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ARTIFICIAL INTELLIGENCE AND INTERNAL AUDIT STAFFING PRACTICES: NECESSITATING A DIFFERENT SKILL SET FROM AUDITORS

(YAPAY ZEKA VE İÇ DENETİM PERSONEL UYGULAMALARI: DENETÇİLERDEN BEKLENEN FARKLI BECERİLER)

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ABSTRACT

The integration of artificial intelligence (AI) into internal auditing practices has necessitated a significant transformation in the skill sets required of auditors. This paper explores the evolving competencies essential for internal auditors to remain effective in a rapidly changing technological landscape. As AI capabilities advance, auditors must not only possess traditional technical skills, such as risk management and knowledge of internal controls, but also a robust array of soft skills, including effective communication, critical thinking, and ethical conduct. The literature emphasizes the importance of continuous learning and professional development, highlighting that auditors should proactively seek opportunities to enhance their expertise through targeted workshops and certifications. Furthermore, the cultural context in which auditors operate influences the specific skills needed, with hierarchical cultures placing a premium on decision-making and adherence to protocols, while clan cultures prioritize teamwork and interpersonal relationships. Ultimately, the successful adaptation to AI and the changing demands of the auditing profession hinges on a comprehensive understanding of both cognitive and emotional skill sets, underscoring the necessity for auditors to evolve continuously to add value within their organizations.

Keywords: Internal Audit, Artificial Intelligence, Auditors Skill Set, Staffing Practices

JEL Classification: M40,M42

ÖZ

Yapay zekanın (YZ) iç denetim uygulamalarına entegrasyonu, denetçilerin ihtiyaç duyduğu beceri setlerinde önemli bir dönüşümü gerektirmiştir. Bu makale, iç denetçilerin hızla değişen teknolojik ortamda etkili kalabilmeleri için gerekli olan, gelişen yetkinlikleri araştırmaktadır. Yapay zeka yetenekleri geliştikçe denetçilerin yalnızca risk yönetimi ve iç kontrol bilgisi gibi geleneksel teknik becerilere değil, aynı zamanda etkili iletişim, eleştirel düşünme ve etik davranış dahil olmak üzere güçlü sosyal becerilere de sahip olmaları gerektiğini göstermektedir. Literatürde sürekli öğrenmenin ve mesleki gelişimin önemi vurgulanmakta ve denetçilerin hedeflenen çalıştaylar ve sertifikalar aracılığıyla uzmanlıklarını proaktif olarak geliştirme fırsatlarını aramaları gerektiği vurgulanmaktadır. Ayrıca, denetçilerin faaliyet gösterdiği kültürel bağlam, ihtiyaç duyulan belirli becerileri etkiler; hiyerarşik kültürler karar alma ve protokollere bağlılığa öncelik verirken klan kültürleri ekip çalışmasına ve kişilerarası ilişkilere öncelik vermesinin önemi ortaya çıkmıştır. Sonuçta, yapay zekaya ve denetim mesleğinin değişen taleplerine başarılı bir şekilde uyum sağlamak, hem bilişsel hem de duygusal beceri setlerinin kapsamlı bir şekilde anlaşılmasına bağlıdır ve denetçilerin kuruluşlarına değer katmak için sürekli olarak gelişmelerinin gerekliliktir.

Anahtar Kelimeler: İç Denetim, Yapay Zeka, Denetçilerin Becerileri, Personel Yönetim Uygulamaları

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1. INTRODUCTION

Several studies have outlined essential skill sets for internal auditors. Smith (2005) underscores the significance of communication skills, particularly listening and interpersonal abilities. Both Seol et al. (2011) and Mocanu (2019) emphasize the requirement for a wide range of competencies. Furthermore, Plant et al. (2013) highlight the varying importance of different competencies, such as quality-related issues and soft skills, for internal audit managers in South Africa. Combined, these studies emphasize the necessity of a versatile skill set for internal auditors, encompassing communication, analytical thinking, integrity, and various competencies. On the other hand, the automation of repetitive cognitive and physical tasks by AI, such as financial analysis and audit, primarily impacts the workforce (Melemuku, 2023). Thus, the integration of AI in internal auditing is transforming the skill requirements for internal auditors, necessitating adapting to the changing audit landscape by enhancing their competencies to effectively leverage AI technologies and deliver high-quality audit services in the digital era. So, this article questions the most important skills for AI-era internal auditors.

All kinds of auditors are required to have a blend of soft competencies, such as vital communication and critical thinking skills, and hard competencies linked to technical expertise and problem-solving abilities (Tirta Yasa, Yuliansyah, & Dewi Kesumaningrum, 2021). Furthermore, they must have a solid grounding in ethics, experience, and proficiency to uphold professional skepticism and guarantee audit quality (Knechel, 2016). Audit quality is dependent on two crucial attributes: competence (expertise) and independence (objectivity) (Vitalis, Boritz, & Simeoni, 2024).

Skill can be defined as a combination of cognitive and soft abilities required to apply discipline-specific knowledge effectively in the workplace (Barac, Plant, Kunz, & Kirstein, 2021). In the context of future auditors, skill profiles are evolving to encompass a range of competencies beyond traditional attributes. Moreover, the concept of generic skills is integral to employability and lifelong learning, emphasizing the importance of cognitive and soft skills in professional development. A range of studies have highlighted the critical skills necessary for internal auditors (Tholen, 2017). As a result, the growing need for ‘ higher ’ skills has been perceived as axiomatic of the modern auditing.

With AI, new auditors may have less room to employ their hard abilities. Communication skills are consistently emphasized, with a focus on creating value and maintaining professionalism (Smith, 2005). Coetzee et al. (2019) further emphasized that while there is a global consensus on the importance of certain competencies, the specific levels of importance vary by region. Moreover, Elmghaamez and Ntim (2016)(2016) points out that public speaking and international financial report preparation may be important skills for internal auditors. Mocanu and Ciurea (2019) provides a comprehensive overview of the traits required for internal auditors, including knowledge of professional standards, analytical thinking, communication skills, and integrity. These studies collectively highlight the need for a diverse set of skills, including communication, soft skills, technical expertise, and professional knowledge, for internal auditors to be effective in their roles.

The main research question of this paper is: “What are the specific skill sets and competencies that internal auditors need to develop in response to the integration of AI in the auditing profession?”

2. LITERATURE REVIEW

According to Zgarni (2021), auditors need to consistently enhance their skills beyond conventional accounting and finance expertise to adjust to the evolving demands of the profession. The credibility of the audit process relies significantly on the competency and independence of auditors (Colette & Lukman, 2024). Furthermore, auditors must demonstrate accountability to the public, emphasizing the importance of their abilities and qualities in delivering high-quality audit services.

The definition of skill, whether social or technical, is rooted in the efficient utilization of strategies to match task demands with an individual's capabilities (Shtaltovna, 2021). Job analysis helps in assessing individual job requirements and linking them to skill sets, while employer surveys provide insights into the most relevant skills for the present and future workforce based on regional employer feedback (Mohan, Sarfraz, Hewege, & Rajendran, 2018). More clearly, job requirements of internal auditors are different from other jobs that auditors’ skills should be determined according to internal auditing job requirements. At the same time, these skill sets are based on regional factors that they may be unique according to Turkish organizational culture.

Another reason for defining skills for internal auditors is bridging the skills gap between internal auditors and organizations. This paper has two components: 1) Skills taxonomy generation for internal auditors in Turkiye related to vocational skills to define and develop a taxonomy of professional auditors’ skills; 2) Skills tagging, which leverages properties of relevant skills in AI use.

2.1. Skills taxonomy generation for internal auditors in Türkiye

Internal auditors can be able to provide services beyond the usual auditing norms and practices (Macailao, 2020). Therefore, it is necessary to distinguish their skill set from that of other auditors. Furthermore, scholars and professionals concur that possessing hard skill skills is crucial information for internal auditors to effectively carry out their full internal audit responsibilities (Setyaningrum, Mita, & Rosdini, 2022).

It is crucial for internal auditors to prioritize continuous professional development as it plays a vital role in enhancing their skills, remaining abreast of the latest industry trends, and effectively adapting to evolving job requirements. Upholding compliance with continuing professional development (CPD) requirements is imperative to ensure that internal auditors not only acquire new knowledge and skills but also actively contribute to their professional growth and overall effectiveness (ALfrijat, 2020). Furthermore, internal auditors should be proactive in seeking out and engaging in a wide range of ongoing learning opportunities, such as attending industry-specific seminars, partaking in targeted workshops, and obtaining relevant certifications, in order to consistently expand their competencies and expertise. By actively pursuing these opportunities, internal auditors are better positioned to stay relevant and add value within the dynamic field of internal auditing (Rezaee, 1994).

A range of studies have highlighted the critical skills necessary for internal auditors. Communication skills are consistently emphasized, with a focus on creating value for the organization (Smith, 2005). In the digital economy, competencies in IT, mathematics, and technology are essential (Halar, 2020). Technical expertise, innovative practices, and the ability to assess and investigate fraud are also crucial (Macailao, 2020). However, there is a gap in these skills in some regions, such as Libya, where internal auditors lack public speaking, IT audit, and international financial report preparation skills (Elmghaamez & Ntim, 2016). The Institute of Internal Auditors' Competency Framework is a valuable resource for identifying these skills (Seol et al., 2011; Seol, Sarkis, & Wang, 2017). Soft skills, particularly face-to-face interactions, are also important for entry-level internal auditors (Philna Coetzee & Du Plessis, 2021). The significance of particular talents and skills needed by internal audit managers differs (Plant et al., 2013). There is a need for internal auditors to update their skills in agile audit methodologies and data analytics (Setyaningrum et al., 2022).

In the contemporary work environment, employees are expected to possess a wide range of cognitive and emotional abilities (Koenig, 2011). In the business literature, skills are generally diverted into cognitive, social, digital, and professional skills (Carr & Umberson, 2013; Mohan et al., 2018; Shtaltovna, 2021). Recent research emphasizes the need for "Future Skills" to prepare learners for upcoming challenges, identifying nine meta-categories of such skills (Kotsiou, Fajardo-Tovar, Cowhitt, Major, & Wegerif, 2022). Thus, internal auditors also update their skills for the AI integration. This aligns with the notion that employees must continuously upskill and stay relevant in the face of evolving technologies to remain competitive (Wilson & Syed, 2021).

Seol et al. (2011) defined necessary skill for internal auditors as cognitive and behavioral skills. Cognitive skills encompass mastering technical tools and understanding organizational mechanics, applying analytical and design abilities for problem-solving and research, and making informed, creative judgments in uncertain situations. Behavioral skills involve personal management in challenging contexts, leveraging interpersonal skills for effective communication and teamwork, and utilizing organizational knowledge and networks to achieve outcomes.

Internal auditors must possess a breadth of technical skills to effectively navigate complex financial information, assess risks, and evaluate control systems. These essential skills encompass a comprehensive understanding of accounting principles, auditing standards, data analysis techniques, and regulatory requirements (Krichene & Baklouti, 2021; Steyn, 2021). Moreover, keeping abreast of emerging technologies, such as enterprise resource planning (ERP) systems, is imperative for internal auditors to proficiently audit automated processes and ensure data integrity (Nilasari, 2019). The ability to leverage technology and data analytics tools has become increasingly indispensable for internal auditors, allowing for enhanced audit efficiency and effectiveness (Djogo, 2023).

Internal auditors need more than just technical skills to succeed in their roles. They also require strong soft skills. Effective communication, including both verbal and written skills, is essential for communicating audit findings, building relationships with stakeholders, and facilitating discussions with management (Plant & Slippers, 2015; Steyn, 2021). Furthermore, critical thinking skills are necessary for internal auditors to objectively analyze information, recognize patterns, and make well-founded conclusions, thus improving the quality of audit reports and recommendations (Schleifer & Brady Greenawalt, 1996). Emotional intelligence is also crucial, as it enables internal

auditors to navigate interpersonal relationships, resolve conflicts, and show empathy in their interactions (Osi Dewina, 2018).

Table 1: Necessary Skills for Internal Auditors

Technical Skills	Knowledge of accounting principles
	Understanding of auditing standards
	Proficiency in data analysis techniques
	Familiarity with regulatory requirements
	Ability to audit automated processes and data integrity
	Utilization of technology and data analytics tools
Soft Skills	Effective verbal and written communication
	Relationship building and interpersonal skills
	Critical thinking and analytical skills
	Emotional intelligence for managing interpersonal dynamics
	Ethical conduct and integrity in upholding professional standards
	Adaptability and resilience to navigate changing environments
Continuous Learning	Engagement in professional development activities
	Compliance with continuing professional development (CPD) requirements
	Participation in seminars, workshops, and certifications for skill enhancement

Palmer et al. (2004) outlines essential qualifications for a professional role, focusing on three main areas: technical skills, including accounting principles and data analysis; soft skills, such as communication and critical thinking; and a commitment to continuous learning through professional development activities. These qualifications are designed to ensure proficiency in technical aspects, effective interpersonal interactions, and ongoing skill enhancement.

This table encapsulates the diverse skill set required for auditors, encompassing technical competencies, soft skills, and a commitment to continuous learning and professional development. By possessing a blend of technical expertise, effective communication, critical thinking abilities, and ethical conduct, auditors can fulfill their responsibilities effectively and contribute to organizational success.

Several studies highlight the importance of changes for the employee skills depending on technological advantages (Cicekli, 2016; Özdemir & Tuzcuoğlu, 2021). For example, soft skills are particularly sought after by managers in the banking industry in Turkey (Cicekli, 2016). Moreover, Turkish employees perceived a high correlation between paternalistic and servant leadership styles (Hale Öner, 2012). Because, Turkish business culture is characterized by a mix of clan and hierarchy orientations, with strong paternalistic and authoritarian tendencies (Oney-Yazıcı, Giritli, Topcu-Oraz, & Acar, 2007; Yiyit & Arslan, 2020). Organizational culture significantly impacts wage policies in Turkish family firms (Tanrıverdi, Cakmak, & Altındağ, 2016). Despite ongoing liberalization, traditional cultural values continue to shape Turkish business practices, balancing change and continuity in the evolving business environment. so, as a natural conclusion, Turkish business culture can affect internal auditors' skills.

In recent years, the impact of technological advancements, particularly artificial intelligence (AI), on human resources within Turkey has become a focal point of research. While some workers may not view AI as a threat, there is an increasing necessity for individuals to cultivate skills that go beyond traditional job requirements in order to thrive in evolving work environments (Kambur, 2021). Furthermore, the significant disparity between the skills possessed by employees and the requirements set by employers has emerged as a substantial challenge in Turkey's labor market, resulting in inefficiencies in the utilization of human capital (Pavlovska, 2015). As a resolution to this issue, it is imperative for organizations to invest in training, skill development, and talent management to effectively optimize their workforce and boost productivity (Kajwang, 2022). Moreover, the incorporation of technology in sectors such as hospitality and e-businesses within Turkey underscores the necessity for employees to adapt to digital advancements

and acquire pertinent technological skills to maintain their competitiveness (Chaaya, Abou Hamad, & Beyrouthy, 2019; Napierała, Bahar, Leśniewska-Napierała, & Topsakal, 2020).

2.2. Relevant Skills In and with AI Use

The emergence of AI-related technologies has led to a growing need for the advancement of upskilling and reskilling methods to bridge the existing skills gap. The continuous evolution of emerging technologies, particularly artificial intelligence (AI), is reshaping the socio-economic environment and driving the demand for digital proficiency and enhanced skills among professionals (Cramarenco, Burcă-Voicu, & Dabija, 2023).

The impact of technology, especially AI, on workers' skills has been extensively studied. Concerns about job displacement and changes in required skill sets have been raised throughout history. References to technological unemployment date back to the 1950s. Recent research has explored how technology, including AI, can replace and enhance workers' skills across different job roles and industries. Studies suggest that the impact of AI on skills is not uniform and can differ depending on how AI is integrated into various occupations. AI has the potential to enhance skills through the adoption of high-performance work practices, resulting in increased efficiency and productivity. However, the implementation of AI can also impose constraints on work pace and diminish employee autonomy, potentially exacerbating inequalities in the labor market by amplifying skills more commonly associated with high-skill jobs (Muthuveloo, Chiek, & Ping, 2017). This perspective underlines the dual nature of technology as both a substitute for and an enhancer of worker skills.

It is essential to move beyond simplistic predictions of job automation and skill substitution, as highlighted in scholarly literature (Muthuveloo et al., 2017). While some research has focused on the potential for AI to replace auditors, there is a growing recognition of the importance of exploring how AI can enhance or complement the existing skills of auditors within their professions. Shifting the focus from simple substitution effects to a comprehensive understanding of technology's role in skill development is crucial for fully understanding AI's impact on the workforce. Additionally, the literature emphasizes the limitations of current approaches that rely on aggregated data and broad professional categories to predict the impact of AI on skills. These approaches may overlook within-firm effects related to differences in technology investments and organizational structures. To fully comprehend how AI affects skill development and utilization, it is essential to consider not only substitution effects, but also the potential for AI to redefine job roles, tasks, and skill requirements within organizations over time.

Furthermore, the discussion extends to the concept of reconstitution effects resulting from the prolonged use of AI within firms. As AI adoption becomes more widespread, it is essential to examine how job roles evolve, tasks are redefined, and skill demands change within organizations. By exploring both the intended and unintended consequences of AI implementation, researchers can better grasp the dynamic nature of skill transformations in the workplace.

The era of Artificial Intelligence (AI) has led to a shift in the skill requirements for internal auditors. Along with traditional skills like risk management and knowledge of internal controls, auditors now need to adapt and acquire skills that align with technological advancements. This includes communication, analytical thinking, and professional knowledge, to effectively utilize AI technologies and provide high-quality audit services (Holm & Lorenz, 2022).

As discussed above, culture in Turkish organizations has strong effect on perception of general task and job demand policies (Tanrıverdi et al., 2016). Moreover, Research has shown that clan culture is associated with higher levels of employee performance and job satisfaction (Bing-You et al., 2019)(Bing-You et al., 2019). The Turkish construction industry is dominated by a mixture of clan and hierarchy organizational cultures (Oney-Yazıcı et al., 2007).

The influence of clan and hierarchy cultures on organizational performance holds considerable importance. Clan culture, which emphasizes employee development and engagement, has been associated with greater organizational effectiveness (Herminingsih & Gozali, 2014). The supportive and collaborative characteristics of clan culture promote enhanced productivity, creativity, and overall performance (Bing-You et al., 2019). Conversely, hierarchy culture, while providing stability and clear direction, may encounter difficulties in adapting to evolving environments and market demands, potentially impacting overall performance (Liao, 2018).

The concept of clan culture within an organization truly emphasizes the development of strong social connections and a sense of solidarity among employees. This fosters a work environment that is supportive and nurturing, ultimately contributing to a positive and encouraging atmosphere for everyone (Bing-You et al., 2019). Within this culture, open communication, mentorship, and a focus on long-term objectives take precedence over short-term accomplishments, thereby promoting holistic growth and development (Herminingsih & Gozali, 2014). On the other hand, the hierarchy culture is characterized by a more formal structure that relies on a top-down decision-making approach, where authority

and control are centralized (Liao, 2018). Stability, efficiency, and well-defined reporting structures are highly valued within this culture to ensure that tasks are carried out in alignment with established protocols (Kim, 2020).

In clan organizational cultures, specific work skills are crucial for thriving in the collaborative and supportive environment they foster. Employees in clan cultures benefit from possessing strong interpersonal skills, as these cultures emphasize teamwork, open communication, and relationship-building (Bing-You et al., 2019)(Bing-You et al., 2019). The ability to work effectively in a team, communicate clearly, and build positive relationships with colleagues is pivotal in clan cultures where a sense of belonging and camaraderie is valued (Liao, 2018). Additionally, adaptability and a willingness to learn and grow are essential skills in clan cultures, as they often prioritize employee development and continuous learning (Herminingsih & Gozali, 2014). Employees who can adapt to change, embrace new challenges, and seek opportunities for growth are likely to succeed in clan cultures where innovation and creativity are encouraged (Kim, 2020).

In organizational cultures with a hierarchical structure, specific skill sets are crucial in order to excel within the formal and structured environment they represent. Employees in these cultures benefit from possessing strong organizational and time management skills, as they underscore the importance of structure, control, and adherence to established procedures (Wuisan, Palupi Meilani, & Sutawidjaya, 2020). The ability to effectively prioritize tasks, adhere to established protocols, and meet deadlines is particularly vital in hierarchical cultures, where efficiency and stability are highly valued (Olynick & Li, 2020). Furthermore, leadership and decision-making capabilities hold significant importance in hierarchical cultures, given their inclination towards a top-down approach to management, where clear reporting structures and authority play a central role (Al Dari, Jabeen, Hussain, & Al Khawaja, 2021). Employees who can demonstrate effective leadership, make informed decisions, and navigate hierarchical systems adeptly are well-positioned for success in such cultures, where formal processes and control are emphasized (Sanz-Valle & Jiménez-Jiménez, 2018; Sanz-Valle, Naranjo-Valencia, Jiménez-Jiménez, & Perez-Caballero, 2011).

In a nutshell, in clan organizational cultures, thriving requires strong interpersonal skills, teamwork, open communication, and a willingness to learn, fostering a sense of belonging and innovation. Conversely, hierarchical organizational cultures demand strong organizational, time management, leadership, and decision-making skills to navigate their structured, formal environments efficiently.

Soft skills are essential in both clan and hierarchy organizational cultures, albeit in varying ways. In clan cultures, the emphasis on teamwork, collaboration, and employee development makes soft skills paramount (Bing-You et al., 2019). Employees in clan cultures benefit from strong interpersonal and communication skills, as well as the ability to work effectively in a team (Liao, 2018). Remember that having good people skills like being understanding, listening well, and resolving conflicts peacefully is really important for creating a friendly and caring work atmosphere in close-knit communities where relationships are highly important (Herminingsih & Gozali, 2014). Moreover, adaptability, creativity, and a willingness to learn are important in clan cultures that encourage innovation and continuous improvement (Kim, 2020).

In hierarchical cultures, soft skills take on different significance. Within these settings that prioritize structure, control, and formal procedures, soft skills like time management, organizational skills, and leadership abilities are crucial (Wuisan et al., 2020). Employees in hierarchical cultures benefit from strong decision-making skills, the ability to adhere to established protocols, and effective communication skills to navigate the formal environment (Olynick & Li, 2020). Attention to detail, reliability, and the ability to work within a structured framework are also essential in hierarchical cultures where efficiency and stability are valued (Dari et al., 2020). Furthermore, leadership skills and the ability to navigate hierarchical structures are important in these cultures where clear reporting structures and authority are central (Sanz-Valle et al., 2011).

Soft skills play a crucial role in both clan and hierarchy cultures, contributing to positive work environments, increased productivity, and organizational success. In clan cultures, they help build strong relationships, foster innovation, and create a supportive atmosphere, leading to high employee satisfaction and engagement (Abbasi & Dastgeer, 2018). In contrast, in hierarchy cultures, soft skills are essential for maintaining efficiency, adhering to protocols, and ensuring smooth operations within the structured environment (López-Zapata & Ramírez-Gómez, 2023). Recognizing the significance of soft skills in both clan and hierarchy cultures allows organizations to establish a balanced work environment that values collaboration and structure, ultimately leading to enhanced performance and employee well-being.

Thus, Soft skills are crucial in both clan and hierarchy organizational cultures as they enhance teamwork, communication, and adaptability. In clan cultures, they foster collaboration, employee development, and innovation,

leading to a supportive atmosphere and strong relationships. In hierarchical cultures, soft skills such as time management, organizational proficiency, and leadership are essential for maintaining efficiency, adhering to protocols, and navigating formal structures effectively. Overall, soft skills contribute to a positive work environment, increased productivity, and organizational success, by balancing the need for collaboration and structure. Consequently, soft skills are important for internal auditors and auditions in the Turkish organizational context.

Soft skills like communication, cooperation, and emotional intelligence are more critical than ever as a complement to AI in the workplace (Shareef, 2023). The integration of artificial intelligence (AI) across multiple fields has notably impacted the development and application of soft skills in professional settings. AI's role as a transformative agent emphasizes its ability to refine and augment essential soft skills, such as communication, empathy, and problem-solving, which are vital for success in today's workforce. In internal auditions, AI aids professionals by offering access to information and improving auditors' interactions, thereby enhancing decision-making and audit report quality. In the realm of education, AI tools provide personalized feedback to learners, improving their language skills and fostering essential soft skills like active listening and collaboration, particularly in virtual learning environments (Sadun, Fuller, Hansen, & Neal, 2022).

AI's contribution to the development of soft skills extends beyond individual interactions, impacting larger professional sectors such as business, where there is a renewed focus on blending technical prowess with interpersonal abilities. The emphasis on emotional intelligence, especially in healthcare, showcases how AI can support the cultivation of empathy, leadership, and communication skills, underlining the interplay between emotional intelligence and soft skills. As the landscape of AI continues to evolve, understanding and leveraging its influence on soft skill enhancement is crucial for both individuals and organizations aiming to navigate the complexities of the digital age successfully. The multifaceted effects of AI on soft skills signify its central role in shaping a workforce that is not only technically proficient but also adept at managing the nuanced human aspects of professional environments.

Succinctly, in the Turkish organizational culture, soft skills will be more prominent with the integration of AI for the internal auditors. Integrating AI tools into communication, business writing, and composition rather than technical parts of audit reports can help develop auditors' soft skills in the AI era (AlAfnan, Dishari, & Siti Fatimah MohdZuki, 2024).

3. DISCUSSION

The integration of artificial intelligence (AI) into the field of internal auditing presents both challenges and opportunities that necessitate a reevaluation of the skills required for auditors. The rapid advancement of AI technologies has transformed the landscape of auditing, making it imperative for internal auditors to adapt and acquire new competencies that align with these changes. The traditional skill sets that auditors have relied upon, such as risk management and knowledge of internal controls, remain essential; however, they are no longer sufficient in isolation. The emergence of AI demands that auditors also develop technical expertise and innovative practices to effectively leverage these technologies in their audit processes.

One of the critical areas for future research is the identification of specific skill gaps among internal auditors, particularly in regions where these competencies are lacking. For instance, it has been noted that in certain areas, such as Libya, auditors may struggle with essential skills like public speaking, IT auditing, and international financial reporting. Addressing these gaps is crucial for enhancing the overall effectiveness of internal audit functions. Research could focus on developing targeted training programs that equip auditors with the necessary skills to navigate the complexities introduced by AI and other technological advancements.

Moreover, the literature emphasizes the importance of ongoing professional development for internal auditors. Auditors should proactively engage in continuous learning through industry-specific seminars, workshops, and certifications. This approach not only helps auditors stay current with emerging trends but also enhances their ability to add value to their organizations. Future studies could explore the effectiveness of various professional development initiatives and their impact on auditor performance, thereby providing insights into best practices for continuous learning in the field. Additionally, the discussion around the dual nature of skills—soft and hard—among internal auditors is particularly relevant in the context of AI integration. While technical skills are increasingly important, soft skills such as

communication, critical thinking, and adaptability are equally vital for auditors to effectively collaborate with stakeholders and navigate the complexities of modern auditing environments.

4. CONCLUSIONS AND RECOMMENDATIONS

The evolving landscape of internal auditing necessitates a significant shift in the skill sets required for auditors, particularly in light of advancements in technology such as artificial intelligence (AI). As highlighted by Arun, the effectiveness of internal auditors is increasingly dependent on their ability to adapt and acquire both soft and hard skills that align with organizational goals and the complexities of modern auditing environments. Continuous professional development through targeted learning opportunities is essential for auditors to remain relevant and enhance their value to organizations. Furthermore, the integration of AI into auditing practices underscores the need for auditors to possess technical expertise and innovative practices to effectively assess risks and investigate fraud. Therefore, the literature emphasizes the importance of understanding and improving the competencies of internal auditors to elevate their performance and streamline risk assessment processes in an ever-changing business landscape.

Continuous professional development is crucial for internal auditors to improve their abilities, remain updated on industry trends, and adapt to changing job demands with the effects of AI. However, in the literature, it is not clear which skills should be updated or will be redundant with the development of AI. Moreover, the literature rule out the Turkish cultural context for the internal auditor skill development.
The study differentiates between perceived behavioral (soft) skills and cognitive (hard) skills, arguing that both are crucial for internal auditors. Key findings suggest the increasing importance of communication, analytical thinking, integrity, and a broad range of competencies due to AI integration. The paper reviews literature indicating a shift towards higher, more diverse skills necessitated by AI, including the need for technical expertise, professional knowledge, and enhanced soft skills like public speaking.

Ultimately, the main research question seeks to identify the specific skills and competencies internal auditors need to develop in response to AI's role in auditing. The findings aim to contribute to professional practice by improving internal auditors' skills, enhancing performance, and streamlining risk assessment processes.

The impact of artificial intelligence (AI) on skills in the workplace, particularly in Denmark, is thoroughly examined. It delves into how AI can both substitute for and augment the skills of workers, highlighting the nuanced effects of technology adoption on skill development within different job roles and industries. The literature emphasizes that the effects of AI on skills are not uniform and can vary based on how AI is utilized within occupations. While some studies have focused on the potential for AI to replace tasks and jobs, there is a growing recognition of the importance of considering how AI can complement existing skills within occupations. The document also points out the limitations of current approaches in predicting the impact of AI on skills, stressing the need to move beyond simplistic predictions of job automation and skill substitution. Additionally, it discusses the concept of reconstitution effects resulting from prolonged AI use within firms, emphasizing the evolving nature of job roles, tasks, and skill requirements. Overall, the document provides a comprehensive analysis of the multifaceted relationship between AI and worker skills, highlighting the complexities and implications of technology adoption in the modern workplace.

Future research in the field of internal auditing should focus on several key areas to enhance the effectiveness and adaptability of auditors in an increasingly complex environment influenced by technological advancements, particularly artificial intelligence (AI).

Firstly, there is a pressing need to investigate the specific skill sets required for internal auditors in the context of AI integration. As noted by Arun, the effectiveness of internal auditors is contingent upon their ability to adapt and acquire both soft and hard skills that align with the evolving demands of the profession. Future studies should explore the relative importance of these skills, their practical applications in hiring and training processes, and the impact of emerging technologies on the competencies required for auditors. This could involve developing a comprehensive framework that categorizes essential skills and identifies gaps in current training programs.

Secondly, research should examine the regional disparities in auditor competencies, as highlighted by Arun, particularly in areas where auditors may lack critical skills such as public speaking, IT auditing, and international financial reporting. Comparative studies across different geographical regions could provide insights into the specific training needs and

barriers faced by auditors in various contexts. This would enable the development of targeted educational programs that address these gaps and enhance the overall competency of internal auditors globally.

Additionally, the exploration of ongoing professional development opportunities for internal auditors is crucial. As emphasized by Arun, auditors should actively seek out continuous learning through industry-specific seminars, workshops, and certifications to remain relevant in their field. Future research could assess the effectiveness of different professional development initiatives and their impact on auditor performance and organizational value addition. This could include longitudinal studies that track the career progression of auditors who engage in various learning opportunities compared to those who do not.

Lastly, it is essential to investigate the role of organizational culture in supporting the development of internal auditors. Research could explore how organizational commitment to training and development influences auditor effectiveness and the overall internal audit function. Understanding the interplay between organizational culture and auditor competencies could provide valuable insights for organizations aiming to enhance their internal audit capabilities.

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