

ACCESS TO CAREER DEVELOPMENT OPPORTUNITIES FOR EMPLOYEES WITH HUMANITIES EDUCATIONAL BACKGROUNDS IN TECHNOLOGY COMPANIES

Mochamad Irfan

Universitas Mayjen Sungkono Mojokerto

correspondence: irfanmoc@gmail.com

Abstract - Humanities graduates in technology companies face structural, cultural, and procedural barriers to career development opportunities. This study constructs a conceptual framework explaining access disparities based on educational background. A systematic literature review method was applied following established qualitative research procedures. Structural barriers include rigid degree requirements that block humanities graduates from entry level technical positions. Cultural barriers emerge from shared beliefs that technical skills possess higher value than humanistic and social competencies. Procedural barriers originate from performance measurement systems biased toward quantitative contributions rather than qualitative insights. Alternative career paths designed specifically for non engineers often become dead ends preventing advancement to senior levels. Formal mentoring programs are necessary to bridge cultural knowledge gaps not taught in standard training. Technical training for humanities graduates requires different pedagogical approaches leveraging their abstract thinking strengths rather than assuming prior knowledge. The signaling theory of education explains why degree stigma persists even after years of relevant work experience. Cross national differences demonstrate that inclusive practices toward humanities graduates are feasible and already implemented successfully. Long term value of humanities graduates becomes visible through improved product quality, reduced internal conflicts, and better ethical decision making. Ethical implications of educational background discrimination deserve attention alongside other protected categories.

Keywords: career development, humanities graduates, technology companies, educational background discrimination, access barriers.

INTRODUCTION

Technology companies are widely known as a sector that places heavy emphasis on technical skills and programming ability in recruitment and career development. An educational background in computer science, informatics engineering, or information systems has become the main ticket to enter this industry. Employees holding degrees outside these fields often face considerable difficulty being seen as equally competent. The group most affected by this tendency is graduates of the humanities, such as philosophy, literature, history, or cultural studies (Lauvås et al., 2021). Those holding degrees in these fields are frequently placed in administrative or support roles that offer no clear career path. In fact, a humanities curriculum trains critical thinking, the ability to analyze complexity, empathy, and communication skills that carry real value. Modern technology companies actually need employees who can understand the needs of users from diverse backgrounds. The ability to translate human behavior into product design cannot be taught through a standard programming course. Balancing the speed of technological development with a deeper, more humanistic way of thinking has been argued as a key factor in shaping a genuine innovation culture within organizations (Darmawan, 2023). Yet the reality on the ground shows that a humanities degree often becomes a barrier rather than an asset in career assessment. When performance evaluation standards and measures of employee loyalty focus solely on technical skill, companies risk losing valuable contributions from employees with different educational backgrounds (Darmawan et al., 2020). Giving employees the opportunity to keep developing rather than being judged only on narrow technical skill sets is therefore essential. This condition creates a situation in which potential talent cannot grow because of structural barriers tied to educational labels.

Career development opportunities within technology organizations are typically structured along two tracks: technical and managerial. The technical track moves from junior programmer up to software architect or senior data scientist. The managerial track moves from team coordinator up to director or chief operating officer overseeing human resources. Employees from humanities backgrounds often do not meet the formal requirements to enter the technical track. They lack a portfolio of programming projects or technical certifications that serve as the standard measure of competence. As a result, the managerial track becomes their only option, yet that track requires prior experience leading a team. Without experience in a technical role, however, it is difficult for them to gain the trust needed to lead a team of software engineers. This creates a vicious cycle in which the lack of access to entry-level technical positions blocks access to higher positions as well. Some companies have attempted to create a third track, such as product owner or user

experience researcher (Prommegger et al., 2021). Yet this track is often regarded as a supporting role with lower prestige and compensation than the technical track. Humanities employees stuck in such positions feel their careers have stalled because there is no clear path to senior management. As automation reshapes routine work, organizations are also being pushed to design deliberate strategies for keeping employees engaged and continuously building their knowledge, rather than letting repetitive digital processes narrow what counts as a valuable contribution (Darmawan, 2024). This large-scale digital transformation ultimately has a major influence on shifts in work design due to automation, the emergence of new social classes in the digital era, the strengthening of digital leadership to improve team efficiency, and the need to ensure legal certainty around the protection of student data and the validity of AI-based electronic contracts. Developing human resource capacity supports improved performance and supply chain sustainability (Barzani et al., 2022).

The stigma against humanities graduates in technology companies does not appear without cause; it is cultivated by collective cognitive bias (Blair-Loy & Cech, 2023). Founders and executives in the technology field are generally from engineering or scientific backgrounds, so they tend to recruit people similar to themselves. This affinity bias phenomenon makes them more comfortable with candidates who share a similar educational background. The way individuals form mental representations to make sense of complex situations and reach a decision, sometimes called cognitive mapping, helps explain why hiring managers keep falling back on familiar, degree-based categories instead of judging candidates on demonstrated ability (Darmawan, 2024). They unconsciously doubt the ability of humanities graduates to grasp programming logic or system architecture. Yet a great deal of research shows that the capacity to learn technical skills is not correlated with a person's undergraduate degree. A philosopher with strong abstract reasoning ability may learn programming faster than an ordinary engineer. However, because they are never given the chance to prove their ability, they are continually overlooked in the promotion process. The stigma is also reinforced by an industry culture that glorifies technical problem-solving as the most valuable activity. Work related to people, such as team management or interface design, is regarded as less valuable. As a result, employees who excel in human-centered aspects but are weaker in technical skill find it hard to gain recognition. True leaders treat every employee fairly and equally, regardless of position, degree, or background. Such fair treatment allows employees to feel properly valued and recognized (Mardikaningsih et al., 2022). They must work twice as hard just to be regarded as half as competent by colleagues with an engineering background. This psychological pressure links closely to how companies design mental health policies, since a workplace that fails to protect employees from constant self-doubt and status anxiety struggles to build the kind of loyalty it hopes to see over the long run (Issalillah & Khayru, 2025). This psychological condition can trigger impostor syndrome, which damages self-confidence and long-term motivation.

Humanities employees who remain in technology companies often develop camouflage strategies to hide their educational background (James et al., 2023). They avoid mentioning their degree in informal conversation and list only work experience on their résumé. Some even take short programming courses solely to obtain a certificate they can display on their LinkedIn profile. Adjusting to a workplace that was not built with one's own background in mind resembles the kind of transition employees go through whenever an organization asks them to reshape how they present themselves at work (Mardikaningsih & Hariani, 2025). This adaptive strategy demands considerable psychological energy because they must constantly maintain an image. They cannot relax and simply be themselves at work for fear that their true identity will be discovered. This sense of alienation contributes to higher levels of stress and mental fatigue compared with other employees. Yet if companies valued diversity of educational background, no such camouflage would be necessary. Efforts to build social inclusion have so far been discussed mainly in relation to older workers adapting to new digital tools, but the same principle, treating a different background as something to accommodate rather than penalize, applies just as directly to employees who enter technology work from the humanities (Darmawan, 2023). A team made up of engineers and humanists would produce a product that is more inclusive and easier to use. Engineers understand how to build a system; humanists understand who that system is built for. Partnership between these two groups is a source of innovation that remains underutilized in many companies. Those who manage to break through the barriers and reach senior positions often become role models for the next generation. When a company succeeds in creating an environment that supports diversity of background, employee commitment to their work and organization increases significantly (Eddine et al., 2023). Yet their numbers remain very small, so the role-model effect has not yet been widely felt across the industry. In social interaction, psychological well-being serves as the foundation for a person's ability to build relationships that are mutually beneficial and meaningful (Hariani & Mardikaningsih, 2022).

Internal training programs at technology companies are often designed on the assumption that participants already possess an adequate technical skill base (Pearce & Pearce, 2018). Material on data analysis, Python programming, or database management assumes participants are already familiar with the basic concepts. Humanities employees who lack that foundation will struggle even in the earliest sessions. They need remedial programs or alternative learning paths tailored to their specific needs. Yet companies rarely allocate resources for such programs because they are seen as inefficient. As a result, humanities employees must learn on their own outside working hours using free resources from the internet. One way training could be made more welcoming without simply repeating standard technical material is by using gamification-based methods, which have been shown to help preserve cooperation and empathy among employees while they learn new skills together (Putra et al., 2024). This process of self-directed learning requires discipline and

persistence that not everyone has, especially after a full day of work. Even those who succeed in mastering technical skills still face bias in the promotion process. A manager may doubt whether their mastery is as solid as that of an engineering graduate who studied the material more systematically. The absence of a structured development path makes humanities employees feel they are not regarded as a valuable investment for the company. They are more easily seen as a burden that needs training rather than an asset whose potential should be maximized. Companies lose the opportunity to develop loyal internal talent that understands the organization's culture. In the digital era, learning patterns are also changing through online interaction, which affects how students acquire information (Darmawan, 2021). Managing a team through periods of change can also become a major challenge, especially in organizations whose members come from diverse backgrounds and differing skill levels.

The core problem is the absence of an adequate theoretical framework for understanding access to career development opportunities based on educational background. The human resource management literature has extensively discussed discrimination based on gender, race, or age. Yet discrimination based on field of study or undergraduate degree has received far less attention in academic research (Ayoko & Fujimoto, 2023). Its impact on individuals is just as serious as other forms of discrimination, since it concerns competence that can actually be learned. The difference between engineering and humanities graduates is not an innate difference in ability that cannot be changed through training. It is a difference in learning experience that can be bridged through well-targeted development programs. Building a management approach that is genuinely sustainable and fair for every employee, rather than treating certain groups as expendable, requires the same long-term thinking that has been proposed for managing organizational resources responsibly (Mardikaningsih & Nuraini, 2022). Yet companies frequently use an undergraduate degree as a proxy for competence that is difficult to measure directly in recruitment. This proxy continues to be applied even after an employee has worked for years and has demonstrated real performance. The effect of this educational stigma is reinforced by the practice of setting a minimum degree requirement for every job level. An employee without an engineering degree is barred from certain positions even after proving their ability through work experience. The absence of a policy that allows flexibility in educational requirements creates a structural barrier that is difficult for individuals to overcome. Managers must assess the validity of that assumption using their own professional judgment (Eddine & Darmawan, 2021).

Another problem concerns the inability of conventional performance evaluation systems to capture the unique contributions of humanities graduates. Metrics such as lines of code written, bugs fixed, or features shipped clearly favor technical workers. Contributions such as improving team collaboration, increasing user satisfaction, or resolving conflict between departments are far harder to measure. As a result, employees who excel in soft skills and human relations receive no recognition in formal evaluation (Blair-Loy & Cech, 2023). They are seen as contributing less because what they do is not reflected in performance numbers. Yet that contribution may be more valuable to the long-term health of the organization than a small technical fix. Managers accustomed to quantitative thinking also find it hard to grasp the value of qualitative input. An employee who proposes an interface redesign based on an understanding of user psychology is seen as subjective. The same proposal, if it came from A/B testing data with a statistically significant number attached, would be accepted far more easily. Humanities graduates must work hard to translate their qualitative insight into the language of data that the company values. This translation process consumes time and energy that could otherwise go toward substantive work. An evaluation system biased toward a particular form of contribution reinforces unequal access to career development. This shift is visible in how digital monitoring tools now shape day-to-day evaluation, since tracking employees' activity so closely can narrow their sense of autonomy and blur where their professional responsibility actually lies (Mardikaningsih et al., 2024). This condition brings a fundamental change in ways of working, which previously relied on direct interaction and physical supervision but has now shifted toward a system that depends on digital communication and the measurement of work output (Rojak et al., 2022). Creating a fair system and a flexible structure, with a clear and humane division of tasks, authority, and responsibility that takes each person's ability into account, becomes essential (Rojak & Darmawan, 2022).

The need to understand this issue has become urgent because technology companies face an increasingly severe talent crisis. The number of computer science graduates is not enough to meet the needs of an industry that keeps growing every year (Souza et al., 2024). Companies are forced to look for candidates from outside engineering fields yet remain reluctant to give them equal opportunity. This reluctance costs them access to a large pool of genuinely promising talent. Humanities graduates who feel undervalued will look for work in sectors that are more open to different backgrounds. Government, non-profit organizations, or management consulting are more open to diversity of educational background. As a result, technology companies lose the chance to gain employees with a unique perspective that competitors do not have. In a competitive labor market, the ability to draw on every available source of talent becomes a competitive advantage. Treating internal talent, including people from non-technical backgrounds, as a genuine source of knowledge rather than a cost to be minimized is consistent with the argument that knowledge management itself functions as a source of competitive advantage for information technology companies (Darmawan, 2023). Companies that first succeed in integrating humanities graduates into technical career paths will lead the industry. They will have a team that is more creative, more innovative, and better able to understand a diverse market. This is why research on access to career development for humanities graduates in technology companies has become highly important. This normative study will

provide a foundation for human resource policies that are more inclusive and effective. The use of digital technology in remote work arrangements is itself part of a broader shift in modern management practice, one that has been linked to changes in work dynamics, psychological well-being, and social relationships among employees (Darmawan, 2023). Organizations need to make use of technology and various digital communication channels to ensure that messages about change can be delivered effectively to every member of the organization (Mardikaningsih & Darmawan, 2022).

This research aims to outline the factors influencing career development access for humanities graduates in technology companies and to formulate inclusive policy principles. The resulting theoretical framework includes the identification of structural, cultural, and procedural barriers in career management systems. The theoretical contribution of this study is expanding human resource management literature by incorporating a perspective of discipline-based discrimination. Its practical contribution is providing guidelines for tech companies to design more inclusive career paths. Companies can use this framework to audit their current recruitment, promotion, and employee development practices. The resulting policy recommendations are expected to address access gaps without lowering the required competency standards.

RESEARCH METHODS

A systematic literature review approach is applied in this study, as explained in the literature research methodology put forward by Booth, Sutton, and Papaioannou (2016). This approach was chosen because of its ability to identify, evaluate, and synthesize theoretical evidence from various disciplines. Literature was collected from the fields of human resource management, sociology of education, industrial-organizational psychology, and labor studies. Inclusion criteria were applied to articles discussing at least one aspect of career development access based on educational background. Articles discussing only the performance of humanities graduates without linking it to career access were excluded from the analysis. The selection process was conducted in three stages, namely duplicate screening, assessment based on abstracts, and full-text reading. Each inclusion or exclusion decision was documented with clear reasons so that audit requirements could be met. The collected data was then analyzed thematically to identify recurring patterns (Justham, 2008).

The systematic and accountable analysis process is ensured through the guidance on qualitative research formulated by Corbin and Strauss (2015). Analysis begins with open coding to identify concepts that appear repeatedly in the literature. Concepts such as credentialism, screening theory, human capital, and structural barriers were identified as initial themes. The second step, axial coding, was conducted to group related codes into higher-level categories. The categories formed include: entry barriers, promotion barriers, and competency development barriers. The third step, selective coding, was performed to identify the core category explaining the central mechanism. The core category in this study was identified as signaling mismatch, which is the mismatch between the signals sent by humanities graduates and the signals expected by companies. The validity of findings was maintained through source triangulation and cross-checking between propositions from different authors. The analysis process is iterative, with the researcher moving back and forth between data and the constructed conceptual framework. A conceptual model on the career development access of humanities graduates in technology companies is produced as the final finding.

RESULTS AND DISCUSSIONS

Employees are human resources who play an important role in helping every organization succeed because they are the subjects who execute and implement the strategies, vision, mission, and goals possessed by the organization (Albrecht et al., 2015). The performance provided by employees will be maximal if there is career development. Access to career development opportunities is defined as the opportunity employees have to acquire new skills, fill roles with greater responsibility, and rise to higher organizational levels. This definition covers three dimensions, namely access to formal training, access to challenging assignments, and access to informal mentoring networks. Formal training includes certification programs, internal courses, and company-sponsored advanced education opportunities (Muzakky & Wulansari, 2024). Career development is a mutually beneficial activity for both employees and organizations because employees can become more directed in planning their careers so that when working they are more productive, and for the organization, it will gain benefits from this because indirectly the organization also develops to achieve its goals (Dubrin, 2000). Career development can strengthen commitment to the organization (Darmawan, 2024). Although through a process of time, having career policies can keep workers staying in the organization (Abdullah et al., 2021). Challenging assignments include strategic projects, cross-functional teams, and temporary roles requiring rapid learning. Informal mentoring networks include relationships with seniors who can provide career advice and open doors to opportunities. Employees with an educational background matching the company's dominant culture have greater access to all three dimensions. Conversely, those considered educational "outsiders" must work harder to gain equal access. This difference in access is not always realized by managers because it is implicit and not contained in written policies.

However, its impact is very real on career acceleration and long-term job satisfaction. Unequal access creates two parallel career paths where only certain employees can reach top positions.

Structural barriers to career development access for humanities graduates are rooted in excessive credential-screening practices. Many companies set a minimum requirement of a bachelor's degree in engineering, computer science, or mathematics for entry-level positions (Oberhelman, 2024). This requirement persists even for jobs that do not actually require deep technical knowledge. A technology project manager may not need to know how to code but only needs to understand the software development process. Yet job descriptions still list an engineering degree as an absolute requirement simply because it follows industry habit. As a result, humanities graduates who meet all other qualifications are rejected before they even have the chance to demonstrate their abilities. They never get the opportunity to prove that the soft skills honed during their studies are highly valuable. This exclusion is rarely intentional, yet its structural impact is significant (Ramle & Mardikaningsih, 2022). After repeated rejections, many humanities graduates decide not to apply to technology companies at all. This self-screening process further reduces the diversity of educational backgrounds within the applicant pool. Companies then complain that there are no applicants from non-technical backgrounds without realizing their own role in creating this situation. A systematically designed workforce diversity management strategy can in fact broaden the applicant pool and drive team innovation (Darmawan, 2024). An overly rigid degree requirement becomes an artificial barrier that harms both sides.

Cultural barriers arise from a shared belief that technical skills are more valuable than social and human skills (Cowley & Hanna, 2005). Technology company culture often glorifies technical problem-solving as the highest intellectual activity. Employees who spend hours writing code are seen as more productive than those who communicate with users or business partners. This unofficial value hierarchy influences who is considered deserving of promotion and career opportunities. Humanities graduates who excel in communication and empathy constantly feel that their contributions are undervalued. An insight about an unmet user need may be ignored because it is delivered in a non-technical manner. Conversely, the same proposal, if delivered by an engineer with quantitative data, would be acted upon immediately. This kind of bias also shows up in a broader pattern, in which technology can either reinforce or erode equal treatment among groups of employees (Darmawan, 2024). This difference in response reflects a bias toward the forms of knowledge considered legitimate within company culture. Changing an entrenched culture requires deliberate intervention from top leadership. A more flexible organizational structure can make it easier for companies to align their work culture with constantly changing environmental demands (Darmawan & Mardikaningsih, 2023). Companies need to explicitly state that communication skills, empathy, and human understanding are just as valuable as technical skills. Without consistent statements and actions, cultural bias will continue to reinforce unequal access. Putra et al. (2020) state that improved employee performance and job satisfaction are influenced by the work environment. Therefore, if what employees need can be fulfilled and provides satisfaction, it will encourage them to be more enthusiastic at work. In addition, employee satisfaction and morale in delivering excellent service must not be ignored, as they directly affect the quality of work outcomes (Eddine & Darmawan, 2022).

A performance evaluation process biased toward quantity is a procedural barrier for humanities employees. Individual performance metrics such as the number of tasks completed or lines of code produced strongly favor technical workers (Blair-Loy & Cech, 2023). Productivity measurement that relies solely on quantitative output overlooks the role of human creativity and innovation, which are difficult to quantify directly (Darmawan, 2023). An engineer who fixes twenty bugs in a month appears highly productive by this metric. Meanwhile, humanities employees who resolve conflicts between teams or improve user satisfaction are difficult to measure. The impact of such actions may only become visible after several months and cannot be attributed to a single person. Traditional performance management systems were not designed to capture contributions in the domain of human relations. As a result, humanities employees receive lower performance scores even though their contributions are equal to or greater than their technical counterparts. The accuracy of performance feedback also tends to decline and become delayed in more flexible work arrangements, making this evaluation gap even harder to correct (Mardikaningsih et al., 2025). This low score is then used as grounds to deny promotion requests or development opportunities. This creates a positive feedback cycle in which those already favored by the system continue to gain further advantage. Employees disadvantaged by the system feel powerless because they cannot change how the company measures performance. Changing the appraisal system to include qualitative contributions requires a significant investment of time and resources. Yet without this change, access to career development will never be equal between engineering and humanities graduates. A performance appraisal that focuses solely on quantitative results without considering behavioral aspects and long-term development will be difficult for employees to regard as fair.

Alternative career paths designed specifically for humanities graduates often become a counterproductive solution in practice (James et al., 2023). Some companies open positions such as "technical writer" or "user experience researcher" intended for non-engineers. These positions have their own career ladder, separate from the main technical and managerial track. In practice, however, these positions are often regarded as second class, with lower compensation and prestige. Humanities graduates who enter these positions become trapped without a path to move into the main track. They reach the highest level on the alternative track yet remain below mid-level on the technical track. This

creates a glass ceiling in which they cannot rise higher despite having adequate ability. A better solution is to integrate humanities graduates into the same career track as engineers. Organizational innovation strategies that integrate diverse areas of expertise have been shown to strengthen business resilience and competitiveness over the long term (Mardikaningsih et al., 2024). They need to be given additional training to fill technical gaps while still leveraging their strengths. In an increasingly complex work environment, where team members come from diverse professional backgrounds and areas of expertise, cross-functional training serves as a bridge that strengthens communication and synergy across departments (Fared & Darmawan, 2021). Once the gap is closed, they must be evaluated using the same criteria without discrimination based on background. This integration approach does require a larger upfront investment but delivers long-term benefits. Companies will have more employees with diverse perspectives who can better understand user needs. Employees also feel valued as equal partners rather than as second-class citizens within the organization. Beyond interaction factors, strong social capital support and team collaboration serve as an important foundation for maintaining work quality within an organization (Putra et al., 2021).

The role of informal mentoring is highly decisive for the career success of humanities graduates at technology companies (Baran & Zarzycki, 2021). Authentic leadership plays an important role in shaping a positive work climate and encouraging organizational citizenship behavior that supports this kind of mentoring process (Mardikaningsih et al., 2022). Influential mentors can open doors to strategic project opportunities that are not officially announced. They also provide honest career advice about which skills need further development. However, humanities graduates often struggle to find mentors because there are no role models with similar backgrounds. Senior employees with engineering backgrounds tend to choose mentees who resemble themselves at a younger age. Unconsciously, they feel more comfortable guiding young engineers than humanities graduates. As a result, humanities graduates lose access to the implicit knowledge of how to succeed within company culture. They must learn on their own the unwritten rules that could actually be taught through a mentoring relationship. Companies need to intervene in this process with formal mentoring programs that pair humanities graduates with senior mentors. An empowering leadership style also broadens the autonomy and innovation capacity of team members, including those serving as mentors and mentees alike (Darmawan, 2024). This program must require regular meetings and provide incentives for mentors who participate well. Mentors also need to be trained on the specific challenges faced by humanities graduates in technical environments. With the right support, mentoring relationships can bridge the cultural knowledge gap that hinders career access. The success of some humanities graduates in reaching senior positions will create role models for the next generation. The willingness to support one another in mastering new systems is essentially influenced by strong positive psychological dimensions that sustain individual commitment to completing collective tasks (Darmawan & Mardikaningsih, 2021).

Technical training for humanities graduates must be designed differently from training for engineers because they start from a different baseline. Teaching someone with no programming background is like teaching a foreign language from scratch (Vance et al., 2022). Developing human capital within a knowledge-based organization indeed requires a continuous learning process designed around each individual's starting point (Darmawan, 2025). An effective approach begins with analogies and metacognition about how programmers think through problem-solving. Humanities graduates need to understand conditional logic, loops, and data structures within a framework they are already familiar with. Instructors must have extra patience and not assume that participants are already familiar with technical jargon. Using examples from humanities domains, such as literary text analysis or historical categorization, is very helpful. Humanities graduates also need to be given the courage to make mistakes, since fear of being wrong is a major learning barrier. Corporate responsibility toward employee mental health becomes increasingly relevant amid growing digital productivity pressure, so a supportive learning environment cannot be treated as an optional extra (Khayru & Arifin, 2025). A safe learning environment where failure is celebrated as part of the process is essential for building confidence. Successful training programs often pair participants with study partners who share a similar background. This peer support reduces feelings of isolation and allows for sharing effective learning strategies. Once the basics are mastered, humanities graduates can learn at the same pace as other participants, or even faster. A positive learning experience will increase their sense of belonging and reduce the urge to hide their identity. Therefore, appropriate career planning is essential for human resources during their most productive years, so that employees can develop themselves to carry out all their duties supported by their work spirit (Retnowati & Darmawan, 2023). Organizations need to design training programs that not only impart technical knowledge and skills but also strengthen individuals' confidence in their own abilities (Mardikaningsih & Darmawan, 2022).

The added value of humanities graduates for technology companies is often not visible in the first year of work but becomes clear over time. After passing the initial adjustment period, their contribution to understanding user needs starts to be felt (Oberhelman, 2024). Products developed with humanities involvement have more intuitive interfaces and clearer documentation. Internal conflicts between teams decrease due to the presence of employees trained in negotiation and communication. Strategic decisions become more mature because they take into account the ethical and social implications of the technology being built. Financial services companies that recruit philosophy graduates for compliance teams report a decrease in regulatory violations. E-commerce companies that recruit literature graduates for content teams experience an increase in customer retention. This added value is difficult to measure in quarterly profits but is highly

decisive for the long-term health of the organization. Companies with a higher proportion of humanities graduates tend to be more innovative over the long run. They think not only about whether a product can be built but also about whether it should be built. Risk management is not the sole responsibility of the project manager but a shared responsibility of the entire team (da Silva et al., 2022). Public perception of risk is also shaped by the diversity of perspectives within an organization, so involving a range of professional backgrounds can enrich how a company responds to the social risks of the technology it develops (Khayru & Seran, 2025). Investors are beginning to recognize the importance of this cognitive diversity and are incorporating it into their evaluation criteria. Technology companies that ignore the added value of humanities graduates will fall behind in long-term competition.

Educational signaling theory explains that a bachelor's degree functions as a signal about a candidate's productivity in the labor market. However, this signal can become obsolete once someone has relevant work experience (Huntington-Klein, 2021). A humanities graduate with five years of experience in the tech industry should not be judged based on their degree. What is relevant is the performance record and recommendations from the direct supervisor who has worked with them. However, field practices show that educational signals continue to influence evaluations even after years of work. This effect is known as persistent educational stigma, where initial labels continue to stick for life. Employees who have shown extraordinary performance are still doubted in their capabilities when transferred to new functions. The reason given is "they do not have a technical background" despite having succeeded in previous technical roles. Companies need to adopt a policy that after a certain probation period, degrees are no longer a consideration. Evaluation must be solely based on performance and competence visible in actual work. Designing an assessment system that balances quantitative data and qualitative aspects reflects the true value of employee contributions (Darmawan, 2020). This policy will eliminate the incentive for employees to hide their educational background. Employees can be themselves and focus on the work rather than managing impressions about their identity.

Cross-country differences in the acceptance of humanities graduates in technology companies show that this issue is not universal (James et al., 2023). In some European countries such as Germany and the Netherlands, humanities graduates are more easily accepted into technical positions. Strong vocational education systems make cross-field transitions more common and not stigmatized. In East Asia such as Japan and South Korea, degree-based discrimination remains very strong and institutionalized. Companies there require specific degrees for every position very strictly without flexibility. In the United States, polarization occurs between progressive startups and rigid traditional companies. Silicon Valley technology startups are more open to diverse educational background diversities. They realize that innovation requires different perspectives not possessed by homogeneous teams. By utilizing a diverse workforce, organizations can gain broader viewpoints in decision-making and adapt more easily to global market dynamics (Abdulah et al., 2021). However, as these companies grow large and are listed on the exchange, they tend to become more conservative. The formalization process accompanying growth often brings back rigid degree requirements. Companies that manage to maintain an inclusive culture after growing large are rare exceptions. Further research is needed to identify what factors allow them to maintain such flexibility. Best practices from these companies can be emulated by other organizations wanting to become more inclusive.

The ethical implications of discrimination based on educational background are rarely discussed in human resource management literature. Racial or gender discrimination has long received attention due to strong social movements and regulations. However, discrimination against humanities graduates is considered natural because it is believed to reflect objective competence differences. In fact, many studies show that after controlling for work experience, performance differences disappear. This discrimination becomes a self-fulfilling prophecy where humanities graduates are not given the opportunity to prove their capabilities. Then companies use the absence of evidence as an excuse to continue discriminating. This vicious cycle continues because there is no external pressure to change existing practices. There are no anti-discrimination laws covering the category of educational field of study as a protected class. Companies will not be sued in court if they only recruit engineering graduates for certain positions. However, ethically, this action harms individuals who have the potential to make major contributions to the company. They lose the income and career satisfaction they should have achieved. Society also loses the optimal contribution from available human resources. This ethical debate needs to be brought into the public realm to raise awareness of a long-neglected issue. A positive attitude in correcting work errors requires ethical leadership from management to build a healthy and sustainable organizational culture (Mardikaningsih et al., 2022). Sustainability is not just about economic efficiency or technological progress, but also about the social and moral responsibilities borne by developers and policymakers (Essa & Mardikaningsih, 2023).

Philosophy, literature, history, and cultural studies may face different levels of discrimination in technology companies. Philosophy graduates trained in formal logic may be more easily accepted than literature graduates. However, empirical research is needed to verify whether these differences are indeed significant in practice. This framework also assumes that all technology companies have a relatively homogeneous culture. In fact, differences between small startups and large corporations may moderate the relationship found. Companies whose products relate directly to creative content may be more accepting of humanities graduates. Conversely, companies whose products are technical infrastructure may be more rigid in degree requirements. Further research with diverse samples is needed to test the generalization of this framework. Qualitative research with interviews can uncover the subjective

experiences of humanities graduates not captured in the theoretical framework. Mixed methods combining surveys and interviews will provide a richer understanding. Nonetheless, this framework provides a useful starting point for further research on a neglected topic. This work system is projected to continue developing and become a common work pattern in the future, in line with technological advancements that increasingly facilitate its implementation (Putra et al., 2022). Sustainability is not merely a strategic choice, but also a necessity for companies wanting to remain relevant and competitive in the global market (Mardikaningsih & Darmawan, 2021).

CONCLUSIONS

Access to career development opportunities for humanities graduates in technology companies is hindered by three main factors, namely structural, cultural, and procedural. Structural barriers in the form of rigid degree requirements prevent humanities graduates from entering entry-level positions. Cultural barriers in the form of the belief that technical skills are more valuable cause humanities contributions to be underestimated. Procedural barriers in the form of performance appraisal systems biased toward quantity disadvantage their qualitative contributions. Separate alternative career paths often become traps that prevent humanities graduates from reaching senior positions equivalent to engineers. Formal mentoring programs are needed to bridge cultural knowledge gaps that are not taught in official training. Technical training for humanities graduates requires a different pedagogical approach that leverages their strengths in abstract thinking. The added value of humanities graduates becomes clear in the long run through improved product quality and reduced internal conflict. Educational signaling theory explains that degree stigma persists even after relevant work experience. Cross-country differences show that inclusive practices toward humanities graduates are very feasible to implement more widely. The ethical implications of discipline-based discrimination need attention, which has been overlooked so far.

The implication for human resource management practitioners is the need to periodically audit degree requirements in job descriptions. Many degree requirements are actually unnecessary for success in the role and only limit the applicant pool. Companies are advised to replace degree requirements with specific competency requirements that can be tested during the recruitment process. Performance appraisal systems need to be revised to include qualitative indicators regarding contributions to team dynamics and user satisfaction. Internal training programs must provide remedial pathways for employees without a technical background to learn at their own pace. Senior mentors need to be specifically trained to mentor employees from non-technical backgrounds. Companies that successfully integrate humanities graduates are invited to share experiences through industry association forums. Finally, awareness of the value of cognitive diversity needs to be increased through education and leadership training.

REFERENCES

- Abdullah, M. H. A. B., B. Gardi, & D. Darmawan. (2021). Innovation in Human Resource Management to enhance Organizational Competitiveness in the Era of Globalization. *Journal of Social Science Studies*, 1(1), 51 – 58.
- Albrecht, S. L., A. B. Bakker, J. A. Gruman, W. H. Macey, & A. M. Saks. (2015). Employee Engagement, Human Resource Management Practices and Competitive Advantage: An Integrated Approach. *Journal of Organizational Effectiveness: People and Performance*, 2(1), 7-35.
- Ayoko, O. B. & Y. Fujimoto. (2023). Diversity, Inclusion, and Human Resource Management: A call for more belongingness and intersectionality research. <https://doi.org/10.1017/jmo.2023.72>.
- Baran, M. & R. Zarzycki. (2021). Key effects of mentoring processes multi-tool comparative analysis of the career paths of mentored employees with non-mentored employees. *Journal of Business Research*, 124, 1–11. <https://doi.org/10.1016/J.JBUSRES.2020.11.032>.
- Barzani, L. A., Darmawan, D., & Zulkarnain, M. A. B. (2022). The application of sustainable supply chain management principles in the manufacturing industry to improve operational performance and corporate social responsibility. *International Journal of Service Science, Management, Engineering, and Technology*, 1(1), 38–45.
- Blair-Loy, M. & E. A. Cech. (2023). Productivity metrics and hiring rubrics are warped by cultural schemas of merit. *Trends in Microbiology*, 31(6), 556–558. <https://doi.org/10.1016/j.tim.2023.03.004>.
- Booth, A., A. Sutton, & D. Papaioannou. (2016). *Systematic approaches to a successful literature review* (2nd ed.). SAGE Publications.
- Corbin, J. & A. Strauss. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). SAGE Publications.
- Cowley, P. & B. E. Hanna. (2005). Cross-cultural skills – crossing the disciplinary divide. *Language & Communication*, 25(1), 1–17. <https://doi.org/10.1016/J.LANGCOM.2004.05.002>.
- da Silva, B. dos S., Darmawan, D., & Gardi, B. (2022). A systematic approach to risk management to enhance information technology project success in a dynamic business environment. *Journal of Social Science Studies*, 2(2), 213–218.
- Darmawan, D. (2020). Health, well-being, and productivity of senior employees in the era of artificial intelligence. *Journal of Science, Technology and Society*, 1(2), 43–50.
- Darmawan, D. (2021). Social interaction in digital society: Changes in online communication patterns and dynamics of virtual communities. *Studi Ilmu Sosial Indonesia*, 1(1), 325–350.
- Darmawan, D. (2022). Posthuman human resource management in organizations using generative artificial intelligence. *Studi Ilmu Sosial Indonesia*, 2(2), 97–124.
- Darmawan, D. (2023). Innovation Culture That Balances Technological Speed with the Depth of Humanistic Thought. *International Journal of Service Science, Management, Engineering, and Technology*, 4(1), 47–54.
- Darmawan, D. (2023). Knowledge Management as a Source Of Competitive Advantage in Information Technology Companies. *International Journal of Service Science, Management, Engineering, and Technology*, 3(2), 44–50.

- Darmawan, D. (2023). Measuring Employee Productivity in the Digital Era by Considering Human Creativity and Innovation. *International Journal of Service Science, Management, Engineering, and Technology*, 4(3), 47–53.
- Darmawan, D. (2023). Social Inclusion for Older Workers in the Implementation of Digital Technology within Organizations. *International Journal of Service Science, Management, Engineering, and Technology*, 4(2), 44–51.
- Darmawan, D. (2023). The Concept Of Remote Work: A Literature Review on its Impact on Work Dynamics, Psychological Well-Being, and Social Relationships Among Employees. *International Journal of Service Science, Management, Engineering, and Technology*, 3(3), 49–55.
- Darmawan, D. (2024). Distribution of Six Major Factors Enhancing Organizational Effectiveness. *Journal of Distribution Science*, 22(4), 47–58.
- Darmawan, D. (2024). From Individual Minds to Collective Decisions: The Function and Contribution of Cognitive Mapping. *Journal of Social Science Studies*, 4(2), 467–476.
- Darmawan, D. (2024). Strategies for Enhancing Employee Knowledge and Engagement in Automated Routine Work. *International Journal of Service Science, Management, Engineering, and Technology*, 6(1), 65–71.
- Darmawan, D. (2024). The Influence of Empowering Leadership Style on Enhancing Team Members' Autonomy and Innovation Capacity. *International Journal of Service Science, Management, Engineering, and Technology*, 6(3), 48–55. Retrieved from <https://ejournalisse.com/index.php/isse/article/view/232>
- Darmawan, D. (2024). The Role of Technology in Promoting or Hindering Gender Equality in the Workplace. *International Journal of Service Science, Management, Engineering, and Technology*, 6(2), 67–73.
- Darmawan, D. (2024). Workforce Diversity Management Strategies for Enhancing Innovation and Team Performance. *International Journal of Service Science, Management, Engineering, and Technology*, 5(2), 53–59. Retrieved from <https://ejournalisse.com/index.php/isse/article/view/230>
- Darmawan, D. (2025). Human Capital Development in Knowledge-Based Organization and Continuous Learning. *International Journal of Service Science, Management, Engineering, and Technology*, 7(1), 1–6.
- Darmawan, D., & Mardikaningsih, R. (2023). The Role of Flexible Organizational Structures in Enhancing Corporate Adaptability to Environmental Dynamics. *International Journal of Service Science, Management, Engineering, and Technology*, 3(1), 44–49.
- Darmawan, D., & Mardikaningsih, R. (2021). The role of positive psychological factors in enhancing employee engagement and commitment to work tasks. *International Journal of Service Science, Management, Engineering, and Technology*, 1(2), 37–44.
- Darmawan, D., R. Mardikaningsih, E. A. Sinambela, S. Arifin, A.R. Putra, M. Hariani, M. Irfan, Y.R. Al Hakim, & F. Issalillah. (2020). The Quality of Human Resources, Job Performance and Employee Loyalty. *International Journal of Psychosocial Rehabilitation*, 24(3), 2580–2592.
- Dubrin, A. J. (2002). *Fundamental of Organizational Behavior*. Southwestern Publishing, Nashville.
- Eddine, B. A. S., & Darmawan, D. (2021). Professional employees, manual workers, and informal workers in achieving work-life balance. *Studi Ilmu Sosial Indonesia*, 1(1), 209–226.
- Eddine, B. A. S., & Darmawan, D. (2022). Social construction of work-life balance in cultural and organizational norms. *Studi Ilmu Sosial Indonesia*, 2(1), 213–234.
- Eddine, B. A. S., D. Darmawan, R. Mardikaningsih, E. A. Sinambela. (2023). The Effect of Knowledge Management and Quality of Work Life on Employee Commitment. *Journal of Human Sciences*, 10(1), 87–100.
- Essa, N. E., & Mardikaningsih, R. (2023). Sustainable and fair technology for an equitable society. *Journal of Social Science Studies*, 3(1), 355–362.
- Fared, M. A., & Darmawan, D. (2021). Design and implementation of cross-functional training to improve team collaboration. *Journal of Social Science Studies*, 1(1), 215–220.
- Hariani, M., & Mardikaningsih, R. (2022). The performance of authenticity and the commodification of parasocial bonds: Twin pillars of influencer culture on social media. *Studi Ilmu Sosial Indonesia*, 2(2), 385–412.
- Huntington-Klein, N. (2021). Human capital versus signaling is empirically unresolvable. *Empirical Economics*, 60(5), 2499–2531. <https://doi.org/10.1007/S00181-020-01837-Z>.
- Issalillah, F., & Khayru, R. K. (2025). Mental Health Policies and Programs in Building Long Term Employee Loyalty. *International Journal of Service Science, Management, Engineering, and Technology*, 7(2), 39–47. <https://ejournalisse.com/index.php/isse/article/view/239>
- Justham, D. (2008). Planning your research and audits. *Journal of Orthopaedic Nursing*, 12(1), 45–49. <https://doi.org/10.1016/J.JOON.2008.02.003>.
- Khayru, R. K., & Arifin, S. (2025). Corporate Efforts and Strategies in Fulfilling Responsibility for Employee Mental Health in the Era of Digital Productivity Pressure. *International Journal of Service Science, Management, Engineering, and Technology*, 7(1), 44–52. Retrieved from <https://ejournalisse.com/index.php/isse/article/view/235>
- Khayru, R. K., & Seran, G. (2025). Public Perception and Response to Risk: A Sociological Review in the Modern Era. *International Journal of Service Science, Management, Engineering, and Technology*, 7(2), 17–23.
- Lauvås, P., K. Raaen, & A. O. Larsson. (2021). Are you one of us?: How Employers Prioritize among IT Graduates. 79–84. <https://doi.org/10.1145/3450329.3476854>.
- Mardikaningsih, R., & Darmawan, D. (2021). Business sustainability strategies in the facing of regulatory uncertainty and managerial challenges. *Journal of Social Science Studies*, 1(2), 111–118.
- Mardikaningsih, R., & Darmawan, D. (2022). Situational leadership strategies to improve change management and team performance. *Journal of Social Science Studies*, 2(1), 247–252.
- Mardikaningsih, R., & Darmawan, D. (2022). The role of self-efficacy in predicting employee adaptability to technological change in the workplace. *International Journal of Service Science, Management, Engineering, and Technology*, 2(3), 43–55.
- Mardikaningsih, R., & Hariani, M. (2025). Buildansition in the Workplace. *International Journal of Service Science, Management, Engineering, and Technology*, 7(2), 6–10.
- Mardikaningsih, R., & Nuraini, R. (2022). Implementation of Circular Economy Principles for Sustainable Waste Management in the Industrial Sector. *International Journal of Service Science, Management, Engineering, and Technology*, 1(3), 41–47.
- Mardikaningsih, R., Halizah, S. N., Darmawan, D., Masithoh, N., & Nuraini, R. (2022). Examining the Role of Authentic Leadership in Shaping Positive Work Climate and Organizational Citizenship Behavior. *International Journal of Service Science, Management, Engineering, and Technology*, 2(1), 52–59.
- Mardikaningsih, R., Halizah, S. N., Hariani, M., Darmawan, D., & Nuraini, R. (2025). Performance Feedback Accuracy Decline and Delay in Hybrid Work Arrangements. *International Journal of Service Science, Management, Engineering, and Technology*, 7(1), 53–62. Retrieved from <https://ejournalisse.com/index.php/isse/article/view/236>
- Mardikaningsih, R., Halizah, S. N., Nuraini, R., & Darmawan, D. (2022). The role of ethical leadership in shaping a positive and sustainable organizational culture. *International Journal of Service Science, Management, Engineering, and Technology*, 2(2), 48–55.
- Mardikaningsih, R., Hariani, M., Darmawan, D., Halizah, S. N., & Nuraini, R. (2024). The Impact of Digital Monitoring on Employee Work Autonomy and Professional Responsibility. *International Journal of Service Science, Management, Engineering, and Technology*, 5(3), 60–67. <https://ejournalisse.com/index.php/isse/article/view/231>

- Mardikaningsih, R., Hariani, M., Issalillah, F., & Nuraini, R. (2024). Organizational Innovation Strategies as Drivers of Business Resilience and Competitiveness in the Global Environment. *International Journal of Service Science, Management, Engineering, and Technology*, 6(3), 56–65. Retrieved from <https://ejournalisse.com/index.php/isse/article/view/233>
- Muzakky, A. & P. Wulansari. (2024). The Effect of Training and Competency on Career Development: A Conceptual Framework. *Journal of Business and Management Studies*. <https://doi.org/10.32996/jbms.2024.6.4.14>.
- Oberhelman, S. M. (2024). The Arts and Humanities Degree: Value and Benefits. *Athens Journal of Humanities & Arts*, 11(4), 355–366. <https://doi.org/10.30958/ajha.11-4-1>.
- Pearce, J. M. & J. M. Pearce. (2018). Ensuring technical competency for management of research-focused organizations. *The Journal of High Technology Management Research*, 29(2), 172–180. <https://doi.org/10.1016/J.HITECH.2018.09.002>.
- Prommegger, B., D. Arshad, & H. Krcmar. (2021). Understanding Boundaryless IT Professionals: An Investigation of Personal Characteristics, Career Mobility, and Career Success. 51–59. <https://doi.org/10.1145/3458026.3462162>.
- Putra, A. R., Arifin, S., & Darmawan, D. (2024). Gamification-Based Learning that Preserves Cooperation and Empathy Among Employees. *International Journal of Service Science, Management, Engineering, and Technology*, 5(1), 43–50. <https://ejournalisse.com/index.php/isse/article/view/229>
- Putra, A. R., Darmawan, D., & Arifin, S. (2022). Employee experience in the digital workplace: A human resource management perspective. *Studi Ilmu Sosial Indonesia*, 2(2), 361–384.
- Putra, A. R., M. Hariani., D. Nurmalasari., M. Irfan., & Y. R. A. Hakim. (2020). Role of Work Environment and Organizational Culture to Job Performance. *Journal of Islamic Economics Perspectives*, 1(2), 1-12.
- Putra, A. R., Mardikaningsih, R., & Darmawan, D. (2021). Organisational social capital and team collaboration as supports for total quality management. *Studi Ilmu Sosial Indonesia*, 1(1), 129–146.
- Ramle, N. L. B., & Mardikaningsih, R. (2022). Inclusivity in technology-based services: Access and skills challenges. *Journal of Social Science Studies*, 2(2), 225–230.
- Retnowati, E., & D. Darmawan. (2023). Optimizing Employee Morale in the Workplace through the Integration of Career Development, Job Satisfaction, and Work Environment Factors. *International Journal of Service Science, Management, Engineering, and Technology*, 3(1), 37-42.
- Robson, J., E. Murphy, N. Nuseibeh, A. Tawell, B. Hart, J. Stewart, E. Keep, & S. Marginson. (2023). The value of the humanities: understanding the career destinations of Oxford humanities graduates. Oxford University, Humanities Department. <https://doi.org/10.5287/ora-9ebmjvrp7>.
- Rojak, J. A., & Darmawan, D. (2022). Strategies for elevating employee performance: Focusing on work-life quality and self-efficacy development. *Journal of Science, Technology and Society*, 3(2), 9–16.
- Rojak, J. A., Darmawan, D., & Khayru, R. K. (2022). Transformational leadership as an agent of social change in organizational value systems. *Studi Ilmu Sosial Indonesia*, 2(1), 191–212.
- Souza, A. C. M. de., S. Reinehr, A. Malucelli, T. Conte, S. Marczak, L. Jaccheri, F. Binder, T. Lauschner, & D. S. Cruzes. (2024). IT Talent Shortage: Strategies to Mitigate a Blackout. 499–509. <https://doi.org/10.5753/sbes.2024.3533>.
- Vance, E. A., D. Glimp, N. D. Pieplow, J. M. Garrity, & B. A. Melbourne. (2022). Integrating the humanities into data science education. *Statistics Education Research Journal*, 21(2), 9–9. <https://doi.org/10.52041/serj.v21i2.42>.