 2008; Ray, 2019; Rivera, 2012). Third, intersectional analysis cautions that aggregate representation measures can conceal unequal access to informal networks and advancement channels across intersecting identity groups (Cho et al., 2013; Crenshaw, 1991). Finally, accountability structures that assign responsibility for diversity outcomes are more consistently supported by the evidence than awareness-based interventions alone (Dobbin & Kalev, 2022; Kalev et al., 2006). Other proposed levers, such as dashboards, rotation systems, and promotion matrices, are applications of that accountability logic rather than interventions directly tested by these studies.

These points establish a foundation for the next theme in the review. If leadership and culture shape who has voice and access, mentorship, sponsorship, and social capital may shape how that access is converted into career mobility. The following section, therefore, examines

how developmental relationships and networks function as infrastructure in higher education IT, and how their design can either reinforce or remediate the inequities embedded in leadership routines and organizational culture. Taken together, this literature associates inclusive leadership with psychological safety, voice, belonging, and participation. However, much of this scholarship emphasizes senior leadership behaviors or generalized organizational culture without examining how inclusive leadership is enacted through routine decision making by middle managers in higher education IT contexts. As a result, existing studies provide limited insight into how leadership practices are operationalized at the level where access to opportunity, visibility, and advancement decisions are most frequently mediated.

Mentorship, Sponsorship, and Social Capital in Higher Education IT

In higher education IT departments, technical skill alone may not determine advancement; career mobility can also depend on access to advocacy, developmental feedback, and informal networks. Mentorship and sponsorship may support career development and access to advocacy, yet when access is informal or uneven, they may reproduce existing organizational hierarchies rather than disrupt them. Kuknor et al. (2025) found among 352 Indian IT and IT-enabled services professionals that inclusive leadership was positively related to organization-based self-esteem, with inclusion in decision making partially mediating the relationship. The study did not measure psychological safety or focus exclusively on historically marginalized groups. This section examines mentorship ecosystems, sponsorship structures, and social capital mechanisms as equity infrastructure. It also considers how AI-mediated decision tools may influence who enters hiring pipelines and who becomes visible for developmental opportunities.

Mentorship vs. Sponsorship: Distinct but Unequal

Mentorship and sponsorship are related but distinct mechanisms, and the difference carries consequences for equity. Mentors advise and coach, helping protégés interpret norms, refine skills, and navigate institutional processes, which builds confidence and role clarity over time. Mentors primarily provide guidance and psychosocial or career support, while sponsors use influence to advocate for individuals and connect them to consequential opportunities (Allen et al., 2004; Ibarra et al., 2010). Sponsorship may therefore affect access to advancement in ways that mentoring alone does not, although the evidence does not justify claiming that sponsorship is the only reliable route to mobility. Mentoring can improve readiness, while sponsorship can help convert readiness into visibility, advocacy, and access to advancement opportunities. Ibarra et al. (2010) found in corporate settings that women often received mentoring but less sponsorship than men, helping explain why mentoring did not translate into promotion at the same rate. Seibert et al. (2001) separately showed that social capital was associated with career success. These studies provide adjacent, not higher education IT-specific, evidence for distinguishing developmental support from advocacy.

Methodological work on social capital and career success reinforces this design logic. Seibert et al. (2001) found that network structure and social resources were associated with salary, promotions, and career satisfaction beyond human-capital variables. Salazar Campo et al. (2024) provided preliminary longitudinal evidence about how developmental networks evolved among early-career biomedical investigators. The latter study did not test compensation or promotion effects. Developmental-network research emphasizes the value of multiple relationships that provide varied knowledge, support, and access (Dobrow et al., 2012;

Higgins & Kram, 2001). Evidence is not sufficient to claim that programs with prescribed cadence and executive review narrow stretch-assignment or advancement gaps. For this study, sponsorship is treated as an organizational mechanism that can be structured and monitored rather than left entirely to informal or discretionary relationships.

While mentorship and sponsorship are conceptually distinct, the literature also indicates that sponsorship may be more directly tied to advancement because it involves positional advocacy, visibility, and access to decision-making spaces. Sponsorship involves the use of positional power to advocate for individuals, assign high-visibility opportunities, and influence promotion decisions, whereas mentorship alone may not alter access to organizational decision-making forums. Evidence from corporate settings indicates that women may receive mentoring without equivalent access to sponsorship, which can limit the translation of development into promotion (Ibarra et al., 2010). Broader claims about all underrepresented groups require additional evidence.

Intersectionality, Psychological Safety, and Invisible Exclusion

Mentorship and sponsorship gaps are not experienced uniformly; intersectionality shapes who gains access to advocates, information, and visibility. Intersectionality theory suggests that developmental access should be examined across overlapping identity categories rather than through aggregate diversity measures alone (Cho et al., 2013; Crenshaw, 1991). Developmental network scholarship further indicates that access to multiple developmental relationships can influence career learning, support, and mobility (Dobrow et al., 2012). These exclusions may arise through informal network dynamics, implicit assumptions, and inherited routines rather than deliberate exclusion. Their cumulative impact can be consequential

because staff without access to informal knowledge channels may have less clarity about promotion criteria, stretch roles, and advancement pathways.

Developmental relationships should account for identity, power, and access because mentoring and sponsorship are shaped by organizational networks and social capital (Dobrow et al., 2012; Ibarra et al., 2010; Seibert et al., 2001). Kuknor et al. (2025) found that inclusive leadership was associated with organization-based self-esteem through a climate for inclusion in which employees felt valued and able to contribute uniquely. For this study, that finding suggests that developmental programs should be embedded in leadership climates that validate voice and reduce interpersonal risk. These findings underscore the need to design mentoring and sponsorship structures that account for identity, power, and access rather than assuming that developmental relationships operate the same way for all employees.

Recent higher education studies provide context-specific evidence about inclusion and institutional support. Lama et al. (2025), in a cross-sectional study of faculty in Kathmandu, Nepal, found positive associations between age, ethnic, and educational diversity and employee performance. The study did not test mentoring, sponsorship, or the proposition that diverse teams outperform only under inclusive conditions. Amescua and Moore (2025), using interviews with 12 DEI practitioners of color at Southern California community colleges, identified institutional resistance and insufficient organizational support as central challenges. Their findings support the need for institutional accountability and peer support, but they do not establish structured sponsorship networks.

A global lens further complicates and enriches the picture. Fahm (2025) reported that Muslim women were underrepresented in higher education leadership in Nigeria and identified

cultural, religious, gender, and institutional barriers. The study recommended targeted mentorship, gender-sensitive leadership development, and institutional reform. It did not specifically analyze colonial legacies. Fahm's findings suggest that mentorship and leadership-development efforts in that context should account for cultural, religious, gender, and institutional barriers. For this dissertation, Fahm's findings underscore that inclusive mentoring practices in higher education IT cannot be assumed to generalize unchanged across cultural contexts; local histories and socio-political conditions shape both the barriers professionals face and the forms of support that are most effective.

Social Capital: The Shadow Curriculum of Advancement

Social capital refers to resources available through relationships and network positions, including access to information, influence, and career support (Dobrow et al., 2012; Seibert et al., 2001). In this study, these informal resources are treated as part of the unwritten process through which employees learn how opportunity and advancement operate. Applied to higher education IT in this study, social capital may be accumulated not only through formal performance evaluations but also through informal credibility, such as a manager who vouches for a staff member in a leadership meeting, a colleague who shares unspoken norms about hiring or promotion, or a committee appointment that signals strategic trust. These informal endorsements can influence which staff are perceived as ready for stretch roles or succession pathways, even when formal metrics appear neutral.

The reviewed studies suggest that access to developmental relationships and organizational resources may be uneven across racial and gender lines. Crook (2022) found, in a quantitative study of 74 African American women in U.S. higher education leadership, that

mentorship significantly predicted reported career advancement. The study did not examine IT professionals, cross-functional committee exclusion, or visibility to senior leaders. Ray (2019) theorized how racialized organizations can reproduce unequal outcomes through routine structures, while Rivera (2012) documented cultural matching in hiring at elite professional service firms. Applied to mentoring and sponsorship, these studies suggest that informal judgments of familiarity can shape access, but neither study directly examined invitations to influential forums. As an analytic implication, employees who meet formal requirements may still lack the relational endorsements that support promotion consideration. Seibert et al. (2001) found that social capital was associated with career success through access to information, resources, and sponsorship-related benefits. This supports examining advancement as a relational as well as an individual process.

Applying the accountability logic identified by Dobbin and Kalev (2022) and Kalev et al. (2006), institutions could track participation in mentoring, sponsorship, cross-unit committees, and visible assignments. This is a practice implication derived from the evidence rather than an intervention directly tested in those studies. Higgins and Kram (2001) conceptualized developmental networks as relationships with multiple developers who provide varied forms of support. Salazar Campo et al. (2024) offered preliminary evidence about how such networks evolve in academic medicine. Neither source establishes that networks containing at least one sponsor outperform single-dyad models. For higher education IT, this synthesis suggests that social capital should be treated as a talent-system concern that can be monitored rather than left entirely to informal networks.

AI, Equity, and Mentorship Pipelines

Artificial intelligence tools may influence not only hiring pools but also mentoring and sponsorship pipelines when institutions use algorithmic systems to match employees, identify high-potential staff, or route candidates into developmental programs. If institutions use algorithmic tools to match employees, identify high-potential staff, or route candidates into developmental programs, the equity concerns identified in algorithmic hiring research may also become relevant to developmental-resource allocation. Recent algorithmic hiring research shows that artificial intelligence-enabled recruitment systems can reproduce inequity through biased data, prediction targets, model design, implementation choices, and human interpretation of system outputs (Fabris et al., 2025; Soleimani et al., 2025). Extending this concern to AI-enabled mentoring or high-potential systems is a plausible inference, but it should be identified as an inference because the cited studies did not evaluate developmental-resource allocation.

Chauhan and Kshetri (2022) discussed how data and AI can both reveal and reproduce inequities in organizational DEI efforts. The article did not document a case in which resume screeners downgraded applicants from minority-serving institutions. Chen (2023) reviewed discrimination risks in AI-enabled recruitment and identified limited or biased data and biased design choices as sources of gender, race, color, and personality-related discrimination. The study did not examine higher education hiring or report that caregivers and people with nonlinear careers were disproportionately screened out. If AI-enabled systems influence who enters hiring or talent-development pipelines, they may also affect who becomes eligible for onboarding programs, mentoring matches, and early visibility assignments. Rodgers et al. (2023) proposed an AI-supported approach to ethical decision-making in human resource

management and emphasized the importance of governance and accountability in HR processes. Applied to talent development, this framework suggests that AI should not be treated as a neutral administrative tool.

Emerging research on AI literacy connects technical understanding to inclusive leadership behaviors. Asghar et al. (2025) examined higher education students and linked AI literacy with collaborative knowledge practices and inclusive leadership development. Any implication for managers' willingness to challenge assumptions or demand fairness metrics should be presented as a hypothesis for practice or future research, not as a finding of that study. As a practice hypothesis for higher education IT, mentorship and sponsorship programs could be coordinated with AI governance when algorithmic tools are used for matching, screening, or potential identification. When AI-mediated mentoring tools are subject to the same disaggregated monitoring and corrective-action thresholds used for hiring models, institutions may be better positioned to detect whether developmental networks are reproducing inequitable patterns.

Managerial Gatekeeping and Cultural Resistance

Mentorship and sponsorship programs may falter at implementation when middle managers control access to schedules, assignments, feedback, and development time. Supervisors control schedules, project assignments, and performance feedback, and they decide whether development time is protected or quietly canceled. Recent research on diversity, equity, and inclusion resistance indicates that implementation can be constrained by direct resistance, indirect noncompliance, and perceptions that equity-focused change threatens existing status, resources, or group identity (Gündemir et al., 2024; Iyer, 2022). These

risks reinforce the need to connect diversity, equity, and inclusion initiatives to accountability structures rather than treating them as voluntary commitments (Burnett & Aguinis, 2024; U.S. Government Accountability Office, 2024).

To counter these patterns, institutions can link mentoring and sponsorship outcomes directly to supervisor performance evaluations. Prior research indicates that diversity outcomes are more consistently associated with structures that assign responsibility to organizational decision makers through accountability structures (Dobbin & Kalev, 2022; Kalev et al., 2006). In this configuration, managers are assessed not only on technical outcomes but also on developmental access and mobility for their staff, making equity-related implementation part of role accountability rather than a purely voluntary preference. Amescua and Moore (2025) found that DEI practitioners of color experienced institutional resistance, invisible labor, and insufficient organizational support. The study supports stronger institutional accountability, but it did not specifically establish that practitioners lacked authority over managers who controlled workloads.

Operationalizing Sponsorship and Developmental Networks

As mentorship, sponsorship, and social capital become connected to AI-enabled tools used in hiring, performance evaluation, or talent analytics, these mechanisms may function as a combined equity infrastructure rather than as isolated initiatives.. Developmental-network research and algorithmic-hiring research identify different points at which access can be shaped: relationships affect advocacy and visibility, while automated systems can affect entry into hiring pipelines and the information presented to decision makers (Dobrow et al., 2012; Raghavan et al., 2020). Bringing these literatures together suggests a need for coordinated

governance, but that conclusion is a synthesis of this review rather than a direct finding of the cited studies.

The literature reviewed here explains developmental networks and mentoring in general organizational contexts, but provides limited direct evidence about how sponsorship and social capital are structured in higher education IT. This gap is identified through the present synthesis rather than directly concluded by Dobrow et al. (2012) or Higgins and Kram (2001). Middle managers may control access to networks, stretch assignments, and advocacy opportunities that function as informal gatekeeping mechanisms. Access to developmental relationships may therefore be uneven. Evidence from corporate settings shows gender differences in sponsorship, while developmental-network theory explains how access to multiple developers can shape career learning and support (Dobrow et al., 2012; Ibarra et al., 2010). As a result, the literature offers insufficient understanding of how mentorship and sponsorship operate as structural mechanisms shaping equity outcomes in higher education IT.

AI-Mediated Decision Systems in Hiring, Evaluation, and Student Analytics

Artificial intelligence supports multiple functions across employment and higher education, but the evidence should be separated by domain. Artificial intelligence-enabled recruitment and human resources decision systems are examined by Chen (2023), Fabris et al. (2025), Raghavan et al. (2020), Rodgers et al. (2023), and Soleimani et al. (2025). Student-success prediction is examined by Gándara et al. (2024), while Labadze et al. (2023), Schei et al. (2024), and Stöhr et al. (2024) focus on educational chatbots. These tools can influence who is seen, how potential is interpreted, and when a person is routed forward or held back, so their design choices may contribute to durable organizational patterns. Artificial intelligence systems

can reproduce historical inequities when training data, labels, model objectives, or implementation practices embed biased patterns (Chen, 2023; Raghavan et al., 2020). External audit research also demonstrates demographic error disparities in commercial gender-classification systems (Buolamwini & Gebru, 2018). In practice, replication occurs through proxy variables, skewed error rates, and optimization goals that privilege throughput or cost reduction over equal opportunity. Raghavan et al. (2020) found that vendor claims and bias-mitigation practices varied and that removing protected attributes did not necessarily eliminate discrimination because proxy variables, data choices, and prediction targets can preserve inequity. This supports evaluating the full hiring pipeline rather than isolated model features. Formal results show that certain fairness criteria, including calibration and error-rate balance, cannot all be satisfied simultaneously except under constrained conditions when base rates differ (Chouldechova, 2017; Kleinberg et al., 2017). Institutions therefore need to identify the fairness objective relevant to the decision context and document the associated tradeoffs. Higher education guidance emphasizes bias assessment, representative data, ongoing monitoring, and corrective retraining in AI-supported admissions and decision processes (Roshanaei, 2024). Equal opportunity for qualified applicants aligns with nondiscrimination expectations for employment selection procedures (U.S. Equal Employment Opportunity Commission, 2023). National Institute of Standards and Technology does not prescribe a single fairness metric or prioritize balanced error rates. Instead, the AI Risk Management Framework calls for context-specific measurement and management of harmful bias and for documentation of tradeoffs among relevant metrics (Tabassi, 2023).

Much of the existing literature on algorithmic bias emphasizes technical model performance, fairness metrics, or regulatory frameworks (Chouldechova, 2017; Kleinberg et al., 2017). In contrast, the focus of this study was on how AI-enabled human resources tools are experienced, interpreted, and applied by organizational actors within higher education information technology contexts. Accordingly, this review emphasizes practitioner-facing scholarship that examines how these systems shape decision making, discretion, and perceptions of equity in practice. This scope is consistent with the study's phenomenological focus on meaning and lived experience (Creswell & Poth, 2017).

In the university context, these fairness choices are not abstract; they shape the composition of applicant pools, the signals that determine interview invitations, and the downstream availability of mentorship and sponsorship opportunities. Artificial intelligence-enabled recruitment systems may reproduce discrimination when historical data, labels, or prediction targets encode prior exclusion or rely on proxies for protected characteristics (Chen, 2023; Raghavan et al., 2020). Artificial intelligence-enabled talent tools can also reproduce bias through proxy variables, prediction targets, data imbalance, or design choices that appear neutral but preserve historical inequities (Chen, 2023; Raghavan et al., 2020). These risks support evaluating fairness objectives, data documentation, validation, and audit processes during system selection and implementation rather than only after deployment (Chen, 2023; Raghavan et al., 2020).

Comparative governance frameworks reinforce the same control logic. The NIST AI Risk Management Framework organizes risk management into Govern, Map, Measure, and Manage functions. Together, these functions emphasize governance, contextual understanding,

measurement of risks and impacts, monitoring, and treatment of identified risks across the AI lifecycle (Tabassi, 2023). The European Union (EU) Artificial Intelligence Act treats employment and education systems as high-risk. The EU AI Act classifies specified employment and education systems as high-risk and establishes requirements for risk management, data governance, recordkeeping, transparency, human oversight, accuracy, robustness, and cybersecurity (European Parliament and Council of the European Union, 2024). U.S. institutions may adapt comparable controls through procurement and governance, but that application is a recommendation rather than a requirement of the Act. ISO/IEC 42001 specifies requirements for an AI management system that connects policy, roles, competence, operational planning, performance evaluation, and continual improvement (International Organization for Standardization & International Electrotechnical Commission, 2023). The standard supports auditable governance but does not by itself guarantee equitable outcomes. Taken together, these frameworks converge on a disciplined lifecycle that anticipates failure modes, allocates responsibilities, and requires evidence that systems perform as intended and that identified risks are monitored and managed after deployment. This emphasis is important because principles alone do not ensure ethical AI unless they are translated into governance practices, accountability structures, and implementation controls (Mittelstadt, 2019). Cachat-Rosset and Klarsfeld (2023) reached a similar conclusion in their evaluation of AI ethics guidelines, finding that DEI is often acknowledged in principle but not consistently translated into actionable practices that shape the behavior and accountability of AI actors.

In higher education, governance frameworks must be interpreted within multi-stakeholder environments where data ownership and decision authority may be distributed

across IT, HR, and academic units. For higher education, the NIST functions could be mapped onto existing governance responsibilities: institutional policy and oversight under Govern, system context and data stewardship under Map, testing and monitoring under Measure, and risk response under Manage (Tabassi, 2023). This mapping is an institutional application of the framework rather than a role assignment prescribed by NIST. Treating the lifecycle as shared infrastructure, rather than as a technical checklist, allows campus leaders to make bias prevention an ongoing institutional responsibility rather than a one-time project milestone. One implementation risk is ambiguous accountability, where no unit is clearly authorized to halt, review, or recalibrate a model when risks or harms are identified. Clear policy should identify who has authority to pause, review, or modify a system when risks or harms are identified (European Parliament and Council of the European Union, 2024; Tabassi, 2023).

Audit research has documented demographic error disparities in commercial gender-classification systems (Buolamwini & Gebru, 2018), while retrospective analysis of college student-success prediction found racialized differences in predictive performance and false-failure classifications (Gándara et al., 2024). These studies use different domains and methods and should not be combined as evidence about algorithmic hiring. Gándara et al. (2024) found that fairness-aware mitigation reduced some disparities in student-success prediction but did not eliminate them. The study supports evaluating subgroup performance, but it was not an implementation study of a deployed learning-analytics system. These studies illustrate that algorithmic accuracy alone does not guarantee equitable outcomes. Governance expectations for high-impact systems are often established through standards, regulation, and technical assistance rather than randomized trials (European Parliament and Council of the European

Union, 2024; U.S. Equal Employment Opportunity Commission, 2023). These sources provide compliance and risk-management guidance rather than causal evidence about intervention effectiveness. Because system performance and context can change after deployment, ongoing monitoring, documentation, and corrective action are necessary (Raji et al., 2020). Canada's Directive on Automated Decision-Making also includes transparency, human intervention, and recourse requirements scaled to impact level (Treasury Board of Canada Secretariat, 2021).

Operationalization can unfold through procurement standards and lifecycle governance controls that embed risk management, documentation, and accountability across system design and use. Research and higher education analysis identify both potential efficiency gains and risks of bias, disparate impact, and weak governance in AI-assisted systems (Raghavan et al., 2020; Roshanaei, 2024). Procurement governance can operationalize these frameworks by requiring vendors to disclose intended use, data provenance, performance evidence, known limitations, human-oversight design, and incident-response responsibilities. These are recommended institutional controls derived from NIST and ISO/IEC 42001, not a single standardized procurement checklist prescribed by either framework (International Organization for Standardization & International Electrotechnical Commission, 2023; Tabassi, 2023). Raji et al. (2020) propose an end-to-end internal auditing process that generates documentation across problem formulation, development, deployment, and post-deployment monitoring. These measures keep governance active rather than reactive and help institutions identify and respond to inequities as systems operate in authentic contexts.

Equally important is the human layer of oversight. Even well-designed controls can fail if staff lack the confidence or clarity to intervene when results appear biased. Operationalizing

governance may include training review panels, equipping data stewards with review tools, and defining escalation paths. These are practice recommendations derived from lifecycle-governance principles in Raji et al. (2020) and Tabassi (2023), not interventions directly tested by those sources. As a practice recommendation, transparency dashboards could display model updates, performance trade-offs, and known limitations to make accountability more visible in routine operations. Embedding these routines within existing managerial cycles, such as quarterly business reviews, annual risk reports, or accreditation audits, keeps the conversation anchored in institutional processes instead of isolated technical silos.

Algorithmic systems increasingly influence who enters talent pipelines, how applicants or employees are evaluated, and how decision makers receive information within IT organizations. Despite this reach, the reviewed literature remains fragmented across technical fairness, organizational auditing, leadership practice, and developmental-access scholarship, leaving limited integrated guidance for higher education IT talent governance. The reviewed scholarship tends to examine technical model performance, lifecycle auditing, and organizational governance in separate streams, leaving managerial interpretation and discretion underexamined. Technical fairness research in higher education has focused on model performance and subgroup disparities (Gándara et al., 2024), while organizational auditing research examines lifecycle processes, documentation, and accountability (Raji et al., 2020). The limited integration of these streams leaves managerial interpretation and discretion underexamined.

As a result, the human dimensions of AI use, including how leaders assign decision authority, resolve conflicts between automated recommendations and professional judgment,

and embed accountability into everyday routines, remain underexamined. The reviewed literature leaves unresolved where decision authority should reside when algorithmic outputs conflict with professional judgment and how institutions should document such conflicts. This gap is a synthesis of the present review (Raghavan et al., 2020; Raji et al., 2020). In practice, this synthesis suggests that statistical fairness should be paired with organizational reflexivity, the ability of leaders to question whether the goals being optimized still serve the institution's equity commitments. End-to-end auditing can include documentation of human interventions, decisions, and emerging risks so organizations can examine patterns over time (Raji et al., 2020). Studying these intersections can clarify how model controls and managerial routines jointly shape outcomes for specific groups.

Artificial intelligence-enabled decision systems do not eliminate human judgment. In hiring, they reshape which judgments are embedded in system design, vendor practices, validation, and use (Raghavan et al., 2020). In higher education information technology contexts, middle managers often retain authority over how algorithmic outputs are interpreted, contextualized, and acted upon. These organizational choices can mitigate or reinforce inequities depending on system design, audit processes, and how outputs are interpreted and acted upon (Raghavan et al., 2020; Raji et al., 2020). However, existing research rarely examines how these tools are experienced by practitioners responsible for implementing or being evaluated through them, leaving a gap in understanding the equity implications of AI-mediated decision making in practice.

Gaps in the Literature

Review of the literature reveals several interconnected gaps relevant to equity outcomes in higher education information technology. First, inclusive leadership and diversity research explains psychological safety, inclusion, and organizational accountability, but offers limited direct evidence about how middle managers in higher education IT allocate assignments, visibility, feedback, and opportunity (Newman et al., 2017; Randel et al., 2018). This gap matters because formal diversity commitments do not automatically translate into equitable experiences unless organizational routines and accountability structures shape day-to-day managerial behavior.

Second, mentorship and sponsorship research explains developmental networks, social capital, and gendered differences in sponsorship, but provides little direct evidence about how these mechanisms are structured in higher education IT organizations (Dobrow et al., 2012; Higgins & Kram, 2001; Ibarra et al., 2010; Seibert et al., 2001). Existing scholarship explains the value of mentoring and developmental networks, yet it provides less insight into how underrepresented IT professionals experience the difference between receiving advice and receiving active advocacy for advancement.

Third, technical fairness studies and governance frameworks illuminate model bias, fairness tradeoffs, and lifecycle controls, but fewer studies examine how organizational actors interpret and act on AI-enabled HR outputs in higher education IT (Chouldechova, 2017; Raghavan et al., 2020; Raji et al., 2020; Tabassi, 2023). This leaves an important gap in understanding how human judgment, managerial discretion, and system configuration interact when AI-enabled HR tools are used in recruitment, evaluation, and advancement processes.

Critically, leadership routines, developmental access, and technology-mediated decision systems are usually examined in separate bodies of scholarship (Bernstein et al., 2020; Dobbin & Kalev, 2022; Dobrow et al., 2012; Raji et al., 2020). Taken together, these literatures suggest that the mechanisms may interact in practice, but direct empirical study of that interaction remains limited. Few studies examine the lived experiences of IT professionals, mid-level managers, and HR or equity partners who navigate these mechanisms simultaneously within higher education IT contexts. As a result, there is limited empirical understanding of how equity commitments are operationalized through everyday managerial routines, access to sponsorship, and AI-enabled human resources processes. These gaps establish the need for a qualitative phenomenological study that examines how these mechanisms are experienced across roles within higher education IT.

Conclusions

Across leadership and culture, mentorship and sponsorship, and AI-mediated systems, the collective evidence shows that equitable outcomes depend on deliberate design choices and disciplined governance rather than on goodwill or slogans alone. Accountability research shows that diversity outcomes are more consistently associated with structures that assign responsibility to organizational decision makers. Inclusion research shows that belonging and voice require intentional leadership behaviors, and AI governance research shows that automated systems require documented controls, monitoring, and human oversight (Dobbin & Kalev, 2022; Raji et al., 2020; Randel et al., 2018; Tabassi, 2023). Taken together, the literature indicates that inclusive leadership is more durable when supported by accountability structures, mentoring and sponsorship provide distinct forms of developmental support, and AI

systems require lifecycle monitoring and human oversight (Ibarra et al., 2010; Raji et al., 2020). These findings support treating equity as an organizational process with assigned responsibility, documented decision criteria, review points, and feedback loops rather than relying only on voluntary activity or stated commitment (Dobbin & Kalev, 2022; Raji et al., 2020; Tabassi, 2023).

International AI standards and regulation offer governance controls for high-impact sociotechnical systems that higher education institutions may adapt to AI-enabled HR tools (European Parliament and Council of the European Union, 2024; International Organization for Standardization & International Electrotechnical Commission, 2023; Tabassi, 2023). These sources do not establish controls for mentorship, sponsorship, or inclusive leadership systems. Such linkage may strengthen internal accountability by making AI-related risks more visible, reviewable, and actionable before harms scale. It may also help higher education IT organizations demonstrate more visible stewardship of AI and data-driven decision-making within broader campus equity strategies. For CIOs and HR partners, this combination of standards and scholarship provides a practical blueprint for designing systems that are more accountable, transparent, and aligned with institutional equity commitments.

Taken together, the literature suggests that equitable outcomes depend on intentional organizational design and recurring accountability rather than goodwill alone (Bernstein et al., 2020; Dobbin & Kalev, 2022). The literature supports formal accountability for inclusive leadership, clearer distinctions between mentoring and sponsorship, and lifecycle governance for algorithmic systems (Ibarra et al., 2010; Raji et al., 2020). Specific measures, metrics, and review cadences are practice recommendations rather than universal requirements established by these sources. When leadership, developmental access, and AI governance are reviewed

together, institutions can move toward a more proactive and inspectable approach to equity. This is a synthesis of the reviewed literature rather than an outcome directly tested by Roshanaei (2024) or Tabassi (2023). These convergent gaps support a qualitative study of how practitioners experience leadership routines, developmental relationships, and AI-enabled processes in higher education IT. Together, literature establishes what is currently known about inclusive leadership, mentorship, and sponsorship, and AI-mediated decision systems in higher education IT, while also highlighting persistent gaps related to middle-management practice, intersectional experience, and accountability. These gaps provide the foundation for the qualitative phenomenological approach described in Chapter 3.

Taken together, these gaps indicate a limited empirical understanding of how middle-management engagement, mentorship and sponsorship, and AI-enabled HR tools are experienced in practice within higher education IT settings. Existing studies rarely center on the lived experiences of IT professionals, mid-level managers, and HR or equity partners who navigate these mechanisms daily. To address these gaps, a qualitative phenomenological study is warranted to examine how these equity-shaping mechanisms are experienced and interpreted in higher education IT contexts.

Chapter Summary

Chapter 2 reviewed literature related to inclusive leadership, mentorship and sponsorship, and AI-enabled decision systems as they relate to equity outcomes in higher education information technology. The review demonstrated that these domains are often examined in isolation despite their interconnected influence on recruitment, retention, and advancement. Gaps were identified in understanding how leadership routines, developmental

access, and AI-enabled tools interact in practice. Chapter 3 describes the qualitative phenomenological methodology used to examine these gaps through participants' lived experiences.

Chapter 3: Methodology, Design and Methods

This chapter outlines the methodology that was used to examine how middle-management engagement, mentorship and sponsorship, and artificial intelligence–enabled human resources tools influence recruitment, retention, and advancement outcomes for underrepresented professionals in higher education information technology units. The study addressed the problem of persistent inequities in career mobility despite formal institutional equity commitments and sought to understand how these mechanisms are experienced in practice by IT professionals, mid-level managers, and human resources or equity partners. The study was guided by an integrated conceptual framework drawing on intersectionality theory, critical race theory, and generative interactions, which together connect individual experience, structural power, and team-level routines. This chapter details the research design, population and sampling strategy, recruitment procedures, data collection methods, analytic approach, trustworthiness strategies, and ethical assurances that supported a rigorous and transparent inquiry. This methodological choice aligned with established qualitative research guidance, which emphasizes phenomenology as appropriate for examining lived experience and meaning-making (Creswell & Poth, 2017).

As demonstrated in Chapter 2, existing scholarship addressing inclusive leadership, mentorship and sponsorship, and AI-enabled decision systems remains fragmented and insufficiently attentive to how equity is experienced in practice within higher education information technology contexts. These gaps require an approach capable of capturing meaning, interpretation, and lived experience across organizational roles. Qualitative inquiry is therefore appropriate for examining how professionals experience routine leadership

behaviors, developmental access, and AI-mediated decision processes as interconnected mechanisms shaping recruitment, retention, and advancement outcomes. This chapter describes the methodological approach used to address these gaps through a phenomenological design.

Research Methodology and Design

This study employed a qualitative phenomenological research design to examine how equity-shaping mechanisms are experienced and interpreted by professionals working within higher education information technology environments. The practice-based problem guiding this inquiry concerned how middle-management routines, mentorship and sponsorship structures, and artificial intelligence–enabled human resource systems shaped equitable access to opportunity and advancement. Because the study sought to understand how individuals interpret and make meaning of these mechanisms in lived organizational contexts, rather than measure causal relationships or compare bounded institutional systems, a qualitative methodology is most appropriate (Creswell & Poth, 2017; van Manen, 2016). The focus is interpretive rather than predictive, experiential rather than variable-driven.

A case study design was considered but determined to be misaligned with the research purpose. Case study research examines a bounded case or cases, whereas this study did not treat a particular institution, technological system, or policy as the unit of analysis (Creswell & Poth, 2017). Instead, the study centered shared experiences across institutions and examined how participants interpreted managerial, developmental, and technological mechanisms in their work. A phenomenological orientation was therefore selected because the unit of interest was lived experience rather than a bounded organizational case.

Phenomenology oriented the study toward lived experience and meaning as interpreted by participants (Creswell & Poth, 2017; van Manen, 2016). Reflexive thematic analysis was used to construct patterned meanings across accounts while preserving variation rather than claiming a single invariant essence. Reflexive memoing documented how my professional experience and assumptions shaped interpretation; it did not eliminate or bracket my influence. The analytic goal was to develop a coherent account of how participants experienced and interpreted equity-shaping mechanisms within organizational contexts. The study was situated within an interpretivist paradigm, which assumes that people construct meaning through experience and interaction within particular social and organizational contexts (Creswell & Poth, 2017; van Manen, 2016). Constructs such as inclusion, exclusion, opportunity, fairness, and advancement are therefore understood as experienced realities rather than objective, universally fixed variables. This paradigm aligns with the research problem because leadership decisions, developmental access, and AI-mediated talent systems operate through human interpretation and institutional meaning-making. Examining these processes requires methodological approaches capable of capturing nuance, contradiction, and contextual complexity.

Intersectionality theory, critical race theory, and generative interaction frameworks functioned as sensitizing lenses rather than prescriptive coding schemas. Data analysis proceeded inductively, with initial coding grounded in participant language and narrative meaning. Only after themes were constructed were theoretical frameworks applied to deepen interpretation and explanation. This sequencing preserved analytic openness and reduced the risk of forcing data into predetermined constructs. It also strengthened methodological rigor by

clearly distinguishing between descriptive thematic development and subsequent theoretical interpretation.

Population, Sample, and Participant Recruitment

The target population for this study included higher education information technology professionals, mid-level IT managers, and human resources or equity partners employed at accredited, U.S.-based degree-granting institutions that participate in Title IV federal financial aid programs. These individuals either directly experience or influence talent processes such as hiring, performance evaluation, stretch assignment allocation, mentorship and sponsorship relationships, leadership development, and the implementation or governance of artificial intelligence–enabled human resource systems. The research setting is U.S. higher education, specifically campus-based information technology organizations, where such talent processes are enacted within institutional structures. Because no single public source enumerates all higher education information technology professionals, mid-level information technology managers, and human resources or equity partners who influence information technology talent processes across U.S. Title IV institutions, the exact size of the target population could not be determined; however, the population is broadly situated across accredited U.S. degree-granting institutions with information technology, human resources, and equity-related personnel involved in technology workforce decisions. Eligibility criteria required that participants be at least 18 years of age and have a minimum of one year of professional experience participating in, influencing, or being affected by IT talent management processes within higher education. Individuals who are students, non-IT staff without influence over IT

talent systems, or those within my direct supervisory or evaluative chain were excluded to protect voluntary participation and analytic relevance.

A purposive sampling strategy was employed to ensure recruitment of information-rich participants whose lived experiences directly align with the phenomenon under investigation. The sampling frame consisted of professionals identified through publicly available institutional directories, professional association memberships, and higher-education IT networks. Because the study sought to understand how equity-shaping mechanisms are experienced across roles rather than to generate statistically generalizable findings, probabilistic sampling is neither necessary nor appropriate. Purposive sampling supported deliberate selection of information-rich participants across IT staff, mid-level manager, and HR or equity-partner roles that aligned with the research question (Palinkas et al., 2015). This approach is consistent with phenomenological methodology, which prioritizes depth of experiential insight over numerical breadth.

The final sample included 15 participants. Sample adequacy was evaluated using information power, which considers the study aim, sample specificity, theoretical framing, quality of dialogue, and analytic strategy rather than a universal numerical threshold (Malterud et al., 2016). Given the focused research aim, clearly defined participant criteria, and in-depth interview design, 15 participants provided sufficient information power to support thematic development. Recruitment ended when interviews no longer yielded substantively new perspectives related to middle-management routines, mentorship and sponsorship access, and AI-enabled human resource systems. The stopping criterion was therefore guided by analytic sufficiency rather than saturation as a purely numerical benchmark.

Participant recruitment occurred through professional networks and publicly accessible channels designed to minimize coercion and maximize role and institutional diversity. Primary recruitment pathways included professional association communities such as EDUCAUSE, higher education IT leadership forums, LinkedIn professional networks, and institutional directories where staff contact information is publicly available. Recruitment messages were standardized and distributed through these channels to ensure consistency in communication and voluntariness. Snowball referrals were permitted only when referred individuals independently met inclusion criteria and did not fall within my supervisory or evaluative chain. Snowball referrals supplemented purposive recruitment by identifying additional information-rich participants who independently met the eligibility criteria (Palinkas et al., 2015). Voluntariness and procedural consistency were protected through the study's standardized recruitment and consent procedures. Referred individuals received the same recruitment materials and consent documentation as all other participants to ensure procedural consistency.

To mitigate potential power dynamics, no direct recruitment occurred within my reporting structure. If internal participants were required to ensure adequate representation of IT roles, a neutral facilitator with no evaluative authority managed outreach, consent, scheduling, interviewing, and follow-up communication. All participants received informed consent materials prior to data collection, and participation occurred only after written consent was obtained. Recruitment, consent, interview, data-handling, and confidentiality procedures followed the approved Colorado Technical University Institutional Review Board application. Standardized recruitment language was used across outreach channels, including the email

invitation, EDUCAUSE discussion-board post, and LinkedIn message or post included in Appendix B. These safeguards supported ethical rigor, voluntariness, and methodological integrity while ensuring alignment between the sampling strategy and the phenomenological design.

Data Collection Instrumentation and Procedures

The study used a semi-structured interview guide developed for this study and presented in Appendix A. Interviews served as the sole data source because the inquiry focused on participants' lived experiences and meaning-making rather than institutional comparison or document analysis (Creswell & Poth, 2017; Seidman, 2019). The guide elicited detailed narratives about middle-management engagement, mentorship and sponsorship, AI-enabled HR tools, and identity-related experiences. Sensitizing concepts from intersectionality, critical race theory, and generative interactions informed the guide without prescribing participant responses. The interview guide was reviewed for clarity, flow, and participant burden before data collection. Identity-related questions were placed later in the interview to allow rapport to develop, and improvement prompts were framed as reflections on experience rather than requests for prescriptive solutions.

All interviews were audio recorded and transcribed using Zoom’s AI-generated transcription service, and transcripts were verified against audio files for accuracy before analysis began. Because AI transcription may involve third-party processing, privacy considerations, transcription accuracy issues, and participant expectations about data handling, researchers should disclose AI transcription practices as part of informed consent and research transparency (Samuel & Wassenaar, 2025). Pilot interviews used solely to refine the protocol

were not included in the dataset or analysis. Phenomenological inquiry prioritizes rich, first-person accounts of lived experience (Creswell & Poth, 2017). Semi-structured interviews support depth, context, clarification, and follow-up while allowing participants to describe experience in their own terms (Creswell & Poth, 2017; Seidman, 2019). An audio recording with a verbatim transcription ensures accuracy for analysis. All data collected for this dissertation were stored in accordance with institutional and federal guidelines for the protection of human subjects. Audio recordings, interview transcripts, consent forms, and analytic memos were maintained on password-protected, encrypted devices, with any physical documents secured in a locked cabinet accessible only to me. Identifying information was removed and replaced with pseudonyms to protect participant confidentiality. Data will be retained for a period consistent with institutional review board (IRB) requirements and then permanently destroyed in accordance with institutional requirements. These procedures align with established ethical standards for safeguarding research data and ensuring participant privacy.

Procedures for Replication

I completed the CTU Human Subjects Research (HSR) application, prepared all consent materials, and finalized Appendices. Standardized recruitment messages were used for direct email outreach, EDUCAUSE community postings, and LinkedIn outreach. All recruitment communications follow Institutional Review Board–approved language and were used consistently across recruitment channels to ensure transparency, voluntariness, and procedural replicability.

Participants were recruited through EDUCAUSE community groups, CIO forums, LinkedIn networks, and publicly available institutional directories. Screening questions

confirmed inclusion and exclusion criteria, including the categorical exclusion of my direct reports and anyone within my supervisory or evaluative chain. When required to include internal participants for role diversity, a neutral facilitator managed all communications and conducted the interview.

Eligible participants received an IRB-approved informed consent form following approval of the CTU Human Subjects Research application and had opportunities to ask questions before agreeing to participate. The informed consent form was submitted as part of the CTU Institutional Review Board application. Consent emphasized voluntariness, confidentiality, and the right to withdraw at any time without penalty, consistent with the Belmont Report principle of respect for persons (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Consent forms were stored in encrypted folders separate from interview data.

Participants scheduled a 45- to 60-minute individual semi-structured interview conducted via secure video conferencing or telephone. Each interview began with confirmation of consent and permission to record. I followed the semi-structured interview guide in Appendix A, using probes as needed to elicit detail and clarify meaning. Interviews were audio-recorded with participant permission. Audio recordings were transcribed using Zoom's AI-generated transcription service. I checked each AI-generated transcript against the original audio recording to verify accuracy and correct transcription errors prior to analysis. All audio files and transcripts were stored in encrypted folders accessible only to the research team.

All transcripts were de-identified before coding. Names, institutions, job titles, and other identifying details were replaced with pseudonyms. A linking key was stored separately

from research data. Any public documents referenced by participants, such as job descriptions or diversity, equity, and inclusion statements, were logged with retrieval dates and stored independently from interview data. All materials were maintained in encrypted, access-controlled storage, with access limited to me in accordance with institutional data protection and IRB requirements.

An audit trail documented recruitment logs, consent records, interview session notes, codebook versions, analytic memos, theme refinements, and procedural decisions. All analytic artifacts included timestamps and versioning to support external review. De-identified transcripts were imported into Python and organized in a structured project directory for text handling, file management, and dated analytic records. Initial nodes reflected sensitizing concepts from the conceptual framework, while inductive codes captured unanticipated mechanisms. The dataset then proceeded through the reflexive thematic analysis process detailed in the Data Analysis Procedures section. These steps are described in sufficient detail to support methodological transparency and allow replication in comparable higher education IT contexts.

Data Analysis Procedures

Reflexive thematic analysis was used to examine the interview corpus because it aligns with a phenomenological orientation that centers lived experience and patterned meaning. The analysis used Braun and Clarke's (2006, 2022) six-phase thematic-analysis process, applied reflexively: familiarization, coding, generating initial themes, reviewing themes, defining and naming themes, and writing the report. Braun and Clarke's (2022) later work on conceptual and design thinking further supported attention to how themes were constructed, bounded, and

interpreted during analysis. Reflexive thematic analysis is appropriate because it supports inductive pattern development grounded in participant meaning rather than pre-existing theoretical categories. The approach proceeded from familiarization to coding and theme development through iterative interpretation, reflexive memoing, and repeated engagement with the dataset rather than mechanical rule following (Braun & Clarke, 2006, 2022). Python was used as the primary analytic workspace for managing transcripts, conducting coding, and maintaining an auditable analytic record, including dated logs, versioning, and traceability from excerpts to codes to themes. Python was used to organize transcripts, coded excerpts, analytic memos, and versioned exports. Interpretation and theme construction remained my analytic work. Themes were constructed from recurring experiential patterns, organizational mechanisms, and process-level dynamics reflecting how individual meaning-making is situated within institutional routines.

Familiarization began with an end-to-end reading of each transcript and reflexive memoing of initial observations, contextual notes, and sensitizing concepts. Coding proceeded line by line using concise labels that remained close to participant language, with multiple codes applied when useful. An evolving coding framework recorded code names, working definitions, and examples. The framework was revised as interpretation developed rather than used as a fixed set of coding rules designed to produce coder agreement. A dated change log documented code merges, splits, and conceptual refinements. These procedures supported transparency and reflexive accountability in theme development (Braun & Clarke, 2006, 2022).

Candidate themes were generated by clustering related codes around patterned meanings relevant to the research question, such as assignment allocation, sponsorship access,

or AI override practices. Each candidate theme received a memo defining its central organizing concept, scope, exclusions, and illustrative excerpts. Theme review examined coherence within themes, distinction among themes, variation across accounts, and experiences that complicated emerging interpretations. Revisions were documented to preserve traceability from excerpts to codes, theme memos, and reported interpretations (Braun & Clarke, 2022; Lincoln & Guba, 1985).

Final themes were defined and named through concise statements and analytic narratives. The conceptual framework was used after initial theme construction to deepen interpretation without forcing data into predetermined categories. Peer debriefing functioned as reflexive dialogue that challenged assumptions and sharpened interpretations rather than as a reliability or consensus check. Python queries were used descriptively to examine how coded material was distributed across role and institution categories. Contradictory or divergent accounts were retained to bound claims. The audit trail documented how interpretations developed from excerpts, codes, memos, and theme revisions, allowing readers to assess transparency and coherence. These procedures support reflexive accountability and traceability; they do not imply that another researcher would reproduce identical themes from the same corpus.

Trustworthiness

Consistent with Lincoln and Guba's (1985) framework for naturalistic inquiry, trustworthiness was established through procedures that address credibility, transferability, dependability, and confirmability. These procedures are aligned with the study's qualitative phenomenological design and data sources. The plan operationalizes credibility, transferability,

dependability, and confirmability with concrete artifacts and review points drawn from established qualitative guidance. These procedures are integrated into the analytic workflow so that checks occur in real time rather than as after-the-fact add-ons. Together, they support evaluative criteria consistent with naturalistic inquiry and contemporary guidance on thematic analysis (Nowell et al., 2017).

Credibility

Participants were offered transcript review solely to confirm transcription accuracy and clarify factual meaning, not to validate interpretations or analytic themes. Credibility was supported through systematic comparison of experiential patterns across participants occupying different roles within higher education information technology contexts. The analysis examined similarities and differences in participants' meaning-making to identify shared experiences and points of variation related to middle-management engagement, mentorship and sponsorship, and artificial intelligence–enabled human resources tools. This approach is consistent with qualitative inquiry that emphasizes depth, coherence, and patterned meaning across participant accounts rather than corroboration through multiple data sources (Creswell & Poth, 2017). I maintained a reflexive journal throughout the analysis to document analytic decisions and monitor potential bias. Negative and contradictory cases were documented and reported to refine and bound thematic claims, and discrepancies and their resolutions were captured in the audit trail to preserve a transparent record of revisions.

Transferability

Thick description documented institutional context, role responsibilities, and relevant organizational routines so readers can assess the applicability of findings to their own settings.

Reports specified inclusion and exclusion criteria, participant role composition, and salient contextual features that shape how findings may transfer by analytic analogy rather than statistical generalization. Boundaries of applicability were stated alongside major claims to reduce overextension beyond the study's scope. This approach supported transferability while remaining consistent with a phenomenological design focused on lived experience situated within institutional routines. This approach reflects the use of thick description in qualitative research to support transferability by providing sufficient contextual detail (Creswell & Poth, 2017).

Dependability

Dependability was supported through a documented analytic process showing how data were collected, coded, interpreted, and revised over time (Lincoln & Guba, 1985; Nowell et al., 2017). Analytic pivots were time-stamped with concise rationales so reviewers could inspect how interpretations developed. Python-based versioning and dated exports preserved coding history, analytic queries, and theme revisions. Periodic reviews of logs, version histories, and memos checked consistency between the procedures described and those enacted. These records provide transparency and procedural accountability without claiming that the same corpus would yield identical themes if analyzed again.

Confirmability

Chains of evidence linked interview excerpts to codes, theme memos, and reported claims to distinguish participants' meanings from my interpretations (Lincoln & Guba, 1985; Nowell et al., 2017). Negative and contradictory cases were explicitly retained and reported to bound assertions and refine theme definitions rather than to smooth inconsistencies. A

reflexive journal documented assumptions, role tensions, and mitigation steps throughout the analytic process. Analytic decisions were examined against raw evidence through reflexive journaling, audit trail review, and documented chains of evidence to test coherence and warrant. Together, these safeguards support confirmability by demonstrating that findings are grounded in participants' accounts rather than my preference.

Ethical Assurances

This study received Colorado Technical University Institutional Review Board approval before recruitment or data collection began. Ethical procedures were guided by the Belmont Report principles of respect for persons, beneficence, and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). All procedures adhered to IRB-approved protocols for recruitment, consent, data handling, and confidentiality. Participation was voluntary, and prospective participants were advised of their right to decline or withdraw without penalty (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979).

Informed consent was obtained using IRB-approved materials detailing the study's purpose, procedures, risks, benefits, confidentiality protections, and the voluntary nature of participation. Interview data were de-identified promptly; names, institutions, and role-specific identifiers were replaced with pseudonyms, and any linking information was stored separately in encrypted, access-restricted files.

All digital data including audio recordings and transcripts are stored in secure, password-protected environments accessible only to me. Transcripts were verified against original recordings prior to analysis, and findings are reported in aggregate or through carefully

selected excerpts that avoid revealing identifiable details. These measures collectively ensured privacy, confidentiality, and responsible stewardship of participant information. All study data will be retained for a period of seven years following study completion and then permanently destroyed in accordance with IRB and institutional requirements. Beyond risk minimization, the study is expected to contribute to the program discipline by clarifying how equity commitments are operationalized through leadership routines, developmental access, and AI-mediated HR practices in complex organizational settings. The study also has broader social value by informing more equitable talent practices that can reduce structural barriers to advancement for underrepresented professionals in higher education IT.

Chapter Summary

This chapter justified a qualitative phenomenological design, detailed population and sampling, specified interview-only data collection procedures, and presented a replicable analysis plan using reflexive thematic analysis. Procedures to ensure trustworthiness and ethical conduct were outlined, including transcript review for accuracy, audit trails, de-identification, and IRB alignment. Chapter 4 reported findings organized by themes that addressed the research question and linked back to the problem and purpose. Interpretive analysis in this study remains descriptive and explanatory; recommendations and practice implications are intentionally reserved for Chapter 5 to preserve analytic separation.

Chapter 4: Findings

The purpose of this qualitative phenomenological study was to explore how higher education information technology professionals, including underrepresented staff, mid-level IT managers, and human resources or equity partners, experience middle-management engagement, mentorship, and sponsorship, and artificial intelligence–enabled human resources tools as mechanisms shaping recruitment, retention, and advancement outcomes. The study focused on how these mechanisms appeared in participants' lived experiences within U.S. higher education IT environments.

The problem addressed in this study was persistent underrepresentation and uneven access to career opportunity for racially and gender-underrepresented professionals in higher education IT. Higher education IT workforce data document representation gaps, particularly in administrative roles (Pritchard et al., 2019). Prior research indicates that organizational accountability and routine decision processes influence diversity outcomes beyond formal policy statements alone (Dobbin & Kalev, 2022; Kalev et al., 2006).

Data were collected through semi-structured interviews with 15 participants representing IT staff, mid-level managers, and HR or equity partners working in higher education institutions. Interview data were analyzed using reflexive thematic analysis to identify patterned meanings related to participant experiences across roles and contexts. Findings are presented through 10 themes developed from the interview data. These themes capture both shared and divergent perspectives, highlighting how organizational structures and practices shape experiences across participant groups. Together, they provide insight into the

complexities of talent processes and the influence of institutional context on decision-making and equity considerations.

Description of the Study Sample

The final study sample consisted of 15 participants drawn from higher education information technology environments across the United States. Participants were selected using purposive and snowball sampling to ensure representation across roles directly involved in or affected by hiring, development, evaluation, and advancement processes within IT organizations. Participants represented three primary role categories: IT staff, mid-level IT managers, and human resources or equity partners. Information technology staff participants included individuals working in operational, technical, and support roles within institutional IT units. Mid-level IT managers included directors, associate directors, and team leads responsible for supervising staff, assigning work, and participating in hiring and evaluation processes. Human resources and equity partners included individuals involved in talent management, recruitment, policy implementation, or diversity, equity, and inclusion initiatives supporting IT organizations.

Participants reported a wide range of professional experience in higher education IT and related roles. Experience levels ranged from approximately 3 years to over 30 years, with several participants having more than 15 years of experience in higher education environments. Many participants also reported prior experience in corporate or private-sector IT settings before transitioning into higher education.

To protect confidentiality, the final sample is described in aggregate rather than through participant-level demographic detail. The 15 participants represented three role categories

relevant to the study purpose: higher education IT professionals, IT leaders or mid-level managers, and HR, HRIS, or equity partners who supported or influenced IT talent processes. All participants worked in U.S. higher education IT-related environments and completed one semi-structured interview. Specific demographic characteristics, institutional names, exact job titles, and exact years of experience are not reported at the individual level because the sample was small and some combinations of role, institution type, and professional background could increase the risk of deductive identification.

Reflexive thematic analysis resulted in 10 primary themes representing patterned meanings across participant experiences related to recruitment, retention, and advancement within higher education information technology environments. The themes were retained as distinct findings because each captured a separate mechanism evident in the interview data. Middle management captured control over assignments, communication, and leadership exposure. Visibility addressed how staff became seen, recognized, or overlooked. Mentorship captured developmental guidance and career navigation, while sponsorship captured advocacy, network access, and leadership exposure. Bias reflected structural and experiential patterns in decision-making, and inclusion reflected access, participation, and belonging. Opportunity captured the central mechanism through which advancement was experienced. Artificial intelligence reflected filtering and support functions in hiring and evaluation, while emotional intelligence and mindset captured selection and development factors. Resources and structural constraints reflected compensation, staffing, and advancement barriers that shaped the availability of opportunity. The 10-theme structure was retained because each theme represented a distinct mechanism in the participant accounts rather than a different label for

the same finding. Collapsing the themes would have obscured meaningful differences among managerial control, visibility, developmental support, advocacy, bias, inclusion, technology-mediated filtering, individual selection factors, opportunity, and structural constraint. The themes are presented narratively in the Results section because the study used a qualitative phenomenological design and prioritized experiential detail, interpretive context, and representative quotations. Theme boundaries were reviewed for internal coherence and external distinctiveness, and negative or divergent cases were considered during refinement. Although the themes are presented separately for clarity, they should be read as interacting mechanisms. Middle management, visibility, mentorship, sponsorship, bias, inclusion, AI-enabled tools, emotional intelligence and mindset, and structural constraints all shaped how access to opportunity appeared within higher education IT environments. Table 1 summarizes the 10 themes and the organizational mechanism represented by each theme.

Table 1

Chapter 4 Themes and Descriptions.

Theme	Description
1. Middle management as a gatekeeping mechanism	Middle managers shaped access to assignments, leadership exposure, communication, and advancement-related opportunities.
2. Visibility as a mechanism of access	Visibility influenced whether participants were seen, recognized, and included in projects, meetings, and decision-making spaces.
3. Mentorship as a development mechanism	Mentorship supported learning, feedback, career navigation, and preparedness for future opportunities.
4. Sponsorship as an advocacy mechanism	Sponsorship provided active advocacy, leadership exposure, and access to opportunities through influential relationships.
5. Bias as a structural and experiential mechanism	Bias operated through formal systems, informal routines, identity-shaped experiences, and uneven access to opportunity.
6. Inclusion as a multi-dimensional experience	Inclusion was experienced through participation, communication, access, belonging, and involvement in organizational processes.
7. Opportunity as the core mechanism of advancement	Opportunity connected assignments, visibility, sponsorship, leadership access, and development to career mobility.
8. Artificial intelligence as a filtering and support mechanism	Artificial intelligence-enabled HR tools support screening and information processing while remaining dependent on configuration and human judgment.
9. Emotional intelligence and mindset as selection and development factors	Emotional intelligence and mindset shaped hiring, evaluation, collaboration, adaptability, and developmental support.
10. Resources and structural constraints as limiting factors	Compensation, staffing, funding, organizational hierarchy, and limited role availability constrained recruitment, retention, and advancement.

Results

The results are organized by the 10 themes developed through reflexive thematic analysis. Each theme is presented with an interpretive description, supporting participant

evidence, and a brief synthesis of how the theme relates to the study's central research question. The themes are presented separately for clarity, but the accounts showed that they operated as interconnected mechanisms shaping access to opportunity, recruitment, retention, and advancement within higher education IT environments.

Theme 1: Middle Management as a Gatekeeping Mechanism

Middle management emerged as a central mechanism shaping access to opportunity, visibility, and advancement within higher education IT organizations. Across roles, middle managers were positioned between senior leadership and operational staff, influencing how decisions were communicated, how work was assigned, and how individuals were evaluated. This role controlled access to key experiences, including high-visibility projects, leadership interaction, and career development opportunities. The theme reflects patterned descriptions of middle management as not only responsible for executing organizational strategy, but also for determining how that strategy translates into day-to-day practices affecting staff. Although middle management was necessary for organizational function, managerial actions affected whether employees experienced access, support, or constraint within their roles.

Across all three role categories, participants described middle management as a central control point for assignments, leadership exposure, communication flow, and advancement opportunities. Managerial decisions shaped who received high-visibility work and access to leadership. Participant 11 described leadership access as a condition that shaped opportunity, connecting career progression with proximity to decision makers. Managers also influenced how quickly opportunities moved through organizational processes. Participant 3 described some middle managers as "gatekeepers" who were "hitting the brakes" on work they believed

was good for the organization, illustrating how managerial action restricted upward communication and advancement-related opportunities.

Participants also connected managerial behavior with workplace climate. Participant 10 stated, “they want to be liked instead of respected. And that’s where you’re gonna run into some issues and some problems,” reflecting differences in managerial priorities and effectiveness. Participant 11 stated, “The management makes the environment,” linking management with communication, expectations, and access to opportunity. Together, these accounts showed that managerial behavior shaped both the movement of opportunity and employees’ experience of the work environment.

Middle management also translated organizational strategy into operational practice. Managers functioned as a connection point between leadership goals and staff execution. Participant 18 explained that middle management can function as “your translation layer between the senior leadership... and then the folks who are... doing the job,” highlighting the role of managers in communication and implementation. Participant 4 described middle managers as “the people that actually, uh, implement the roadmap, or execute,” emphasizing how managers carried out day-to-day work that may not be visible to leadership. This example reinforced the operational role managers played in translating strategy into daily work. Together, these examples positioned middle managers as responsible for interpreting and enacting organizational priorities. This translation function shaped how staff experienced policies, expectations, and access to work-related opportunities.

Across responses, middle management emerged as a central point of control within higher education IT organizations. The role shaped leadership access, assignment distribution,

advancement opportunities, communication, and the workplace environment. Some managers were experienced as supportive and engaged, while others were experienced as reactive or limiting. These differences showed that the same organizational role could produce different experiences depending on managerial behavior and institutional context.

Theme 2: Visibility as a Mechanism of Access

Visibility emerged as a mechanism tied to access to opportunity, leadership interaction, and advancement within higher education IT organizations. Visibility was characterized as the extent to which individuals were seen, recognized, and included in decision-making spaces, projects, and organizational conversations. Across roles, visibility connected to meeting participation, involvement in high-impact work, and exposure to leadership. The theme reflects patterned descriptions of visibility as associated with how individuals were perceived and considered for additional responsibilities or advancement opportunities. Visibility was not evenly distributed across staff and was often influenced by managerial decisions, organizational structures, and informal processes. Although visibility supported career progression, access to visibility was mediated through workplace dynamics and routines.

Visibility was linked to leadership interaction, project participation, and recognition within organizational systems. Across participant groups, visibility meant more than being observed by leadership; it also meant being included in spaces where advancement-related decisions and relationships developed. Visibility was consistently associated with whether individuals were considered for advancement and recognition within their organizations. Work performance alone did not always ensure visibility. Participant 15 connected long tenure with limited advancement, stating, “I’ve been in HR... almost 20 years... and I’m still in the same

position.” This account reflected limited advancement despite long-term service and indicated that performance did not always result in recognition. Participant 11 connected leadership access with opportunity and visibility rather than treating performance alone as sufficient, linking visibility with proximity to leadership and inclusion in decision-making environments. Visibility influenced how contributions were acknowledged and how individuals were positioned for future opportunities.

Visibility was also shaped by how work was presented and communicated within the organization. Recognition of work was often mediated by leadership rather than directly attributed to staff. Participant 2 explained, “you would do the work, right? But whenever the work would get the attention of senior leadership, you weren’t the person to go in and present on those things.” This example shows how visibility was shaped by organizational communication and reporting structures.

Visibility was also tied to participation in projects and organizational activities that increased exposure to leadership. Collectively, participant responses connected visibility with communication pathways and access to assignments within the organization. Visibility also linked to specific opportunities, including project involvement and leadership engagement. Inclusion in certain meetings or assignments increased exposure and recognition within the organization. Participant 11 described project access and leadership exposure as factors that shaped growth and recognition. Assignment decisions and access to leadership environments shaped visibility. These examples connect visibility to access to roles, tasks, and interactions within the organization. Both formal structures and informal practices shaped inclusion in high-impact work.

Across responses, visibility shaped access to opportunity and advancement through leadership exposure, project assignments, and organizational communication processes. Some participants connected visibility with recognition and career progression, while others described limited visibility despite sustained contributions. These differences showed that visibility varied by role and institutional context, but consistently influenced recognition, leadership access, and inclusion in advancement-related opportunities.

Theme 3: Mentorship as a Development Mechanism

Mentorship emerged as a mechanism supporting professional development, skill-building, and career navigation within higher education IT organizations. Mentorship was characterized as guidance provided by more experienced individuals to support learning, decision-making, and progression within a role or career path. Across roles, mentorship involved feedback, advice, and exposure to knowledge that was not always formally documented within the organization. The theme reflects patterned descriptions of mentorship as contributing to individual growth and preparedness for future opportunities. Mentorship occurred through formal programs and informal relationships, with access varying across individuals and organizational contexts. Although mentorship supported development, its availability and impact depended on access to mentors and the nature of the relationship.

Across organizational roles, mentorship contributed to learning, confidence, and understanding of organizational expectations. Although mentorship experiences varied across participants, developmental guidance and exposure to institutional knowledge were consistently associated with mentorship relationships. Mentorship was consistently associated with guidance and support, contributing to professional growth. Several participants

emphasized the importance of feedback and developmental interaction within mentoring relationships. Participant 4 described mentoring as seeing people's "talent" and "gifts," giving "suggestions for growth," and helping "prepare them for pitfalls." This example reflected learning through interaction with more experienced individuals. Participant 2 described mentorship as helping staff work through initiatives, receive feedback, and develop critical thinking over time. Mentorship helped individuals interpret their roles, identify potential pathways, and develop skills necessary for advancement. It also provided information and perspective that supported decision-making within the organization.

Mentorship also varied in structure and effectiveness depending on the relationship and context. Informal mentorship relationships were sometimes more impactful than formal structures. Participant 11 described informal mentoring relationships as important to development and career navigation, indicating that mentorship occurred through everyday interactions as well as structured programs. Participant 4 stated, "some of my best mentors have actually... corrected me... Often, corrected me often," showing variation in mentoring approach and interaction. Mentorship depended on access to individuals willing to provide support and share experience.

Mentorship supported development but did not necessarily lead to advancement opportunities. Mentorship contributed to skill-building and preparation but did not always translate into career progression. Participant 15 stated, "I've been in HR... almost 20 years... and I'm still in the same position." This account shows that development alone did not determine promotion or visibility outcomes. Mentorship provided preparation for opportunities that may or may not occur, functioning as guidance rather than direct advocacy.

These accounts position mentorship as a developmental mechanism that contributes to readiness, but not consistently to advancement access. Participants distinguished between mentorship as support and other mechanisms that influence mobility.

Across participant responses, mentorship was consistently described as a mechanism supporting development, learning, and career navigation. Participants indicated that mentorship provides guidance, feedback, and access to knowledge that supports individual growth within higher education IT organizations. Mentorship was described as supporting skill development and preparation for future roles. Participants also described variation in access and effectiveness across contexts. Some participants experienced mentorship through informal relationships, while others described limited or inconsistent access. Across all responses, mentorship was associated with development rather than direct advancement, reflecting its role in preparing individuals rather than determining outcomes.

Theme 4: Sponsorship as an Advocacy Mechanism

Sponsorship emerged as a mechanism involving advocacy, visibility, and access to advancement opportunities within higher education IT organizations. Sponsorship was characterized as the active support provided by individuals in positions of influence who advocate for others in decisions related to assignments, promotions, and leadership exposure. Across roles, sponsorship was distinct from mentorship because it facilitated access to opportunities rather than development alone. The theme reflects patterned descriptions of sponsorship as connected to being recommended, introduced, or positioned for advancement within the organization. Sponsorship often involved placing individuals in high-visibility roles or

presenting them to decision-makers. Although sponsorship was impactful, access was uneven and influenced by relationships and organizational dynamics.

Sponsorship differed from mentorship through advocacy, leadership access, and exposure to advancement opportunities. Across participant groups, sponsorship was described as dependent on the willingness of influential individuals to provide access to organizational networks and decision-making environments. Sponsorship was consistently associated with access to opportunities through advocacy by individuals in leadership positions. Participant 2 stated, “I have grown the most under sponsorship.” This comment positioned sponsorship as a meaningful source of professional growth. Sponsorship also created exposure to leadership environments. Participant 19 explained, “I had him join my CISO meetings,” indicating access to spaces where advancement-related decisions occurred.

Sponsorship also involved decisions about readiness and timing for opportunity. Sponsors could advocate for individuals before they were fully prepared for a role. Participant 19 stated, “if I find someone who's hungry, I'm pushing them. Even if they need some development.” This example reflects placement in situations that increase visibility and experience. Sponsorship provided access to opportunities that might not otherwise be available, including identifying potential and facilitating advancement. It depended on the willingness of leaders to advocate for individuals within decision-making processes.

Sponsorship was unevenly distributed across individuals and contexts. Access to sponsorship was influenced by relationships and organizational structures. Participant 11 described access to opportunity as shaped by advocacy and access provided by others. This account reflected variability in access to advocacy. Some accounts also showed the absence of

sponsorship, noting that mentorship may be present while advocacy is absent from advancement decisions. Participant accounts reflected variation in sponsorship experiences depending on access to influential relationships and leadership support.

Across participant responses, sponsorship was consistently described as a mechanism influencing access to opportunity and advancement through advocacy and visibility. Participants indicated that sponsorship involves active support from individuals in positions of influence, including recommending individuals for roles and providing access to leadership environments. Some participants described receiving sponsorship that facilitated opportunity, while others described limited or absent access to advocacy. These variations reflect differences in how sponsorship is distributed across roles and organizational contexts. Across all responses, sponsorship was associated with access to opportunity through advocacy rather than development alone.

Theme 5: Bias as a Structural and Experiential Mechanism

Bias emerged across hiring, evaluation, and advancement processes within higher education IT organizations. Bias was characterized as operating through organizational practices, decision-making routines, and interpersonal interactions. Across roles, bias appeared in both formal systems and informal processes, including hiring decisions, opportunity access, and performance evaluation. The theme reflects patterned descriptions of bias as occurring through structural factors, such as organizational norms and systems, as well as through lived experiences shaped by identity and relationships. Bias was not always explicit but appeared through patterns in opportunity distribution and recognition. Although bias took different

forms, it consistently shaped how decisions were made and how individuals were perceived within organizational contexts.

Bias operated through both organizational systems and interpersonal experiences. Across the interviews, bias appeared in hiring processes, leadership perceptions, opportunity access, and evaluation practices perceived as unevenly applied across individuals and groups. Bias was consistently described as operating through structured systems and decision-making processes within organizations. Several participants indicated that systems used in hiring and evaluation may reflect underlying assumptions or configurations. Participant 6 explained, “who's doing the configuring? And their perspective is how they're gonna build anything.” This comment linked bias to system design and implementation. Participant 14 asked, “Do they know they're not gonna hire me when they call me in for these interviews?” This question reflected concern about bias within both formal and informal decision-making structures. Bias shaped outcomes through processes that may appear neutral but are influenced by underlying practices and perspectives.

Bias was also connected to networks and access to opportunity. Participant 4 stated that “white males” sometimes “get opportunities that they shouldn't have been afforded” because of “networks” and “who they know.” This example linked access to opportunity with relationships and familiarity within the organization. Participant 4 stated that some individuals are “just given the benefit of the doubt.” This comment reflected differences in how individuals were evaluated and considered for opportunities within organizational processes.

Bias also connected to identity and lived experience within the workplace. Race, gender, and other aspects of identity shaped several workplace experiences. Participant 15 stated, “I

felt like that they gave me the interview because they had to," describing perceived inequity in hiring processes. Participant 4 stated, "I've had to be 3 times better," indicating differences in expectations and treatment. Bias influenced how individuals were evaluated, recognized, and considered for advancement. These patterns were reflected across participant responses.

Across participant responses, bias was consistently described as influencing organizational processes, relationships, and individual experiences within higher education IT environments. Participants indicated that bias operates through both formal systems and informal practices, including hiring, evaluation, and access to opportunity. Some participants described bias as subtle or embedded within routine processes, while others described direct experiences related to identity and treatment. These variations reflect differences in how bias is experienced across roles and contexts. Across all responses, bias was associated with patterns in decision-making and access to opportunity within the organization.

Theme 6: Inclusion as a Multi-Dimensional Experience

Inclusion emerged as a multi-dimensional experience related to access, participation, and treatment within higher education IT organizations. Inclusion was characterized as extending beyond representation to include how individuals were involved in decision-making, communication, and day-to-day organizational practices. Across roles, inclusion connected to whether individuals entered conversations, assignments, and opportunities that influenced their work and career progression. The theme reflects patterned descriptions of inclusion as shaped through interactions, access to information, and participation in organizational processes. Inclusion varied across roles and contexts depending on how individuals were

engaged and supported within the organization. Although inclusion took different forms, it consistently involved access to opportunity and participation in organizational activities.

Inclusion extended beyond demographic representation to include active participation in meetings, projects, leadership interaction, and organizational communication processes. Across responses, inclusion was associated with access to participation rather than symbolic organizational presence alone. Inclusion was connected to access, participation, and involvement in organizational processes. Inclusion involved being given a chance to participate and contribute. Participant 14 stated, “actually giving somebody a chance is like the biggest thing that you can do.” This comment linked inclusion to access to opportunities within the organization. Participant 12 described inclusion as tied to access and opportunity rather than representation alone. This account positioned inclusion as access and participation rather than representation alone. Inclusion influenced how individuals contributed to work and became involved in organizational activities.

Leadership behavior and team dynamics also shaped inclusion. Inclusion was influenced by how leaders interacted with staff and structured participation within teams. Participant 12 described inclusive leadership as openness to other perspectives and willingness to learn from others. This account reflected openness to different perspectives within organizational settings. Inclusion was connected to everyday practices, including communication and engagement within teams. These descriptions show that inclusion occurs through how individuals are invited to participate and how their contributions are received. Inclusion depended on both formal structures and informal interactions within the workplace.

Inclusion also varied across organizational contexts and experiences. Inclusion was tied to access to meetings, projects, and decision-making processes. These accounts showed differences in how individuals were included in organizational activities across roles and contexts.

Across participant responses, inclusion was consistently described as a multi-dimensional experience related to access, participation, and treatment within higher education IT organizations. Participants indicated that inclusion involves more than representation and is shaped by access to opportunities, involvement in decision-making, and engagement in organizational processes. Some participants described inclusive experiences characterized by access and participation, while others described limitations in involvement and opportunity. These variations reflect differences in how inclusion is experienced across roles and contexts. Across all responses, inclusion was associated with participation in organizational activities and access to opportunities within the workplace.

Theme 7: Opportunity as the Core Mechanism of Advancement

Opportunity emerged as a central mechanism shaping recruitment, retention, and advancement within higher education IT organizations. Opportunity was characterized as access to assignments, leadership exposure, development experiences, and roles that contribute to career progression. Across roles, opportunity marked the point where organizational processes, managerial decisions, and individual experiences converged. The theme reflects patterned descriptions of opportunity as associated with how individuals moved within the organization and how advancement is experienced. Opportunity was influenced by access to projects, visibility, advocacy, and leadership interaction, and was not experienced

evenly across staff. Although pathways differed, opportunity consistently involved access to experiences that contributed to career growth and advancement.

Opportunity functioned as the mechanism through which visibility, mentorship, sponsorship, leadership access, and organizational support translated into advancement outcomes. Across participant groups, opportunity was associated with exposure to projects, leadership interaction, and participation in advancement-related activities. Opportunity was closely tied to advancement and career progression within organizational environments. Participant 14 stated, “by having someone... just willing to give you a chance... that can really encourage... someone to maybe work harder.” This comment connected opportunity to advancement outcomes. Opportunity also connected to exposure and experience. Participant 11 connected project access and exposure to growth and recognition. This account framed opportunity as access to experiences that contribute to recognition and advancement within the organization.

Managerial decisions and access to leadership environments also influenced opportunity. Opportunities were provided through work assignments and involvement in organizational activities. Participant 19 stated, “if I find someone who's hungry, I'm pushing them.” This comment connected opportunity to managerial judgment and decision-making. Opportunity also connected to leadership access and participation in decision-making spaces, where inclusion increased exposure and experience. These accounts show that opportunity was shaped by decisions about assignment access and leadership interaction. Opportunity depended on access to roles and experiences that contributed to advancement. Opportunity was also unevenly distributed across individuals and contexts. Access to opportunity depended

on organizational processes, relationships, and project participation. Opportunity was experienced differently across organizational roles and institutional contexts.

Across participant responses, opportunity was consistently described as a central mechanism influencing recruitment, retention, and advancement within higher education IT organizations. Participants indicated that opportunity is shaped by access to assignments, leadership exposure, and involvement in organizational processes. Some participants described access to opportunities that contributed to career progression, while others described limited or uneven access across roles and contexts. Opportunities were distributed and experienced differently across organizational environments. Across all responses, opportunity was associated with access to experiences that influence career growth and advancement.

Theme 8: AI as a Filtering and Support Mechanism

Artificial intelligence-enabled human resource tools emerged as mechanisms supporting hiring, screening, and evaluation processes within higher education IT organizations. Artificial intelligence was characterized as assisting with tasks such as reviewing applications, identifying candidates, and organizing information for decision-making. Across roles, AI functioned within existing organizational systems rather than operating independently. The theme reflects patterned descriptions of AI as affecting how information is processed and how individuals are identified within recruitment and evaluation processes. Artificial intelligence use varied by organizational context, with some participants reporting direct interaction and others reporting general awareness of its use. Although AI supported efficiency, it functioned as a supporting tool within broader human decision-making processes.

Artificial intelligence-enabled systems functioned primarily within screening, filtering, and organizational support processes rather than as independent decision-making authorities. Across responses, participants emphasized that human interpretation and organizational configuration continued to shape how AI outputs were applied within hiring and evaluation systems. Artificial intelligence-enabled tools supported the processing of large volumes of information during hiring and evaluation processes. Artificial intelligence was useful for screening applications and identifying candidates based on predefined criteria. Participant 4 stated, “I think it can help us scan, especially when there's large pools of candidates... because it looks for keywords.” This comment emphasized efficiency in handling high volumes of data. Another participant described AI as useful for aligning candidate information and reviewing resumes during early screening. Artificial intelligence supported the initial stages of recruitment and evaluation by organizing and filtering information. The accounts showed that AI influenced how candidates were identified and considered within organizational processes.

The accounts also identified limitations in how AI was used within hiring and evaluation processes. Artificial Intelligence lacked the ability to account fully for context and nuance in decision-making. Participant 6 stated, “That has to be configured. There's no AI going on back there.” This comment positioned AI as operating through predefined rules. Participant 4 described “the nuanced piece that... a human being has” and cautioned that “we could miss some very good candidates.” This concern reflected limits in interpreting complex or contextual information. Artificial intelligence depended on how it was configured and used within organizational systems.

Artificial intelligence also functioned alongside human decision-making rather than replacing it. Human evaluation remained necessary in hiring and advancement decisions. Participant 19 stated, “I think it is still the human behind the preference settings.” This comment emphasized that individuals remained responsible for interpreting and acting on information produced by AI systems. Artificial intelligence assisted with administrative tasks while decisions continued to be made by individuals within the organization. Collectively, participant responses reflected that AI affects how information is processed while decision-making authority remains with human actors.

Across responses, artificial intelligence-enabled tools supported hiring, screening, and evaluation by organizing and filtering information, particularly during early recruitment stages. Participants recognized efficiency benefits but also identified limits related to context, interpretation, configuration, and human judgment. These findings showed that artificial intelligence supported, rather than replaced, decision-making within organizational processes.

Theme 9: Emotional Intelligence and Mindset as Selection and Development Factors

Emotional intelligence and mindset emerged as factors influencing hiring, development, and workplace interactions within higher education IT organizations. Emotional intelligence was characterized as the ability to manage interpersonal relationships, respond to feedback, and navigate organizational dynamics. Mindset was described in terms of openness to learning, adaptability, and willingness to develop skills over time. Across roles, these attributes were considered during hiring decisions and ongoing performance evaluation. The theme reflects patterned descriptions of emotional intelligence and mindset as associated with how individuals are selected, supported, and perceived within the organization. These factors were

evaluated alongside technical skills and were considered important for collaboration and professional growth.

Across leadership and staff roles, emotional intelligence and mindset were linked to adaptability, collaboration, and professional development. These characteristics influenced both hiring considerations and ongoing evaluation within organizational environments. Emotional intelligence appeared as an important factor in hiring decisions. Interpersonal awareness and behavior were considered alongside technical capability. Participant 4 stated, “I look for emotional intelligence in all my hires.” This comment connected emotional intelligence to candidate selection and evaluation. Emotional intelligence also related to workplace interactions. Interpersonal awareness supported collaboration and communication within teams. These accounts connected emotional intelligence to how individuals engaged with others in organizational environments.

Mindset also influenced hiring, development, and long-term engagement within higher education IT organizations. A growth mindset was preferred over a fixed mindset in evaluating candidates and employees. Participant 4 stated, “I can always teach skills or build capacity, but... it's very hard to... work with people when they have a fixed mindset.” This comment connected mindset to the ability to develop and adapt within the organization. Another participant described mindset as influencing how individuals respond to challenges and opportunities, noting that openness to learning is associated with professional development. These accounts connected mindset to how individuals engaged with work and development processes.

Emotional intelligence and mindset also influenced how individuals were evaluated and supported within the organization. These factors affected how individuals responded to feedback, interacted with others, and navigated workplace challenges. A fixed mindset could limit development and collaboration within organizational environments. Emotional intelligence contributed to understanding organizational dynamics and responding appropriately in professional settings. These accounts show that emotional intelligence and mindset were considered in both hiring and ongoing evaluation processes and shaped how individuals were perceived and supported within the workplace.

Across participant responses, emotional intelligence and mindset were consistently described as factors influencing hiring, development, and workplace interactions within higher education IT organizations. Participants indicated that these attributes are considered alongside technical skills and contribute to how individuals are selected and evaluated. Some participants emphasized the importance of emotional intelligence in collaboration and communication, while others described mindset as associated with adaptability and growth. These variations reflect differences in how these factors are emphasized across roles and contexts. Across all responses, emotional intelligence and mindset were associated with selection and development processes within the organization.

Theme 10: Resources and Structural Constraints as Limiting Factors

Resources and structural constraints emerged as factors shaping hiring, development, and advancement within higher education IT organizations. Resources were characterized as including funding, staffing levels, compensation structures, and organizational capacity. Structural constraints were described as limitations related to organizational design, including

position availability, promotion pathways, and institutional policies. Across roles, these factors shaped how opportunities were created and distributed within the organization. The theme reflects patterned descriptions of resource limitations and structural conditions influencing decision-making and access to opportunity. These constraints affected how organizations recruited, retained, and developed talent. Although constraints varied, resources and structure consistently shaped the availability of opportunities within higher education IT environments.

Organizational resources and structural design influenced hiring capacity, staffing stability, advancement pathways, and access to development opportunities. Across participant groups, resource limitations and organizational hierarchy constrained career mobility and organizational flexibility. Resource limitations influenced hiring and retention decisions within higher education IT organizations. Compensation constraints affected the ability to recruit and retain technical talent. Participant 18 stated, “I could never pay quite enough... to keep somebody long term.” This comment linked financial resources to hiring and retention outcomes. Another participant described how resource limitations influence staffing strategies, noting that organizations may rely on alternative approaches, such as developing internal talent, when external hiring is limited. These accounts linked resource constraints to organizational approaches to hiring and retention. Resources shaped the availability of personnel and the ability to sustain staffing over time.

Structural constraints also limited advancement opportunities within organizations. Organizational design affected the availability of roles and promotion pathways. Participant 18 stated, “there's not a lot of opportunity or room... for growth... what are they going to rise up into?” This comment linked structure to advancement limitations. Another participant

described how small team sizes and fixed organizational hierarchies influence career progression, noting that opportunities for advancement may be limited regardless of performance. Participant responses connected organizational structure with the availability of positions and advancement pathways.

Resources also shaped how opportunities were created and distributed. Participant 19 described the issue as “the lack of investment from the institution.” This comment linked funding to access to development and advancement opportunities. Structural constraints also shaped how work was assigned and how opportunities were made available. These accounts linked staffing levels and organizational design to the availability and distribution of opportunities within higher education IT environments.

Across participant responses, resources and structural constraints were consistently described as influencing hiring, retention, and advancement within higher education IT organizations. Participants indicated that financial resources, staffing levels, and organizational design affect how opportunities are created and distributed. Some participants described strategies used to manage resource limitations, while others described constraints that limited access to advancement and development. These variations reflect differences in organizational context and capacity. Across all responses, resources and structural constraints were associated with the availability and distribution of opportunities within the organization.

Discussion of Study Findings

The themes collectively show how organizational processes, relationships, managerial routines, and structural conditions shaped recruitment, retention, and advancement within higher education IT environments. Across themes, access to opportunity was shaped by

interconnected organizational mechanisms rather than isolated experiences or formal policies alone. When considered together, these themes show consistent patterns related to access, decision-making, and the distribution of opportunity across roles and contexts.

Across themes, middle management, visibility, mentorship, and sponsorship operated as interconnected mechanisms influencing how individuals experienced opportunity within the organization. Middle managers influenced assignment distribution, leadership access, and exposure to organizational processes, while visibility affected recognition and participation in advancement-related activities. Mentorship was described as supporting development and preparedness, whereas sponsorship was associated with advocacy and access to leadership environments. Collectively, these themes show how organizational relationships and routines shaped access to opportunity through both formal and informal processes.

Opportunity was also distributed and experienced through identifiable patterns. Across participant groups, opportunity consistently involved access to projects, leadership interaction, visibility, and advocacy. Opportunity was shaped through assignment decisions, sponsorship, organizational participation, and leadership exposure rather than through formal organizational structures alone. These findings show that opportunity functioned as the mechanism through which organizational processes translated into advancement-related experiences and outcomes.

Themes related to bias and inclusion also reflect how organizational processes influence participant experiences. Bias operated through both formal systems and informal organizational practices, including hiring processes, evaluation, access to opportunity, and leadership interaction. Inclusion was described as connected to participation, communication,

and involvement in organizational activities rather than representation alone. Together, these themes indicate that participant experiences of inclusion and exclusion are shaped through organizational routines, access mechanisms, and patterns of participation within higher education IT environments. Emotional intelligence and mindset also appeared within hiring and development processes. These factors shaped how individuals were selected, evaluated, and supported within the organization. Emotional intelligence and mindset were considered alongside technical skills and influenced how individuals were perceived and developed.

Themes related to AI-enabled HR tools and resources and structural constraints reflect how organizational systems influence participant experiences within higher education IT organizations. Artificial intelligence-enabled tools supported hiring and evaluation processes through filtering, organization, and information processing, while human judgment remained central to decision-making. Financial limitations, staffing constraints, and organizational hierarchy also influenced access to opportunity and advancement pathways. Together, these themes indicate that organizational systems, technological processes, and structural conditions collectively shape how opportunity is created, distributed, and experienced.

Across all themes, participant responses showed consistent patterns in how organizational mechanisms operate within higher education IT environments. Middle-management engagement, visibility, mentorship, sponsorship, inclusion, AI-enabled systems, and structural conditions operated as interconnected mechanisms influencing access to opportunity, participation in organizational processes, and advancement experiences. At a broad level, these patterns were consistent with scholarship on organizational accountability, inclusive participation, developmental networks, social capital, and AI governance (Dobbin &

Kalev, 2022; Dobrow et al., 2012; Raji et al., 2020; Randel et al., 2018; Seibert et al., 2001). Detailed interpretation of these relationships is presented in Chapter 5. Although variation appeared across organizational roles and institutional contexts, these mechanisms consistently shaped how recruitment, retention, and advancement were experienced within higher education IT organizations.

The findings presented in this chapter align with the central research question by describing how participants experience middle-management engagement, mentorship, and sponsorship, and AI-enabled HR tools as mechanisms shaping recruitment, retention, and advancement outcomes. Across the interviews, these mechanisms consistently influenced access to opportunity, participation in organizational processes, and experiences of advancement within higher education IT organizations.

Chapter Summary

Chapter 4 presented the findings of this qualitative phenomenological study organized across ten themes reflecting participant experiences within higher education IT organizations. These themes included middle management as a gatekeeping mechanism, visibility as a mechanism of access, mentorship as a development mechanism, sponsorship as an advocacy mechanism, bias as a structural and experiential mechanism, inclusion as a multi-dimensional experience, opportunity as the core mechanism of advancement, AI as a filtering and support mechanism, emotional intelligence and mindset as selection and development factors, and resources and structural constraints as limiting factors. Across these themes, participants described patterns related to access to opportunity, participation in organizational processes, and experiences of recruitment, retention, and advancement.

The findings showed consistent patterns in how organizational practices, relationships, and systems shaped participant experiences. Although variation appeared across participants and contexts, the themes centered on access to assignments, leadership interaction, development, and evaluation processes within higher education IT environments. These findings provide a descriptive account of participant experiences as they relate to the study's central research question. Chapter 5 presents the interpretation of these findings in relation to existing scholarship and the study's conceptual framework.

Chapter 5: Discussion and Conclusions

The purpose of this qualitative phenomenological study was to explore how higher education information technology professionals, including underrepresented staff, mid-level IT managers, and human resources or equity partners, experience middle-management engagement, mentorship, and sponsorship, and artificial intelligence–enabled human resources tools as mechanisms shaping recruitment, retention, and advancement outcomes. The study examined these mechanisms across roles within U.S. higher education IT environments to understand how access to opportunity is experienced within organizational processes. This focus on lived experience supported examination of how these mechanisms operate in practice rather than how they are formally defined.

The problem addressed in this study was persistent underrepresentation and uneven access to career opportunity for racially and gender-underrepresented professionals in higher education IT. Higher education IT workforce data document representation gaps, particularly in administrative roles (Pritchard et al., 2019). Prior research indicates that organizational accountability and routine decision processes influence diversity outcomes beyond formal policy statements alone (Dobbin & Kalev, 2022; Kalev et al., 2006). These disparities persist across institutional contexts and continue to affect access to leadership pathways and advancement opportunities. The problem therefore remains relevant to both organizational practice and ongoing scholarly inquiry.

This study was guided by an integrated conceptual framework drawing on intersectionality theory, critical race theory, and generative interactions, which together provide a lens for examining how identity, power, and organizational routines shape access to

opportunity and career progression. These lenses support examination of how managerial practices, developmental relationships, and technology-enabled systems are experienced within organizational contexts. The framework provides a structure for examining how multiple mechanisms operate together rather than independently. It also supports interpretation of how participant experiences are situated within broader organizational and sociotechnical systems.

Building on the findings presented in Chapter 4, this chapter interprets the thematic patterns identified across participant experiences in relation to the conceptual framework and current scholarship on higher education IT leadership, equity, and organizational processes. The chapter presents interpretation of key findings, followed by implications for practice, limitations of the study, recommendations for future research, and concluding observations. Interpretation is grounded in participant descriptions while connecting those descriptions to existing literature and theoretical perspectives. This structure supports alignment between the findings, the conceptual framework, and the broader contribution of the study.

The interpretation of findings in this chapter is organized around the central research question and three supporting sub-questions introduced in Chapter 1. Restating the questions here reinforces the connection between the study problem, the findings presented in Chapter 4, and the conclusions developed in Chapter 5.

Q1. How do underrepresented higher education information technology professionals, mid-level IT managers, and human resources (HR) or equity partners working in U.S. higher education institutions experience middle-management engagement, mentorship, and sponsorship, and AI-enabled HR tools as mechanisms that shape recruitment, retention, and advancement outcomes?

RQ1a. How do higher education IT staff and mid-level IT managers describe middle-management engagement in inclusive practices such as stretch assignment allocation, participation in decision-making meetings, performance calibration, and coaching, and how do these practices relate to perceived recruitment, retention, and advancement outcomes?

RQ1b. In what ways do underrepresented IT professionals and their leaders experience mentorship and sponsorship, including access, advocacy, and developmental support, and how do intersecting identities in IT career progression shape these experiences?

RQ1c. How do participants perceive the equity implications of artificial intelligence-enabled human resources tools used in hiring, evaluation, and advancement decisions within higher education information technology?

Together, these questions frame the interpretation of findings by focusing attention on how organizational routines, developmental relationships, and AI-enabled systems shaped participants' experiences of access, opportunity, and advancement.

Limitations of Study Findings

The findings of this study should be considered in light of several limitations related to sample size, transferability, data source, and study context. First, the study included a sample of 15 participants drawn from higher education IT environments. While this sample size is consistent with qualitative phenomenological research and supports depth of inquiry, it limits the range of perspectives represented across all institutional types and roles. The sample reflects information-rich cases rather than a comprehensive representation of all higher education IT professionals.

Second, the transferability of findings is constrained by the study's focus on U.S. higher education IT institutions. Participants were drawn from a specific professional and institutional context, and the findings reflect experiences within that environment. While thick description was used to support transferability, application of findings to other sectors, such as corporate IT or international higher education systems, may require contextual consideration. These contextual boundaries should be considered when applying findings beyond similar institutional settings.

Third, the study relied on self-reported data obtained through semi-structured interviews. Participant responses may be influenced by recall bias, personal interpretation, or social desirability. Although procedures such as transcript verification and careful questioning were used to support accuracy, the findings reflect participant perceptions rather than direct observation of organizational processes or objective measurement of outcomes. This reliance on perception-based data represents a limitation inherent in phenomenological research designs.

Fourth, the study did not include a technical evaluation of AI-enabled HR tools or a direct analysis of organizational systems. As a result, findings related to AI reflect participant experiences and perceptions of these tools rather than an assessment of underlying algorithms or system performance. This limits the ability to draw conclusions about the technical functioning of AI systems within organizational contexts. The focus on experience rather than system-level analysis defines the scope of conclusions that can be drawn from the findings.

Despite these limitations, the study provides value through its focus on lived experience and the identification of consistent patterns across participants. The qualitative

phenomenological design supports an in-depth understanding of how organizational mechanisms are experienced across roles, offering insights into processes that are not readily captured through quantitative approaches. The findings contribute to both scholarship and practice by providing a structured account of how middle-management engagement, mentorship and sponsorship, and AI-enabled HR tools operate within higher education IT environments. These contributions should be considered alongside the stated limitations when interpreting the results of the study.

Interpretation of Study Findings

The interpretation of study findings connects the 10 themes presented in Chapter 4 to the central research question, the conceptual framework, and the literature reviewed in Chapter 2. The themes are interpreted separately for clarity, but they are best understood as interacting mechanisms that shaped participants' experiences of access, opportunity, and advancement. Across the findings, opportunity emerged as the central point where middle-management behavior, visibility, mentorship, sponsorship, inclusion, bias, AI-enabled tools, emotional intelligence and mindset, and structural constraints converged.

Theme 1: Middle Management as a Gatekeeping Mechanism

Middle management functioned as a central mechanism influencing access to opportunity, visibility, and advancement within higher education IT institutions through assignment distribution, leadership exposure, and communication practices. Participants described middle managers as controlling how assignments are distributed, how information is communicated, and how individuals gain exposure to leadership and decision-making processes. These findings position middle management as the operational layer through which

organizational processes are enacted in practice. The role, therefore, represents a primary point at which access to opportunity is shaped within organizational systems.

Participant descriptions indicate that access to opportunity is not determined solely by formal structures but is mediated through managerial decisions and interactions. Control of assignments, communication, and exposure to leadership reflects how middle management shapes the conditions under which employees experience their roles. These patterns show that managerial behavior influences how individuals are positioned within the organization and how they are considered for advancement. Variation in participant responses indicates that similar structural roles can produce different outcomes depending on how managerial responsibilities are enacted.

Participants also described how middle management influences the movement of opportunities within organizational processes. Descriptions of delayed communication, limited access, and selective exposure to leadership indicate that managers affect how opportunities progress through the organization. These patterns position middle management as a mechanism that connects organizational systems to individual experience. The consistency of these descriptions across participants supports the interpretation that middle management functions as a control point within organizational processes.

These findings align with research showing that middle managers carry practical responsibility for implementing diversity, equity, and inclusion initiatives and that accountability structures, monitoring, and implementation supports influence whether equity commitments become operational practice (Boroș & Gorbatai, 2024; Burnett & Aguinis, 2024; U.S. Government Accountability Office, 2024). Prior studies establish the importance of middle-

manager implementation and organizational accountability. The present study extends that literature by identifying assignment allocation, communication, and leadership exposure as experienced mechanisms within higher education IT. This extension emphasizes the role of middle management as an operational mechanism rather than a purely administrative function.

Within the conceptual framework of this study, middle management operates as a gatekeeping mechanism connecting structural conditions to downstream processes such as visibility, mentorship, and sponsorship. Participant descriptions indicate that this role influences how individuals gain access to experiences that contribute to advancement. This positioning highlights how managerial routines translate organizational priorities into lived experience. Collectively, participant responses position middle management as a central mechanism shaping access to opportunity within higher education IT institutions.

Theme 2: Visibility as a Mechanism of Access

Visibility functioned as a mechanism through which access to opportunity, leadership interaction, and advancement-related experiences were distributed within higher education IT institutions. Participants described visibility as connected to being seen, recognized, and included in organizational processes such as meetings, projects, and decision-making environments. These findings indicate that visibility operates as a condition for recognition rather than as a direct outcome of performance. The role of visibility therefore reflects how organizational systems determine who is acknowledged and considered for advancement.

Participant descriptions indicate that performance alone does not ensure recognition within organizational contexts. Visibility was associated with proximity to leadership, participation in high-impact work, and inclusion in communication channels. These patterns

show that recognition is mediated through access to organizational spaces rather than automatically derived from individual contribution. The findings therefore support the interpretation that visibility is constructed through organizational routines rather than achieved solely through effort.

Participants also described visibility as influenced by both formal and informal processes within the organization. Formal processes include assignment to projects and participation in structured activities, while informal processes include communication practices and leadership attribution of work. These dynamics position visibility as a function of how work is presented and communicated within hierarchical structures. The findings indicate that visibility is shaped by how organizational systems distribute exposure and recognition.

These findings extend social-capital research showing that network position and access to social resources are associated with career success (Seibert et al., 2001). In this study, participants experienced visibility and leadership access as specific mechanisms through which that broader social-capital process operated. Seibert et al. (2001) linked network resources to career success; the present findings specify project assignments and leadership exposure as concrete forms of visibility experienced by participants. The findings extend this literature by demonstrating how visibility is experienced as a mechanism shaped by access rather than performance alone. This extension highlights how organizational routines influence recognition and advancement outcomes.

Within the conceptual framework of this study, visibility operates as a mechanism connecting middle management practices to opportunity access. Participant descriptions indicate that visibility is influenced by assignment decisions and communication structures that

determine exposure to leadership. This positioning highlights how individuals are made visible within organizational systems rather than becoming visible through performance alone. Across responses, visibility emerged as a key mechanism shaping access to opportunity within higher education IT institutions.

Theme 3: Mentorship as a Development Mechanism

Mentorship functioned as a developmental mechanism supporting skill-building, organizational learning, and career navigation within higher education IT institutions. Participants described mentorship as providing guidance, feedback, and access to knowledge that supports understanding of organizational processes and career pathways. Across responses, mentorship was associated with preparedness rather than direct access to opportunity. The role of mentorship therefore reflects how individuals develop capability within organizational systems.

Participant descriptions indicate that mentorship enhances understanding of organizational expectations and decision-making processes. Access to feedback, advice, and experiential knowledge supports how individuals interpret their roles and identify potential career pathways. These patterns show that mentorship contributes to how individuals prepare for advancement rather than ensuring advancement outcomes. The findings therefore support the interpretation that mentorship operates as a mechanism focused on development rather than mobility.

Participants also described variation in mentorship structure and effectiveness across organizational contexts. Mentorship occurred through both formal programs and informal relationships, with informal interactions often described as more impactful. These differences

indicate that mentorship is shaped by access to relationships and organizational environment rather than standardized processes alone. The findings suggest that mentorship outcomes vary depending on how relationships are formed and maintained within the organization.

These findings align with existing research indicating that mentorship contributes to professional development, skill-building, and career navigation but does not independently guarantee advancement (Allen et al., 2004; Dobrow et al., 2012; Ensher & Murphy, 2005; Higgins & Kram, 2001). Prior studies have shown that mentorship provides guidance and psychosocial support that enhances individual capability. The findings extend this literature by demonstrating how mentorship is experienced as preparation for opportunity rather than a direct pathway to advancement. This extension reinforces the distinction between development and access within organizational systems.

Within the conceptual framework of this study, mentorship operates as a development mechanism that supports readiness for opportunity but does not directly control access to advancement. Participant descriptions indicate that mentorship contributes to how individuals build skills and interpret organizational processes. This positioning highlights how mentorship functions alongside other mechanisms, such as visibility and sponsorship, that influence mobility. Participant descriptions consistently positioned mentorship as a supporting mechanism contributing to career progression within higher education IT institutions.

Theme 4: Sponsorship as an Advocacy Mechanism

Sponsorship functioned as an advocacy mechanism directly influencing access to opportunity and advancement within higher education IT environments. Participants described sponsorship as involving active support from individuals in positions of influence who advocate

for others in decisions related to assignments, promotions, and leadership exposure. These patterns suggest that sponsorship converts visibility and access into advancement-related outcomes. The role of sponsorship therefore reflects how advocacy influences movement within organizational systems.

Participant descriptions indicate that sponsorship provides access to opportunities through relational influence and positional authority. Access to networks, leadership environments, and high-visibility assignments was described as dependent on the willingness of influential individuals to advocate for others. These patterns show that sponsorship operates through interpersonal relationships that shape how individuals are positioned within decision-making processes. The findings therefore support the interpretation that sponsorship functions as a mechanism linking access to advancement through advocacy.

Participants also described sponsorship as involving decisions about readiness and timing for opportunity. Sponsors were described as placing individuals into roles or environments that increase exposure and experience, sometimes prior to full preparedness. These dynamics indicate that sponsorship influences when and how individuals are presented for advancement opportunities. Sponsorship operated through discretionary decisions that shaped access to leadership environments and advancement pathways.

These findings align with developmental-network and sponsorship research showing that sponsorship differs from mentoring because it involves active advocacy, visibility, strategic exposure, and access to opportunity through influential relationships (Dobrow et al., 2012; Schwartz et al., 2024). Prior studies have shown that sponsorship involves the use of influence to support individuals in gaining visibility and access to decision-making processes that affect

promotion outcomes. The findings extend this literature by demonstrating how sponsorship is experienced as an active mechanism shaping access to opportunity within higher education IT environments. This extension emphasizes the role of advocacy as a distinguishing factor in advancement outcomes.

Within the conceptual framework of this study, sponsorship operates as a mechanism that directly influences access to opportunity through advocacy and positioning. Participant descriptions indicate that sponsorship connects visibility and organizational relationships to advancement outcomes by influencing how individuals are recommended and presented within decision-making processes. Sponsorship functions alongside mentorship but plays a distinct role in enabling mobility. Across participant responses, sponsorship emerged as a central mechanism shaping advancement within higher education IT environments.

Theme 5: Bias as a Structural and Experiential Mechanism

Bias functioned as a structural and experiential mechanism influencing hiring, evaluation, access, and advancement within higher education IT environments. Participants described bias as operating through both formal systems and informal practices, including decision-making routines, access to opportunity, and interpersonal interactions. Participant responses consistently described bias as embedded within organizational processes rather than occurring as isolated events. The role of bias therefore reflects how patterns of access and evaluation are shaped within organizational systems.

Participant descriptions indicate that bias operates through routine decision-making practices that influence how individuals are evaluated and how opportunities are distributed. Access to opportunity was described as associated with networks, familiarity, and patterns of

recognition within the organization. These patterns show that bias is embedded in processes that may appear neutral but produce uneven outcomes. The findings therefore support the interpretation that bias functions as a mechanism influencing how access and recognition are distributed.

Participants also described bias as connected to identity and lived experience within organizational contexts. Experiences related to race, gender, and other identity factors were described as influencing how individuals were perceived, evaluated, and considered for opportunity. These dynamics indicate that bias operates through both structural processes and interpersonal interactions that shape organizational experience. The findings suggest that bias is experienced as part of broader patterns rather than as isolated incidents.

These findings align with research showing that inequality can be reproduced through racialized organizational routines and cultural matching, while accountability structures may help counter those patterns (Ray, 2019; Rivera, 2012). Prior studies have shown that seemingly neutral processes can reproduce disparities through patterns of decision-making and access to opportunity. The findings extend this literature by demonstrating how bias is experienced across roles within higher education IT environments. This extension emphasizes how organizational routines contribute to uneven access and recognition.

Within the conceptual framework of this study, bias functions as a cross-cutting influence on how access to opportunity is distributed across organizational processes. Participant descriptions indicate that bias shapes how middle management, visibility, mentorship, and sponsorship function in practice. This positioning highlights how bias interacts with multiple mechanisms rather than operating independently. Collectively, these patterns

demonstrate how bias influences the experience of opportunity within higher education IT institutions.

Theme 6: Inclusion as a Multi-Dimensional Experience

Inclusion functioned as a mechanism associated with access, participation, organizational engagement, and workplace interaction within higher education IT institutions. Participants described inclusion as extending beyond representation to include involvement in decision-making processes, communication, and day-to-day organizational activities. These findings reflect how inclusion operates through participation in organizational routines rather than demographic presence alone. The role of inclusion, therefore, reflects how participation and engagement are experienced within organizational systems.

Participant descriptions indicate that inclusion is shaped by access to opportunities and involvement in organizational processes. Participation in meetings, assignments, and communication channels was described as influencing how individuals are able to contribute to their work environments. These patterns show that inclusion is associated with how individuals are positioned within organizational routines and decision-making structures. The findings therefore support the interpretation that inclusion functions as a mechanism through which access and participation are experienced.

Participants also described inclusion as influenced by leadership behavior and team-level interactions. Leadership practices related to communication, openness, and engagement were described as shaping how individuals were invited to participate and how their contributions were received. These dynamics indicate that inclusion operates through both

formal structures and informal interactions within the organization. Inclusion was experienced through everyday organizational practices influencing engagement and participation.

These findings align with current inclusion research indicating that inclusion is shaped by access to participation, communication, fair treatment, being valued, and involvement in core organizational processes (Randel, 2025). Prior studies have shown that inclusion extends beyond representation to include engagement in decision-making and access to opportunities. The findings extend this literature by demonstrating how inclusion is experienced through access to participation within higher education IT environments. This extension highlights how organizational routines shape inclusion as an experiential process.

Within the conceptual framework of this study, inclusion operates as a mechanism connected to access and participation within organizational processes. Participant descriptions indicate that inclusion influences how individuals engage with work, interact with others, and contribute to organizational activities. This positioning highlights how inclusion functions alongside other mechanisms in shaping access to opportunity. Participant descriptions consistently reflected that inclusion shapes how organizational processes are experienced within higher education IT institutions.

Theme 7: Opportunity as the Core Mechanism of Advancement

Opportunity functioned as the central mechanism through which recruitment, retention, development, and advancement outcomes were realized within higher education IT institutions. Participants described opportunity as access to assignments, exposure to leadership, and experiences that contribute to career progression. Across themes, opportunity emerged as the point at which organizational processes, relationships, and individual

experiences converge. The role of opportunity therefore reflects how access to experiences translates into advancement outcomes within organizational systems.

Participant descriptions indicate that opportunity is shaped by access to organizational processes rather than determined solely by individual performance. Access to projects, leadership environments, and decision-making spaces was described as influencing how individuals are recognized and considered for advancement. These patterns show that opportunity is constructed through organizational routines that distribute access unevenly across individuals. The findings therefore support the interpretation that opportunity functions as the mechanism through which other processes influence career progression.

Participants also described opportunity as influenced by managerial decisions and organizational relationships. Assignment allocation, inclusion in high-visibility work, and exposure to leadership were described as determining how individuals gain access to advancement-related experiences. These dynamics indicate that opportunity operates through decisions that position individuals within organizational systems. The findings suggest that opportunity is shaped by how access is granted within structured and informal processes.

These findings extend social-capital research showing that access to network resources is associated with career success (Seibert et al., 2001). In the present study, participants identified project assignments and leadership exposure as concrete forms of opportunity through which they experienced recognition and access to advancement. The findings therefore specify how broader social-capital processes were experienced within higher education IT.

Within the conceptual framework of this study, opportunity operates as the central mechanism connecting upstream processes to recruitment, retention, and advancement

outcomes. Participant descriptions indicate that middle management, visibility, mentorship, and sponsorship collectively influence access to opportunity. This positioning highlights how these mechanisms converge to shape how individuals experience career progression within organizational systems. Across themes, opportunity functioned as the core mechanism through which equity-related outcomes were experienced within higher education IT institutions.

Theme 8: AI as a Filtering and Support Mechanism

Artificial intelligence–enabled human resource tools functioned as filtering and support mechanisms within hiring, screening, and evaluation processes in higher education IT institutions. Participants described AI as assisting with organizing information, identifying candidates, and supporting decision-making processes rather than operating as an independent decision-maker. Participant descriptions reflected that AI operates within existing organizational systems and depends on how those systems are configured and used. The role of AI therefore reflects how information is processed and presented within organizational decision-making environments.

Participant descriptions indicate that AI contributes to efficiency by filtering and organizing large volumes of data during hiring and evaluation processes. Access to candidates and information was described as shaped by predefined criteria and system configurations that determine how individuals are identified within organizational workflows. These patterns show that AI influences how information is presented to decision-makers rather than determining final outcomes. The findings therefore support the interpretation that AI functions as an intermediary mechanism within organizational processes.

Participants also described limitations in how AI accounts for context and nuance in decision-making. Artificial intelligence systems were described as operating based on predefined rules and configurations that may not fully capture complex or nontraditional experiences. These dynamics indicate that human judgment remains central to interpreting and acting on information produced by AI systems. Artificial intelligence operated alongside human decision-making rather than replacing it.

These findings align with recent research showing that artificial intelligence-enabled recruitment can automate or structure screening while remaining vulnerable to biased data, design choices, implementation context, and organizational use, making human oversight and governance essential (Fabris et al., 2025; Soleimani et al., 2025). The cited studies describe automation and screening functions but do not establish a general effectiveness claim across AI systems. The findings extend this literature by demonstrating how AI is experienced as a support mechanism embedded within organizational routines in higher education IT environments. This extension highlights how AI influences information flow rather than final decision authority.

Within the conceptual framework of this study, AI operates as a filtering mechanism that influences how information is processed within hiring and evaluation systems. Participant descriptions indicate that AI interacts with organizational processes and human decision-making rather than functioning independently. Artificial intelligence contributes to how candidates and employees are identified and considered within organizational systems. Participant responses consistently described AI as a supporting mechanism shaping how information is processed and used within recruitment and advancement processes.

Theme 9: Emotional Intelligence and Mindset as Selection and Development Factors

Emotional intelligence and mindset functioned as factors influencing selection, development, collaboration, and workplace interaction within higher education IT institutions. Participants described emotional intelligence as related to interpersonal awareness, communication, and the ability to navigate organizational dynamics. Mindset was described in terms of adaptability, openness to learning, and willingness to develop skills over time. These patterns indicate that emotional intelligence and mindset influence how individuals are evaluated and supported within organizational processes.

Participant descriptions indicate that emotional intelligence contributes to how individuals interact within teams and respond to feedback and organizational expectations. Interpersonal awareness and communication were described as influencing collaboration and engagement within workplace environments. These patterns show that emotional intelligence is associated with how individuals are perceived within team and organizational contexts. The findings therefore support the interpretation that emotional intelligence influences how individuals function within organizational systems.

Participants also described mindset as influencing how individuals engage with development and career progression. A growth-oriented mindset was described as supporting adaptability and openness to learning, while a fixed mindset was associated with limitations in development and collaboration. These dynamics indicate that mindset shapes how individuals respond to challenges and opportunities within organizational contexts. The findings suggest that mindset influences how individuals engage with development processes rather than determining access to opportunity directly.

Emotional intelligence and mindset emerged from participant accounts as selection and development factors. Because these constructs were not directly addressed by the inclusion sources reviewed in Chapter 2, this finding should be presented as an extension of the present study's empirical contribution rather than as direct confirmation of prior research. The findings extend this literature by demonstrating how these factors are experienced as part of selection and development processes within higher education IT environments. This extension highlights how individual attributes are considered within organizational decision-making.

Within the conceptual framework of this study, emotional intelligence and mindset operate as influencing factors that shape how individuals are selected, evaluated, and supported within organizational processes. Participant descriptions indicate that these factors affect how individuals engage with development opportunities and workplace interactions. This positioning highlights how emotional intelligence and mindset operate alongside other mechanisms without directly determining access to opportunity. Collectively, participant responses indicate that emotional intelligence and mindset influence how individuals navigate organizational systems within higher education IT institutions.

Theme 10: Resources and Structural Constraints as Limiting Factors

Resources and structural constraints functioned as contextual factors influencing hiring, retention, development, and advancement within higher education IT institutions. Participants described resources as including compensation, staffing levels, and funding, while structural constraints were described as limitations related to organizational design, such as position availability and promotion pathways. Collectively, these findings demonstrate that resources and structural constraints shape the conditions under which organizational processes operate.

The role of resources and structure therefore reflects how institutional capacity and design influence access to opportunity.

Participant descriptions indicate that resource availability influences how institutions recruit and retain employees. Compensation levels, staffing capacity, and funding were described as affecting the ability to attract and sustain technical talent. These patterns show that resource limitations constrain how organizations create and distribute opportunities. The findings therefore support the interpretation that resources influence organizational capacity to support advancement and development.

Participants also described structural constraints as influencing how individuals move within organizational systems. Organizational design factors, including limited role availability and fixed hierarchies, were described as shaping advancement pathways. These dynamics indicate that structural conditions determine the availability of positions and the pathways through which individuals progress. The findings suggest that structure influences how mobility is experienced within higher education IT institutions.

These findings align with EDUCAUSE workforce data showing that mobility and growth opportunities are strongly related to IT leaders' intentions to seek other positions (McCormack, 2024). The present study adds participants' experiences of compensation limits, fixed hierarchies, and constrained promotion pathways. The findings extend this literature by demonstrating how these constraints are experienced across roles within higher education IT environments. This extension highlights how capacity and design shape opportunity availability.

Within the conceptual framework of this study, resources and structural constraints operate as contextual factors that influence how other mechanisms function. Participant

descriptions indicate that these factors shape the conditions under which middle management, visibility, mentorship, and sponsorship operate. Organizational capacity and design affect how opportunities are created and distributed. Across participant responses, resources and structural conditions influenced how opportunity was created and distributed within higher education IT institutions.

Practice Implications of Study Findings

The findings of this study identify specific organizational mechanisms that shape recruitment, retention, and advancement within higher education IT environments. Participants described middle management, sponsorship, visibility, AI-enabled HR tools, and structural constraints as influencing access to opportunity and participation in organizational processes. These mechanisms operate in combination within organizational systems rather than as isolated factors. This positioning indicates that equity-related outcomes are shaped through how these mechanisms interact within institutional environments.

The implications for practice are grounded in how these organizational mechanisms can be intentionally structured, governed, and aligned to support more consistent access to opportunity within higher education IT environments. Because participants described access to opportunity as mediated through middle-management practices, sponsorship, visibility, AI-enabled systems, and structural constraints, the following sections present implications organized around these mechanisms. Each implication reflects how participants described these mechanisms operating within higher education IT institutions. This structure supports alignment between participant experience and actionable organizational practice.

Middle Management

Participants described middle management as a central mechanism influencing how organizational processes are enacted and how access to opportunity is distributed. In practice, institutions should formalize middle-management responsibilities within talent processes by defining expectations for assignment allocation, development planning, and access to leadership interactions within documented operational procedures. This includes establishing formal criteria for assignment distribution, participation in leadership meetings, and access to development opportunities that are applied consistently across teams. Standardizing these processes can reduce variability in how opportunities are provided and may support more consistent access across organizational units.

Institutions should incorporate accountability measures by embedding middle-management responsibilities into performance evaluation systems. These responsibilities include documented assignment distribution, participation in mentorship and sponsorship activities, and measurable indicators of staff development and advancement. Evaluation criteria should assess how managers engage in mentorship, sponsorship, and development of staff, as well as how opportunities are distributed within teams. Embedding these expectations into performance evaluation systems aligns managerial behavior with organizational objectives related to recruitment, retention, and advancement.

Institutions should also implement structured communication practices that support transparency in how decisions are made. This includes documenting assignment decisions, providing feedback on development opportunities, and clarifying pathways for advancement within teams. These practices support consistent communication of expectations and reduce ambiguity in how opportunities are accessed. Increased transparency strengthens alignment

between organizational processes and participant-described experiences of access and opportunity.

Sponsorship

Participants described sponsorship as a mechanism that provides access to opportunity through advocacy and positioning within decision-making processes. In practice, institutions should establish structured sponsorship processes within formal talent review cycles by assigning executive sponsors, defining advocacy expectations, and documenting sponsorship activity tied to advancement pathways. These processes should include identifying potential sponsors, establishing clear expectations for advocacy, and creating structured opportunities for leaders to support staff in advancement-related decisions. Formalizing sponsorship reduces reliance on informal relationships and supports more consistent access to advocacy.

Institutions should implement tracking mechanisms within talent management systems to monitor sponsorship access and outcomes. These mechanisms should include tracking participation rates, assignment to high-visibility opportunities, and resulting advancement outcomes across roles and groups. Monitoring these elements provides visibility into how sponsorship is distributed and whether it aligns with organizational goals related to recruitment, retention, and advancement. Tracking sponsorship activity supports accountability and enables organizations to identify gaps in access to advocacy.

Institutions should also create structured pathways for sponsorship that increase exposure to leadership and decision-making environments. These pathways may include leadership development programs, rotational assignments, and structured opportunities to participate in high-visibility projects. Providing consistent access to these pathways supports

more equitable exposure to advancement-related experiences. Structured pathways reinforce sponsorship as a formal mechanism within organizational processes rather than an informal or discretionary practice.

Visibility

Participants described visibility as a mechanism influencing recognition, access to leadership, and participation in organizational processes. In practice, institutions should implement structured rotation systems that provide equitable access to high-visibility assignments, leadership meetings, and cross-functional initiatives. These systems should define criteria for participation and ensure that exposure to leadership is distributed across teams rather than concentrated among a limited group of individuals. Structured rotation reduces variability in how visibility is assigned and supports more consistent access to advancement-related experiences.

Institutions should standardize recognition processes to ensure that individual contributions are consistently attributed within organizational reporting structures. This includes requiring attribution of project contributions in presentations, reports, and performance evaluations so that staff work is visible to leadership. Clear documentation and communication practices support accurate representation of contributions and reduce reliance on hierarchical interpretation of work. Standardizing recognition strengthens alignment between performance and visibility within organizational processes.

Institutions should also establish mechanisms that increase access to leadership interaction and organizational communication channels. These mechanisms may include structured forums, cross-functional projects, and leadership briefings that provide

opportunities for staff to engage directly with decision-makers. Providing consistent access to these environments supports broader exposure to leadership and increases participation in organizational processes. These practices reinforce visibility as a structured component of talent development rather than an informal outcome of organizational dynamics.

AI-Enabled HR Tools

Participants described AI-enabled HR tools as mechanisms that support hiring and evaluation processes by organizing and filtering information. In practice, institutions should implement governance protocols that define configuration standards, decision boundaries, and audit requirements for these tools. These protocols should include documented configuration controls, scheduled bias reviews, and clearly assigned oversight responsibilities across IT and human resources functions. Establishing governance structures supports consistent use of AI systems and aligns their operation with organizational objectives related to recruitment, retention, and advancement.

Institutions should require formal human review checkpoints within hiring and evaluation workflows that incorporate AI-generated outputs. These checkpoints should include documented override procedures, audit logs of decision changes, and periodic review cycles that validate AI-assisted recommendations before final decisions are made. Human oversight ensures that AI functions as a supporting mechanism rather than a determinant of outcomes. Structured review processes reinforce accountability in how AI outputs are interpreted and applied.

Institutions should also document how AI-enabled tools are used within talent management processes, including how data is processed and how decisions are informed by

system outputs. This documentation should be maintained within policy frameworks that define acceptable use, review procedures, and accountability for outcomes. Clear documentation supports transparency in how AI is applied within organizational processes. These practices strengthen alignment between AI-enabled systems and participant-described experiences of decision-making within higher education IT environments.

Resources and Structural Constraints

Participants described resources and structural constraints as factors influencing how opportunities are created and distributed within higher education IT organizations. In practice, institutions should align resource allocation decisions with talent development priorities by evaluating compensation structures, staffing models, and funding distribution in relation to recruitment and retention outcomes. This includes assessing whether financial and staffing resources support sustained access to development and advancement opportunities. Aligning resources with talent objectives strengthens organizational capacity to support equitable access to opportunity.

Institutions should conduct periodic organizational structure reviews to identify constraints in role availability, promotion pathways, and hierarchical design. These reviews should assess how existing structures influence mobility and whether they limit advancement opportunities across roles. Identifying structural constraints enables institutions to adjust pathways for progression within organizational systems. Regular evaluation of structure supports alignment between organizational design and advancement outcomes.

Institutions should also develop alternative pathways for development when traditional advancement opportunities are limited by structural constraints. These pathways may include

lateral development opportunities, project-based roles, and skill-building assignments that support career progression without requiring formal promotion. Providing multiple pathways for development supports continued growth within constrained environments. These practices reinforce access to opportunity even when structural limitations are present.

Researcher Reflections

Engaging in this study shifted my understanding of equity-related processes in higher education IT from a primarily policy-centered view to a process-centered view grounded in lived experience. Before conducting the research, I understood formal policies, organizational structures, and institutional commitments as important drivers of recruitment, retention, and advancement outcomes. Through data collection and analysis, I came to understand more clearly that these outcomes are experienced through routine managerial decisions, access to opportunity, visibility, sponsorship, and day-to-day organizational interactions. This shift reinforced the importance of examining how equity commitments are enacted in practice rather than assuming that formal structures alone determine outcomes.

The study also deepened my understanding of how organizational mechanisms operate together rather than independently. Participant descriptions showed that middle-management engagement, mentorship, sponsorship, AI-enabled HR tools, and structural constraints interact within institutional systems to shape access to opportunity. As a scholar-practitioner in higher education IT leadership, this required careful reflexive attention to participant language, analytic memoing, and the distinction between professional assumptions and participant meaning. Practically, the study reinforced that improving equity-related outcomes requires attention to operational routines, not only strategic commitments, because access to

opportunity is created or constrained through the everyday processes by which work, visibility, advocacy, and decisions are distributed.

Recommendations for Further Research

Future research should extend examination of equity-shaping mechanisms within higher education IT by employing complementary research designs and expanded contexts. The present study identified patterns related to middle-management engagement, mentorship and sponsorship, and AI-enabled HR tools, but additional research is needed to examine these mechanisms across varied institutional environments. This recommendation is consistent with scholarship showing that organizational routines, accountability structures, developmental access, sponsorship, and artificial intelligence governance can shape opportunity beyond formal policy commitments (Burnett & Aguinis, 2024; Dobrow et al., 2012; Fabris et al., 2025; Schwartz et al., 2024; Soleimani et al., 2025). The following recommendations are grounded in the findings and outline specific directions for future study.

Future qualitative multiple-case research across institution types could examine how middle-management practices are structured and enacted across diverse institution types, including public universities, private institutions, community colleges, and research-intensive universities. This study should focus on comparing assignment allocation, visibility practices, and evaluation processes to identify patterns and variations in how opportunity is distributed. This recommendation is supported by the present finding that middle management functioned as a gatekeeping mechanism and by research showing that managerial accountability and organizational routines influence diversity outcomes (Dobbin & Kalev, 2022; Kalev et al., 2006).

Sequential explanatory mixed-methods research could further examine access to sponsorship and its relationship to advancement outcomes. Quantitative measures should assess participation in sponsorship activities, assignment to high-visibility work, and promotion outcomes, followed by qualitative interviews to explain observed patterns. This recommendation is supported by the present finding that sponsorship functioned as an advocacy mechanism and by scholarship showing that developmental networks, social capital, and active sponsorship can influence access to advancement (Dobrow et al., 2012; Higgins & Kram, 2001; Ibarra et al., 2010; Seibert et al., 2001).

Longitudinal qualitative inquiry could provide additional insight into how access to visibility, mentorship, and sponsorship evolves over time and influences retention and advancement decisions. Following participants across multiple time points would allow researchers to examine how access to opportunity changes within organizational systems across stages of professional development. This recommendation is supported by the present findings that visibility, mentorship, and sponsorship operated as interconnected mechanisms and by scholarship indicating that developmental relationships and access to social capital influence career outcomes over time (Allen et al., 2004; Dobrow et al., 2012; Ensher & Murphy, 2005; Higgins & Kram, 2001; Seibert et al., 2001).

Quantitative analysis using organizational workforce data could evaluate the distribution of high-visibility assignments, meeting participation, and project leadership across roles and groups. This analysis should examine whether visibility is systematically distributed and how it relates to advancement indicators. This recommendation is supported by the present finding that visibility functioned as a mechanism of access and extends research

showing that social capital and network resources are associated with career success (Seibert et al., 2001). The proposed study would test whether high-visibility work and leadership exposure are specific pathways linking social capital to advancement.

An experimental or audit study should evaluate AI-enabled hiring and evaluation tools by testing outcomes across varied candidate profiles. This study should examine how system configuration, criteria, and human oversight influence candidate identification and selection processes. This recommendation is supported by the present finding that AI-enabled HR tools functioned as filtering and support mechanisms and by scholarship showing that algorithmic hiring systems can reproduce inequity when data, prediction targets, validation, monitoring, and governance are insufficient (Chen, 2023; Raghavan et al., 2020; Raji et al., 2020).

A comparative qualitative study should examine how equity-related mechanisms operate across sectors by comparing higher education IT and corporate IT environments. This research should explore similarities and differences in how middle management, sponsorship, visibility, AI-enabled systems, and organizational structures influence career outcomes. This recommendation is supported by the present finding that access to opportunity was shaped through interacting organizational mechanisms and by scholarship indicating that equity outcomes are shaped by organizational context, culture, and routine decision-making practices (Rivera, 2012; Schein, 2010).

A quasi-experimental study should evaluate whether structured sponsorship programs within IT organizations are associated with changes in access to opportunity, high-visibility assignments, and advancement outcomes before and after implementation. This study should measure changes in access to opportunity, high-visibility assignments, and advancement

outcomes before and after implementation. This recommendation is supported by the present finding that sponsorship operated as an advocacy mechanism and by scholarship indicating that developmental networks and active sponsorship may improve access to advocacy and advancement opportunities beyond mentoring alone (Dobrow et al., 2012; Higgins & Kram, 2001; Ibarra et al., 2010; Seibert et al., 2001).

Conclusion

This qualitative phenomenological study explored how higher education information technology professionals, including underrepresented staff, mid-level IT managers, and human resources or equity partners, experienced middle-management engagement, mentorship and sponsorship, and artificial intelligence–enabled human resources tools as mechanisms shaping recruitment, retention, and advancement outcomes. The study addressed the persistent disparity in recruitment, retention, and advancement for racially and gender underrepresented professionals in U.S. higher education IT environments despite formal institutional commitments to diversity, equity, and inclusion. Through semi-structured interviews with 15 participants, the study examined how these mechanisms were experienced in practice across organizational roles and institutional contexts.

The findings showed that access to opportunity was the central process through which recruitment, retention, and advancement outcomes were experienced. Participants did not describe opportunity as the result of individual effort alone. Instead, they described opportunity as shaped through middle-management decisions, leadership exposure, access to projects, visibility, mentorship, sponsorship, organizational inclusion, AI-enabled filtering systems, and structural conditions such as staffing, compensation, and promotion pathways.

These findings suggest that equity-related outcomes in higher education IT are shaped through everyday organizational routines rather than formal commitments alone.

Middle management emerged as a central gatekeeping mechanism because participants described managers as influencing assignment distribution, leadership access, communication flow, and exposure to advancement-related opportunities. This finding is significant because middle managers often operate at the point where institutional strategy becomes daily practice. Participants described variation in how managers created access, restricted access, communicated opportunity, and positioned staff for visibility. As a result, middle-management engagement was not experienced as a neutral administrative function, but as a mechanism that shaped how opportunity was distributed within higher education IT organizations.

Visibility also emerged as a mechanism of access. Participants described visibility as being seen, recognized, and included in organizational spaces where decisions, relationships, and advancement opportunities develop. The findings indicated that performance alone did not guarantee recognition. Instead, visibility depended on leadership exposure, project participation, communication channels, and assignment decisions. This finding reinforces the importance of examining who is invited into high-impact work, who receives recognition for completed work, and who gains access to decision-making environments.

Mentorship and sponsorship were experienced as related but distinct mechanisms. Mentorship supported development, career navigation, feedback, and skill-building. Participants described mentorship as valuable for learning and preparation, but not always sufficient for advancement. Sponsorship, by contrast, was described as advocacy, access, and positioning. Participants described sponsors as individuals who used influence to connect

others with leadership spaces, networks, and opportunities. This distinction matters because the study showed that development alone does not create advancement unless individuals also gain access to visibility, advocacy, and opportunity.

Bias and inclusion further shaped how participants experienced organizational processes. Bias was described as operating through hiring, evaluation, networks, assumptions, and informal decision-making routines. Inclusion was described as more than representation and was connected to participation, access, communication, and involvement in organizational processes. These findings indicate that equity in higher education IT cannot be assessed only by whether individuals are present within the organization. It must also be assessed by whether individuals are meaningfully included in the routines and relationships that shape development, recognition, and advancement.

Artificial intelligence-enabled HR tools were experienced as filtering and support mechanisms rather than independent decision-makers. Participants described these tools as useful for screening, organizing information, and supporting hiring or evaluation processes. However, participants also emphasized that human judgment remained central because people configure systems, interpret outputs, and decide how recommendations are used. This finding suggests that AI-enabled tools do not remove human responsibility from equity-related decisions. Instead, they redistribute decision points across technology, configuration choices, managerial judgment, and organizational governance.

Resources and structural constraints also shaped participant experiences. Participants described compensation limits, staffing shortages, limited advancement pathways, and fixed organizational structures as constraints on recruitment, retention, and advancement. These

constraints affected how opportunities were created and distributed, even when leaders expressed support for development or inclusion. This finding is important because it shows that equity-related practice cannot depend only on individual goodwill. Institutions must also examine whether their organizational structures provide enough capacity, role clarity, and advancement pathways to support career mobility.

The practical value of this study is that it identifies specific mechanisms that institutions can examine and manage. Higher education IT leaders can use the findings to assess how assignments are distributed, how visibility is created, how sponsorship is provided, how Artificial intelligence-enabled HR tools are governed, and how structural constraints limit mobility. Human resources and equity partners can use the findings to move beyond general DEI language toward more specific review of the processes that shape recruitment, retention, and advancement. The study suggests that equitable outcomes require disciplined attention to how opportunity is created, communicated, accessed, and supported across organizational systems.

The findings also support future research focused on testing, comparing, and extending these mechanisms. Future qualitative multiple-case studies could examine how middle-management practices vary across institution types. Mixed-methods studies could examine the relationship between sponsorship access and advancement outcomes. Longitudinal studies could explore how visibility, mentorship, and sponsorship shape retention and promotion over time. Quantitative studies could evaluate the distribution of high-visibility assignments and leadership exposure across roles and groups. Audit studies could examine whether AI-enabled

HR tools produce equitable screening and evaluation outcomes under different configurations and governance conditions.

Overall, this study contributes to scholarship and practice by showing that equity-related outcomes in higher education IT are shaped through interacting organizational mechanisms. Middle management, visibility, mentorship, sponsorship, inclusion, bias, AI-enabled tools, opportunity, emotional intelligence and mindset, and structural constraints operated together within participants' experiences. The study's central contribution is the finding that opportunity functions as the core mechanism through which these processes converge. For higher education IT organizations, improving recruitment, retention, and advancement requires more than formal policy. It requires intentional management of the everyday routines, relationships, systems, and structures through which opportunity is made available or withheld.

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Appendix A: Semi-Structured Interview Guide and Interview Questions

This appendix presents the semi-structured interview guide used as the primary data collection instrument for this study. Interview questions are designed to elicit participant experiences aligned with the central research question and sub-questions RQ1a–RQ1c. Question 2 relates primarily to RQ1a, Questions 3–4 relate to RQ1b, and Question 5 relates to RQ1c. Overarching research question: How do underrepresented higher education information technology professionals, mid-level IT managers, and human resources (HR) or equity partners working in U.S. higher education institutions experience middle-management engagement, mentorship, and sponsorship, and AI-enabled HR tools as mechanisms that shape recruitment, retention, and advancement outcomes?

Interviewer instructions. Before beginning the interview, thank the participant for their time and confirm that they consent to proceed and to be audio recorded. Remind the participant that their responses are confidential and that they may decline to answer any question. Establish a comfortable, conversational tone with a few minutes of rapport-building (for example, informal chat about the day or a mutual professional interest). Throughout the interview, remain neutral and supportive. Ask questions in an open-ended manner, listen actively, and allow the participant time to think and respond. Use the suggested follow-up prompts to encourage elaboration without leading the participant.

Participant Background Questions

- Current role or title
- Years of experience in higher education IT

• Experience with hiring, performance evaluation, or promotion processes

1. Overall experience in higher education IT

Primary question

- Describe your overall experience working in higher education IT, especially as it relates to opportunities to be hired, to stay, and to advance.

Possible follow-ups

- What have been some of the most positive aspects of that experience for you?
- What have been some of the most challenging moments, particularly around recruitment, retention, or advancement?
- Describe your experience with the hiring or recruitment process for your role and whether you perceived it as equitable or inequitable.

Interviewers note. Use this question to give participants space to tell their story in their own words. Listen for early mentions of managers, mentoring or sponsorship, and AI or HR systems so you can reference them later in the interview.

2. Middle-management engagement

Primary question

- Thinking about the role of your immediate supervisors or mid-level managers, describe a time when a manager's actions significantly influenced your career or sense of inclusion at work.

Possible follow-ups

- How did that manager's behavior affect your opportunities, confidence, or decisions about staying or leaving?

- Have you experienced different management styles, and how did those differences impact you as an underrepresented professional in IT?

Interviewer note. If the participant does not immediately recall an example, prompt with areas such as feedback, project assignments, access to training, or support for development. Encourage them to discuss both positive and negative experiences (for example, a manager who advocated for them in a promotion discussion versus one who overlooked them).

Probe on team culture

- Describe the general team or department culture under that manager. Were there any everyday team practices that made you feel more included or excluded?

3. Mentorship experiences

Primary question

- Tell me about any mentoring relationships you have had during your career in IT. What did those mentorship experiences look like, and how did they impact your professional growth?

Possible follow-ups

- What made that mentoring relationship effective or not effective for you?
- If you have not had a mentor, how do you think the absence of mentorship has affected your development, retention, or advancement?

Interviewer note. Adjust this question based on the participant's background. If they have already mentioned a mentor, ask for more detail on that relationship. If they did not have

mentors, focus on how they navigated their career without that support. Keep a supportive tone, since discussing lack of mentorship can be sensitive.

4. Sponsorship and advocacy

Primary question

- Have you ever had someone act as a sponsor for you, for instance, a person in leadership who actively advocated for your promotion, raise, or selection for a key project? If so, describe that experience and its outcome. If not, how do you think the lack of sponsorship has impacted your career advancement?

Possible follow-ups

- Sometimes a sponsor can open doors that would otherwise be closed. Can you recall any opportunity you received, or missed, that you connect to having or not having an influential sponsor?
- In what ways did sponsorship, or the lack of it, affect your visibility for higher-level roles or leadership positions?

Interviewer note. Clarify the definition of sponsorship if needed and distinguish it from mentorship. You might say, “By sponsor, I mean someone who uses their position and reputation to advocate for you in important decisions.” This question focuses on whether the participant feels visible and supported by those with influence in the organization.

5. Experiences with AI-enabled HR tools

Primary question

- Have you encountered any AI-driven or automated systems in hiring, performance reviews, or promotion decisions at your institution? If yes, what was that experience like for you?

Possible follow-ups

- Did you feel that the process was fair or biased in any way because of the technology? Why or why not?
- How did others in your organization react to the use of that tool; were there any concerns about its impact on equity or inclusion?
- Did you see any effect on who was shortlisted, promoted, or retained as a result of these tools?

Interviewer note. If the participant has not personally experienced AI or algorithmic tools in these processes, reframe the question to ask about perceptions: “Even if you have not dealt with them directly, what is your impression of how these tools are being used in hiring or evaluation?” Maintain a curious, nontechnical tone. If needed, clarify examples such as automated résumé screeners, HR analytics for promotions, or algorithmic performance dashboards.

6. Intersection of identities in the workplace

Primary question

- In what ways do you feel that your personal identities, for example your race, gender, or other aspects important to you, have influenced your experiences at work in higher education IT?

Possible follow-ups

- Share an example of a time when you believe your identity played a role in how a work situation unfolded, whether it was a positive opportunity or a challenge you faced.
- How did that experience affect your sense of belonging, your decision to stay, or your interest in seeking advancement?

Interviewer note. This question can be sensitive. Ask it in an open and respectful manner, acknowledging that multiple identity factors may be at play. If the participant has already touched on identity issues earlier, reference that and invite them to elaborate. Be prepared to listen empathetically and allow the participant to pause or express emotion. Reassure them that their honesty is valued.

7. Strategies for improvement

Primary question

- Based on everything we have discussed, what changes or actions do you think could be taken to make the IT work environment more equitable and inclusive, especially for professionals from underrepresented groups?

Possible follow-ups

- What factors most influenced your decision to stay in or consider leaving higher education IT, and how did management practices affect that decision?
- What specific changes to middle-management practices, mentorship and sponsorship systems, or AI-enabled HR tools would you suggest to your institution's leadership?

- Are there particular routines, programs, or checks that you believe would improve recruitment, retention, or advancement for underrepresented IT professionals?

Interviewer note. This question encourages participants to reflect on solutions. Keep the tone optimistic and exploratory and emphasize that their insights may help drive positive change. If the participant struggles to answer, gently prompt by revisiting a barrier they described earlier and asking what might help in that area. Avoid implying that it is their personal responsibility to fix systemic issues.

8. Closing question – additional insights

Primary question

- Is there anything else you would like to share that we have not covered? Perhaps there is an experience or insight about your work in IT and equity or inclusion that we did not discuss but you feel is important.

Interviewer note. Allow the participant to take their time for this final question. Sometimes important thoughts emerge at the end of an interview. Maintain an attentive and appreciative demeanor. If they have shared difficult experiences, thank them for their trust and openness. Conclude the interview by reiterating how valuable their input is and outline next steps, such as letting them know they may receive a brief summary of their interview for confirmation and when study results are likely to be available.

Appendix B: Recruitment Messages

Recruitment Message 1: Email Invitation

Subject: Invitation to Take Part in a Research Study on IT Careers in Higher Education

Hello,

My name is Leon Lewis, Jr. I am a doctoral student at Colorado Technical University. I am inviting you to consider taking part in a research study for my dissertation.

This study looks at how IT professionals in higher education experience their work. It focuses on:

- Middle-management practices
- Mentoring and sponsorship
- The use of automated or AI-supported tools in hiring, review, or promotion

The goal of the study is to better understand how these experiences affect hiring, retention, and career growth for IT professionals who are often overlooked.

You may be eligible to take part if you:

- Are at least 18 years old
- Work in higher education IT, or in an HR or DEI role that works closely with IT
- Have at least one year of experience with higher education IT recruitment, retention, advancement, mentoring, sponsorship, or talent evaluation processes

If you choose to take part, you will be asked to:

- Join one confidential interview by video or phone
- Spend about 45 to 60 minutes sharing your experience

Taking part is voluntary. There is no cost and no payment. You may skip any question or stop at any time. Your name and school will not appear in any reports.

If you are interested or would like more information, please contact me at:
[email address redacted]

Thank you for your time and consideration.

Sincerely,
Leon Lewis, Jr.
Doctoral Student, Colorado Technical University

Recruitment Message 2: EDUCAUSE Discussion Board Post

Hello everyone,

My name is Leon Lewis, Jr. I am a doctoral student at Colorado Technical University and a leader in higher education IT. I am conducting a research study for my dissertation and am inviting members of the EDUCAUSE community to take part.

This study looks at how IT professionals in higher education experience their work. It focuses on:

- Middle-management practices
- Mentoring and sponsorship
- The use of automated or AI-supported tools in hiring or employee review

The goal is to better understand how these experiences affect career growth and retention, especially for IT professionals who are often overlooked.

You may be eligible to take part if you:

- Are 18 years or older
- Work in higher education IT, or in an HR or workplace inclusion role that supports IT
- Have at least one year of experience with hiring, employee review, mentoring, sponsorship, or similar work

If you choose to take part, you will be asked to:

- Join one confidential interview
- Spend about 45 to 60 minutes by video or phone

Taking part is voluntary. There is no payment. You may stop at any time. All responses will be kept confidential.

If you are interested or would like more details, please email me at: [email address redacted]

Thank you for your time and for the important work you do in higher education IT.

Recruitment Message 3: LinkedIn Message or Post

I am a doctoral student at Colorado Technical University and am conducting a research study on careers in higher education IT. I am inviting IT professionals to consider taking part.

This study looks at how people working in higher education IT experience:

- Day-to-day management practices

- Mentoring and sponsorship
- The use of AI or automated tools in hiring or employee review

The goal is to better understand how these experiences affect career growth and retention, especially for professionals who are often overlooked.

You may be a good fit if you:

- Are 18 years or older
- Work in higher education IT, or in an HR or workplace inclusion role that supports IT
- Have at least one year of experience with hiring, employee review, mentoring, or sponsorship

If you choose to take part, you will be asked to:

- Join one private interview by video or phone
- Spend about 45 to 60 minutes

Taking part is voluntary, unpaid, and confidential.

If you are interested or would like to learn more, please message me here on LinkedIn or email: [email address redacted]

Thank you for your time and consideration.

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