DYNAMICS OF TEACHING AND RESEARCH IN BUSINESS ADMINISTRATION: NAVIGATING THE PRE-COVID, COVID, AND POST-COVID LANDSCAPE

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ABSTRACT

Purpose - This article investigates the transformation of teaching and research methodologies in business administration education across the pre-COVID-19, COVID-19, and post-COVID-19 eras. It seeks to identify key trends, challenges, and opportunities resulting from the pandemic, and to propose recommendations for future adaptation.

Body of Knowledge - Before the COVID-19 pandemic, business administration education employed a variety of methods, including lectures, case studies, and experiential learning, alongside increasing integration of technology. Research primarily focused on emerging technologies, sustainability, and ethics. The onset of the COVID-19 pandemic necessitated a swift transition to online and remote instruction, which in turn shifted research priorities toward pandemic-related topics such as supply chain disruptions, marketing strategies, and organizational resilience, as well as new methodologies such as virtual data collection. The post-COVID-19 era is characterized by hybrid and blended learning models that incorporate advanced technologies (e.g., VR/AR, AI) and research concentrating on resilience, sustainability, and crisis management, with a strong emphasis on interdisciplinary and collaborative approaches.

Implications: This review offers valuable insights into the adaptability and resilience of business administration education and research during and after a global crisis. It underscores the necessity for agile industry-academia partnerships, the promotion of entrepreneurial mindsets, and the integration of technology and sustainability in curricula to sustain relevance and competitiveness. The findings provide a framework for curriculum development, pedagogical innovation, and research priorities within the evolving landscape of business administration.

Originality/Value: This article presents a distinctive comparative analysis of the dynamics of business administration education and research across three time periods. By examining the transformations instigated by the COVID-19 pandemic, the study enhances our understanding of the challenges and opportunities encountered by the field, revealing both similarities and differences in approaches across the pre-COVID, COVID, and post-COVID-19 eras. The identification of emerging trends and recommendations for future development significantly contributes to the field.

Keywords: Business administration, COVID-19, Digital transformation, Sustainability, Hybrid learning

Paper Type: Academic Article

INTRODUCTION
Overview of the Importance of Business Administration Education and Research
For decades, education and research in business administration have been vital in shaping the future of the business environment (Ermakova et al., 2016; Castro, 2018). Historically, business schools have adapted their curricula to incorporate emerging trends, from quantitative methods and management science to globalization and, more recently, sustainable business practices

(Zureigat et al., 2019; Islam & Ma, 2024). Recognizing the vital role of business administration education and research, this study examines the pandemic's significant and transformative impact, which has fundamentally reshaped the landscape and presented both challenges and opportunities. Furthermore, the strategic integration of new technologies has become increasingly critical. Business schools must equip students with the digital literacy and data analysis skills necessary to thrive in an increasingly technology-driven world, leveraging tools like learning management systems (LMS), virtual collaboration platforms, and data analytics software to enhance the learning experience and prepare graduates for the demands of the digital economy (Burch et al., 2015; Ilie et al., 2020).

In recent decades, business schools have experienced considerable growth, reflecting the rising need for business education. This expansion has been fueled by the acknowledgement that business administration education significantly affects market operations and society. Beyond traditional business functions, modern programs increasingly emphasize areas like entrepreneurship and innovation, recognizing the dynamic nature of the business landscape. This growth underscores the responsibility of academic leaders to provide the most effective and current curriculum, one that is aligned with industry needs and prepares students for the challenges and opportunities of the 21st century (Zureigat et al., 2019; Ilie et al., 2020).

Nonetheless, ongoing discussions have emerged about the limitations of conventional business education curricula. Researchers have noted that these curricula often lean too heavily on theory and fail to prepare students for entrepreneurship and real-world business challenges adequately. Moreover, insufficient integration of technology, particularly in practical applications, can leave graduates ill-prepared for the demands of today's digital business environment (Tenetilova et al., 2019; Lin et al., 2020). There is an increasing need to focus on hands-on learning opportunities, such as valuable apprenticeships, to connect academic knowledge with industry practices (Ile & Edokpolor, 2020).

Moreover, integrating sustainability, ethics, and corporate social responsibility (CSR) into business administration programs has become more essential. Scholars argue that a collective understanding of these topics and their effects on future business activities is vital for developing effective curricula and motivating students to critically engage with current and forthcoming business practices (Eagle et al., 2015; Chopra et al., 2024). Furthermore, technology plays a crucial role in advancing sustainability efforts by enabling businesses to track their environmental impact, optimize resource use, and promote ethical supply chain management.

Incorporating emerging technologies, like business intelligence and big data analytics, into business administration programs has become increasingly important. Researchers stress that business schools must keep pace with industry developments and ensure that graduates possess the skills and knowledge required to succeed in the digital era. These technologies enable data-driven decision-making, enhance operational efficiency, and facilitate the development of innovative business models. As such, a strong foundation in these technologies is essential for all business administration graduates (Khurram, 2020; Bueno, 2024).

In conclusion, education and research in business administration are crucial as they can shape the business sector's future, provide students with essential skills and knowledge, and respond to industry's changing demands. Ongoing initiatives to enhance and adapt business administration curricula are vital for maintaining the relevance and competitiveness of business education in a constantly evolving global landscape.

Significance of Understanding the Impact of the COVID-19 Pandemic on This Field
The COVID-19 pandemic has profoundly influenced business administration, requiring a more comprehensive understanding of its wide-ranging effects. The pandemic disrupted various aspects of business, including global supply chains, operational logistics, consumer behaviors, and workforce management, resulting in unprecedented challenges for organizations across diverse industries (Pearmunwai et al., 2022; Qun et al., 2022; Proykratok et al., 2025). Scholars have noted that the COVID-19 pandemic compelled businesses to rapidly adapt and modify their strategies in order to maintain continuity, ensure survival, and, in some cases, capitalize on emerging opportunities (Kang et al., 2021; Lutfi et al., 2020; Setiawan et al., 2021). The increased

need for digital transformation, acceleration of remote work, and the explosion of e-commerce have become essential for businesses to navigate the difficulties imposed by the pandemic (Nagel, 2020; Alkahtani et al., 2021; Yasir et al., 2021). For example, brick-and-mortar retailers were forced to develop online sales channels, while manufacturers struggled to secure raw materials and adapt production lines (McKinsey & Company, 2020).

In addition, the pandemic has dramatically affected the research priorities and approaches in business administration. Researchers have redirected their attention to pandemic-relevant topics, such as supply chain resilience, new marketing approaches in a disrupted environment, and the dynamics of remote work (Kang et al., 2021). Moreover, the pandemic has required changes in research methods and data gathering, with a stronger focus on virtual and remote techniques (Dubé et al., 2023).

Grasping the dynamics of education and research in business administration during the pre-COVID, COVID, and post-COVID phases is crucial for several reasons. First, it offers insight into the resilience and adaptability of business education and research amid a global crisis. Second, it emphasizes businesses' changing needs and priorities, which helps create more relevant and responsive curricula and research plans. Finally, it guides the strategies and policies needed to assist the recovery and growth of the business sector in the wake of the pandemic. Examining these three periods allows us to see not only the immediate disruptions caused by COVID-19 but also the longer-term adaptations and innovations shaping the future of business.

By investigating the effects of the COVID-19 pandemic on business administration education and research across these three distinct periods, stakeholders can better understand the challenges, opportunities, and fundamental changes within this discipline. This insight can aid in developing more effective and adaptable methods for teaching, research, and collaboration between industry and academia, ultimately enhancing the long-term resilience and competitiveness of the business sector.

BUSINESS ADMINISTRATION TEACHING AND RESEARCH IN THE PRE-COVID ERA
Prevailing Teaching Methodologies and Pedagogical Approaches
Before COVID, education in business administration employed various instructional methods and teaching styles to provide students with essential knowledge and skills (Strelchonok, 2018; Hou, 2019; Nandedkar & DiRusso, 2019). A typical teaching strategy in business administration was the lecture-based approach, which focused on the instructor's role in presenting course material to a large group of students. This method effectively taught students considerable theoretical knowledge, concepts, and principles (Nandedkar & DiRusso, 2019).

Moreover, case-based instruction became a widely recognized teaching method in business administration programs. This technique involved analyzing real-world business situations and case studies to engage students in critical thinking, problem-solving, and decision-making processes (Hou, 2019). The case-based method was particularly appreciated for its capacity to connect theoretical knowledge with practical application, enabling students to utilize their learning in realistic business contexts (Hou, 2019).

In addition to these traditional methods, interactive and experiential learning strategies—such as role-playing, simulations, and business games—were integrated into business administration curricula. These approaches improved students' practical skills, decision-making capabilities, and comprehension of business processes (Butzke et al., 2017).

Alongside these conventional teaching styles, there was an increasing focus on incorporating new technologies, like digital platforms and online learning tools, into business administration education. This trend sought to enhance the delivery of course materials, promote interactive learning, and better equip students for the digital business environment (Ukata & Silas-Dikibo, 2019; Izagirre-Olaizola & Morandeira-Arca, 2020). However, the extent of technology integration varied significantly across institutions, with some programs fully embracing digital tools while others remained more reliant on traditional approaches.

Assessment methods in pre-COVID business education typically included examinations, quizzes, written assignments, and presentations (Nandedkar & DiRusso, 2019). These methods aimed to evaluate students' understanding of course material, their ability to apply theoretical

concepts, and their communication skills. However, there was increasing recognition of the need for more authentic assessment methods that better reflected real-world business challenges.

Overall, the pre-COVID period in business administration education was marked by a variety of teaching methodologies and pedagogical strategies, each with its own advantages and drawbacks for knowledge acquisition, skill enhancement, and practical application (Strelchonok, 2018; Hou, 2019; Nandedkar & DiRusso, 2019).

Dominant Research Themes and Focus Areas

Before the COVID-19 pandemic, research in business administration encompassed a wide array of themes and focal points aimed at deepening understanding of various facets of business operations, management, and strategy (Issavarestagul, 2019; Somjai & Jermsittiparsert, 2019; Wangkit & Punpanich, 2019). Research methodologies commonly employed included quantitative surveys, qualitative case studies, and statistical analysis of large datasets, reflecting a commitment to both breadth and depth in understanding complex business phenomena.

A key area of research involved examining the effects of emerging technologies, including digital platforms and business intelligence, on business practices and performance (Haseeb et al., 2019a, 2019b). Scholars assessed how adopting these technologies could improve organizational efficiency, decision-making, and competitiveness (Wieczorek et al., 2021). Studies often focused on specific technologies such as cloud computing, blockchain, and artificial intelligence, analyzing their impact on various aspects of business, from supply chain management to customer relationship management.

Another primary research focus was sustainability, CSR, and ethical issues within business administration. Investigations examined how these concepts could be incorporated into business education and their implications for business practices and decision-making (Neungvanna et al., 2019; Thongrawd et al., 2019; Prianto et al., 2020). This research often involved exploring the relationship between corporate social responsibility initiatives and financial performance, as well as examining the ethical implications of various business decisions. For example, research explored the effectiveness of different CSR strategies in enhancing brand reputation and consumer loyalty.

Additionally, researchers explored the dynamics of business administration education, including teaching methods, pedagogical strategies, and the cultivation of relevant skills and competencies among students. These investigations aimed to connect academic theory with industry practices, ensuring the relevance and effectiveness of business administration programs (Sang, 2021). This research frequently compared different teaching approaches, such as case-based learning versus traditional lectures, to assess their impact on student learning outcomes.

Moreover, researchers examined how business administration fits within the broader economic and social framework, assessing its influence on economic development, public policy, and organizational performance. These studies intended to generate insights that could guide policymaking and augment the business sector's role in promoting societal welfare (Baldarelli et al., 2020). This research often involved analyzing the impact of government regulations on business performance and exploring the relationship between business activity and social inequality.

In summary, business administration research before COVID was marked by a diverse approach, covering technological advancements, sustainability, educational methodologies, and the broader social consequences of business activities.

Challenges and Limitations in the Pre-COVID Landscape

In the period before COVID-19, the field of business administration education and research faced various challenges and limitations that hindered its ability to effectively meet the changing demands of the business sector and equip students for the complexities of the contemporary business environment (Dziubaniuk & Nyholm, 2020). Prior to the pandemic, business administration education and research faced challenges related to practical application, technology integration, and industry alignment (Haseeb et al., 2019a, 2019b). COVID-19 exacerbated these issues, while also creating new opportunities for innovation. These limitations

manifested across multiple dimensions, including pedagogical practices, technological adoption, and the alignment of education with industry needs (Calzada, 2021; López et al., 2021).

A significant challenge was the dominance of conventional teaching methods, primarily lecture-driven instruction, which often faced criticism for their lack of practical applicability and minimal student engagement. While approaches such as case-based teaching and experiential learning were increasingly gaining popularity, their incorporation into the curriculum was often only partial or unsuccessful (Becheikh et al., 2022). Moreover, assessment methods often relied heavily on traditional examinations, which may not accurately reflect students' ability to apply knowledge in real-world business settings. One potential solution to this challenge could be the increased use of project-based learning and simulations that allow students to demonstrate their skills in a more authentic context (Catalán &Martínez, 2018).

Moreover, the adoption of emerging technologies, including digital platforms and business intelligence tools, within business administration coursework was often insufficient, failing to adequately prepare students for the increasingly digital business landscape (Tenetilova et al., 2019; Lin et al., 2020). These disconnects between academic programs and industry requirements presented a significant obstacle in ensuring the relevance and competitiveness of business administration graduates (Reynolds & Dang, 2015). For example, many graduates lacked proficiency with data analytics software, which is increasingly essential for decision-making across various business functions. Some universities addressed this challenge by partnering with technology companies to provide students with hands-on training in using these tools.

Additionally, the traditional emphasis on theoretical knowledge and conceptual understanding in business administration education was sometimes viewed as needing more focus on practical skills, entrepreneurial mindsets, and ethical decision-making (Carillo, 2017). The divide between academic theory and real-world practice limits business administration programs' ability to produce well-rounded, adaptable professionals (Stubbs, 2013). To overcome this limitation, some business schools incorporated entrepreneurship courses and ethics workshops into their curricula, aiming to cultivate these essential skills.

Another area for improvement was the integration of sustainability, CSR, and ethical considerations into the foundation of business administration programs (Bridgman et al., 2018). While these subjects were occasionally treated as separate modules or electives, their cohesive integration throughout the curriculum needed improvement, limiting students' ability to develop a comprehensive understanding of the social and environmental ramifications of business decisions (Lusoli, 2020). Several institutions are addressing this challenge by integrating sustainability principles into core courses and encouraging students to participate in community engagement projects.

Lastly, the pre-COVID environment was characterized by a notable absence of interdisciplinary collaboration and cross-fertilization of ideas between business administration and other disciplines, such as engineering, social sciences, and sustainability studies (Howlett et al., 2016). This compartmentalized approach hindered the development of innovative, holistic solutions to complex business issues (Rusinko, 2010; Laster & Russ, 2010). Some universities sought to bridge this gap by establishing joint research centers and offering interdisciplinary degree programs.

While these challenges were not unique to any single region, they were often exacerbated in developing countries due to limited resources and infrastructure.

In conclusion, the pre-COVID landscape of business administration education and research highlighted the need for more dynamic, practical, and interdisciplinary methods to enhance student preparedness for the realities of the modern business arena and to address the changing needs of the industry.

Emerging Trends and Innovations
In the pre-COVID era, the field of business administration witnessed the emergence of several innovative trends and approaches aimed at enhancing the relevance, effectiveness, and adaptability of business education and research (Smajlović et al., 2019). These trends reflected a

growing recognition that business education must evolve to respond to rapid technological advancements, increasing globalization, and heightened social and environmental concerns. While many of these trends showed promise, their widespread adoption and successful implementation were still in progress.

One prominent trend was the increased integration of technological innovation and digital transformation into business administration curricula. Researchers highlighted the importance of equipping students with the knowledge and skills to leverage emerging technologies, such as business intelligence, data analytics, and digital platforms, to drive business innovation and competitiveness (Smajlović et al., 2019). Many universities began offering specialized courses in areas like data science and digital marketing, and some even incorporated these topics into core courses across various business disciplines.

Additionally, there was a growing emphasis on integrating sustainability, CSR, and ethical considerations into the core of business administration education. Researchers advocated for a more holistic approach that would enable students to develop a comprehensive understanding of the social and environmental implications of business decisions (Marques et al., 2016). For instance, some business schools introduced mandatory courses on business ethics and sustainability, while others encouraged students to participate in social entrepreneurship projects.

Furthermore, the pre-COVID era saw the emergence of more interactive and experiential learning approaches, such as case-based teaching, simulations, and problem-based learning. These methods aimed to bridge the gap between academic theory and industry practice, enabling students to apply their knowledge to real-world business challenges (Bucherer et al., 2012). For example, some universities partnered with local businesses to provide students with real-world consulting opportunities, while others developed sophisticated business simulations that allowed students to manage virtual companies (Schiuma & Carlucci, 2018).

Alongside these pedagogical innovations, the pre-COVID era also witnessed advancements in business administration research, with a focus on exploring the dynamics of business model innovation, organizational learning, and the interplay between technological innovation and business strategy (Sitthiwarongchai et al., 2018; Yao et al., 2018; Smajlović et al., 2019). However, some of these initiatives faced challenges, such as limited faculty expertise in emerging technologies or difficulty in replicating real-world complexities in simulations. Some institutions saw early efforts fall flat before improving.

Overall, the pre-COVID era in business administration was marked by a concerted effort to enhance the relevance, responsiveness, and adaptability of business education and research by integrating technological advancements, sustainability considerations, and innovative pedagogical and research approaches.

ADAPTING TO THE COVID-19 PANDEMIC
Shifts in Teaching and Learning Modalities
1. Transition to Online and Remote Instruction

The COVID-19 pandemic forced a rapid and unprecedented shift in the delivery of business administration education, with a significant transition to online and remote instruction (López et al., 2021). This shift was driven by the need to adhere to social distancing measures and lockdown restrictions imposed to curb the spread of the virus (Johnson et al., 2020; Ogunleye, 2023). Before the pandemic, online and digital platforms in business administration education were limited, with a predominant focus on traditional, in-person teaching methods. However, the COVID-19 crisis accelerated the adoption of technology-enabled learning, as educational institutions were compelled to quickly adapt their teaching approaches to ensure the continuity of education (Johnson et al., 2020; Ashour et al., 2021; Ogunleye, 2023). For example, universities that previously offered a few online courses suddenly had to convert entire programs to a remote format within a matter of weeks, relying heavily on platforms like Zoom and Microsoft Teams. Researchers have highlighted that this transition presented both challenges and opportunities for business administration education. On the one hand, many faculty members and students lacked the experience and digital competencies to effectively engage in online learning, leading to

difficulties adapting to the new modalities (Johnson et al., 2020). Some instructors struggled with creating engaging online content, while students faced distractions and technical difficulties at home. On the other hand, the pandemic also accelerated the development of digital competencies and the integration of innovative teaching methods, such as virtual simulations, online case studies, and interactive webinars (Mustari et al., 2021; Ratten & Jones, 2021). However, the shift to online and remote instruction also raised concerns about the quality and effectiveness of business administration education, particularly regarding practical skill development and experiential learning. Researchers have emphasized the need for educational institutions to carefully design and implement online learning strategies that effectively replicate the interactive and immersive nature of traditional classroom settings (Ratten & Jones, 2021). For example, institutions have attempted to replicate the case study method through virtual breakout rooms and online collaboration tools, with varying degrees of success. Furthermore, student experience and feedback revealed the importance of clear communication, technical support, and a sense of community to foster engagement in online learning environments. While some adaptation attempts, such as relying solely on recorded lectures, proved less effective, others, like interactive simulations and virtual guest speaker sessions, were better received. Despite the challenges, the COVID-19 pandemic also presented opportunities for business administration education to embrace digital transformation and explore new pedagogical approaches to enhance the learning experience and better prepare students for the evolving business landscape (Ratten & Jones, 2021). The successful integration of online and remote instruction into business administration curricula will ensure these programs' continued relevance and adaptability in the post-pandemic era (Johnson et al., 2020; Ashour et al., 2021; Ogunleye, 2023).

2. Challenges and Opportunities in Virtual Learning Environments

The rapid transition to online and remote instruction during the COVID-19 pandemic presented both challenges and opportunities for business administration education in virtual learning environments (Curelaru et al., 2022; Khalid, 2022; Adomaitis et al., 2023). One key challenge was the need for more experience and digital competencies among faculty and students, which hindered their ability to engage effectively in virtual learning. Many educators needed help adapting their teaching methodologies and creating interactive, engaging online learning experiences (Khalid, 2022; Adomaitis et al., 2023). Similarly, students faced difficulties navigating the virtual learning environment and maintaining their motivation and focus (Curelaru et al., 2022). For instance, some students reported feeling isolated and disconnected from their peers and instructors. Additionally, the lack of face-to-face interaction and the absence of physical cues in virtual settings posed challenges in fostering a sense of community and social presence, which are crucial for effective learning (Kovaleva et al., 2021). Researchers have emphasized the need for educational institutions to prioritize developing virtual learning environments that replicate the social and collaborative aspects of traditional classroom settings (Curelaru et al., 2022). Furthermore, the transition to online learning raised concerns about the quality and effectiveness of practical skill development and experiential learning, which are integral to business administration education. Educators have had to explore innovative ways to recreate immersive, hands-on learning experiences in virtual environments, such as using virtual simulations, interactive case studies, and remote collaboration tools (Ratten & Jones, 2021). Despite these challenges, the COVID-19 pandemic also presented opportunities for business administration education to embrace digital transformation and leverage the benefits of virtual learning environments. Researchers have highlighted the potential of virtual learning to enhance the accessibility, flexibility, and personalization of educational experiences (Ruangvanich et al., 2019; Ademola, 2021). Additionally, integrating learning analytics and adaptive technologies in virtual learning environments can provide valuable insights into student engagement, performance, and learning outcomes, enabling more targeted and effective interventions (Ruangvanich et al., 2019; Ibarra & Lu, 2021). Furthermore, the pandemic accelerated the development of digital competencies among faculty and students, paving the way for more innovative and technology-enabled teaching and learning approaches in the post-COVID era. The successful integration of virtual learning environments into business administration curricula can contribute to these programs' continued relevance and adaptability to evolving industry demands (Ratten & Jones,

2021). For example, instructors became more adept at using online tools to create engaging lectures and facilitate group discussions. Overall, the challenges and opportunities presented by virtual learning environments in business administration education during the COVID-19 pandemic underscore the need for a comprehensive, strategic approach to digital transformation in higher education.

Transformations in Research Priorities and Methodologies

1. Increased Focus on Pandemic-Related Topics

The COVID-19 pandemic significantly transformed the research priorities and methodologies within business administration (Barreiro-Gen et al., 2020; Sampat & Shadlen, 2021). Researchers shifted their focus toward investigating the various impacts of the pandemic on business operations, strategies, and performance (Pearmunwai et al., 2022; Qun et al., 2022; Proykratok et al., 2025). One key research area examined the pandemic's effects on supply chains, logistics, and operations management (Proykratok et al., 2025). For example, studies analyzed how businesses adapted their supply chain strategies to mitigate disruptions, ensure business continuity, and enhance resilience (Barreiro-Gen et al., 2020). Additionally, studies investigated the role of digital technologies and data analytics in supporting supply chain agility and responsiveness during the crisis (Barreiro-Gen et al., 2020). There was a notable comparative shift from pre-COVID research focusing on general supply chain efficiency to during-COVID research emphasizing resilience and risk mitigation in the face of disruptions. Another prominent research focus explored the pandemic's impact on marketing and customer behavior. Researchers examined how businesses adjusted their marketing strategies, communication channels, and customer engagement approaches to navigate the changing market dynamics. Studies also investigated shifts in consumer preferences and purchasing patterns and their implications for business models and revenue streams (Qun et al., 2022; Samarkjarn & Pechinthorn, 2022). One example is the surge in research on e-commerce adoption and digital marketing strategies for businesses adapting to lockdowns and changing consumer behavior (Teresienė et al., 2021). Furthermore, the COVID-19 pandemic prompted researchers to investigate the organizational and managerial responses to the crisis, including adopting remote work, implementing business continuity strategies, and the role of leadership in fostering resilience (Sampat & Shadlen, 2021). These studies provided valuable insights into the challenges and opportunities businesses faced as they adapted to the pandemic's disruptions (Sampat & Shadlen, 2021). Alongside these pandemic-specific research topics, there was a growing emphasis on examining the pandemic's impact on broader societal and economic issues, such as sustainability, CSR, and businesses' roles in addressing global challenges. Researchers investigated how the pandemic influenced the prioritization of these issues within the business community and the potential long-term implications for integrating sustainability and social responsibility into business practices (Barreiro-Gen et al., 2020). Overall, the COVID-19 pandemic significantly reshaped research priorities within business administration. The focus was on understanding the crisis's multifaceted impacts across business operations, strategies, and the broader socioeconomic landscape.

2. Adaptations in Research Methods and Data Collection

The COVID-19 pandemic necessitated significant adaptations in research methods and data collection approaches within business administration (Molinari & Villiers, 2021). These adaptations posed methodological challenges regarding validity and access. One key adaptation was the increased reliance on virtual and remote data collection methods, such as online surveys, interviews, and focus groups. Researchers pivoted away from traditional in-person data collection techniques due to the pandemic's restrictions and safety concerns (Molinari & Villiers, 2021). This shift presented challenges and opportunities as researchers had to navigate the complexities of virtual engagement and ensure the validity and reliability of their data (Molinari & Villiers, 2021). One significant methodological challenge was ensuring sample representativeness when relying on online surveys, as access to technology and internet connectivity varies across demographic groups (Molinari & Villiers, 2021). Furthermore, researchers had to adapt their interview techniques to foster trust and rapport in virtual settings,

often facing difficulties in observing nonverbal cues and building strong connections with participants. Additionally, researchers have had to explore innovative ways to access and analyze data during the pandemic. The rapid pace of COVID-19-related research led to the development of new data processing and synthesis techniques, including the use of web-based data sources and real-time data analysis. These approaches enabled researchers to stay agile and responsive to the evolving situation while also addressing the challenges posed by the sheer volume of COVID-19-related literature (Fry et al., 2020; Vaghela et al., 2021). Data collection innovations included social media analytics, text mining of online news articles, and analysis of publicly available datasets to track real-time changes in consumer behavior and business operations. The innovative research methodologies and data collection techniques developed during this period offer opportunities for longer-term innovation in business administration. Furthermore, the pandemic prompted researchers to reconsider their methodological approaches, with a greater emphasis on interdisciplinary collaboration and the integration of diverse perspectives. Researchers recognized the need to draw insights from multiple fields, such as public health, psychology, and economics, to better understand the pandemic's multifaceted impacts on businesses and the broader socioeconomic landscape. For example, studies on the impact of remote work integrated psychological theories of stress and well-being to better understand the effects on employee productivity and mental health (Petitta & Ghezzi, 2025). However, the rapid pace of COVID-19 research also raised concerns about the methodological rigor and quality of some studies. Researchers highlighted the need for greater attention to research design, data validation, and peer review processes to ensure the reliability and validity of the findings (Jung et al., 2020; Cunningham et al., 2021; Stamm et al., 2021). The increased reliance on online data collection also raised ethical concerns about participant privacy and informed consent, prompting researchers to develop new protocols to ensure ethical conduct in virtual research environments. The lessons learned from addressing these challenges led to lasting improvements in virtual research methodologies, including enhanced protocols for ensuring data security and ethical considerations in online research. Overall, the COVID-19 pandemic significantly transformed research methods and data collection approaches within business administration, necessitating greater flexibility, innovation, and interdisciplinary collaboration.

Organizational and Institutional Responses
1. Strategies for Business Continuity and Resilience

The COVID-19 pandemic posed significant challenges to businesses, forcing them to develop and implement strategies to ensure business continuity and resilience (Setiawan et al., 2021; Apte et al., 2022; Khalil et al., 2022). These strategies varied across industries and regions, highlighting the importance of adaptability. One of the key strategies organizations adopted was implementing effective business continuity plans (BCPs). These plans enabled businesses to anticipate and respond to disruptions caused by the pandemic, ensuring the continuity of critical operations and preserving organizational resilience. Researchers highlighted that the successful implementation of BCPs was crucial in helping businesses navigate the crisis and maintain their competitiveness (Setiawan et al., 2021; Apte et al., 2022; Lievani, 2023). Examples of successful BCPs include establishing redundant supply chains, implementing remote work policies, and diversifying product lines. However, regional differences in government regulations and infrastructure affected the feasibility and effectiveness of these plans. For instance, businesses in developed countries with robust internet infrastructure found it easier to transition to remote work compared to those in developing countries with limited access to reliable internet services. Additionally, integrating digital technologies and adopting remote work and e-commerce solutions supported business continuity during the pandemic. Researchers emphasized that the effective utilization of digital tools and platforms enabled businesses to adapt to the changing market conditions, maintain customer engagement, and ensure the seamless delivery of products and services (Bai et al., 2021; Lepore et al., 2021; Khalil et al., 2022). Furthermore, researchers identified the importance of government support and fiscal stimulus policies in enhancing the resilience of businesses and tiny and medium-sized enterprises (SMEs). These policies provided much-needed financial assistance and resources to help businesses weather the storm and

maintain operations (Shafi et al., 2020; Khalil et al., 2022; Lievani, 2023). For example, government-backed loan programs and tax breaks helped many SMEs stay afloat during periods of reduced revenue. Alongside these strategies, researchers highlighted the role of entrepreneurial mindsets, intrinsic motivation, and adaptability in fostering business resilience during the pandemic. Businesses that quickly pivoted their strategies, innovated their business models, and demonstrated agility successfully navigated the crisis and emerged stronger (Yesmin et al., 2021; Jena, 2022; Mohammadifar et al., 2022). Overall, the COVID-19 pandemic underscored the importance of comprehensive business continuity planning, the strategic integration of digital technologies, government support, and entrepreneurial resilience to ensure businesses' long-term sustainability and competitiveness. The effectiveness of organizational and institutional adaptations also varied across regions, with developed economies often possessing greater resources and infrastructure to support these changes than developing nations. However, it is crucial to expand on the long-term implications of these emergency responses, including the potential for increased automation, the widening digital divide, and the need for re-skilling initiatives to prepare the workforce for the changing nature of work.

     2. Role of Technology and Digital Transformation

     The COVID-19 pandemic underscored the critical role of technology and digital transformation in enabling organizational and institutional responses to the crisis (Li et al., 2021; Bukar et al., 2022; Abedini et al., 2023). However, resource disparities significantly influenced access to these solutions. Technology supported organizational resilience during the pandemic by facilitating remote work and virtual collaboration. The rapid adoption of video conferencing, cloud-based platforms, and other digital tools enabled businesses to maintain operations and ensure business continuity despite physical distancing requirements (Zhabin, 2023). Case studies showed that organizations that had already invested in digital infrastructure before the pandemic experienced a smoother transition to remote work compared to those that had to scramble to implement new technologies on short notice. Furthermore, integrating emerging technologies, such as artificial intelligence, data analytics, and automation, helped organizations optimize operations, enhance decision-making, and better manage the pandemic's challenges. Researchers highlighted that the strategic deployment of these technologies was instrumental in supporting crisis management efforts and fostering organizational resilience (Browder, 2023; Jeyasingh, 2023). Additionally, the COVID-19 pandemic accelerated the digital transformation of businesses, with a greater emphasis on e-commerce, online customer engagement, and digital marketing channels. Researchers emphasized that the successful integration of digital technologies enabled organizations to adapt to changing market conditions and maintain competitiveness (Grace & Tham, 2020). However, the transition to digital and technology-driven solutions also posed challenges, particularly for SMEs that needed more resources and expertise. Researchers highlighted the importance of providing targeted support and capacity-building initiatives to help these organizations leverage digital technologies and navigate the crisis (Ratten & Jones, 2021). For instance, governments and industry associations launched programs to provide training and technical assistance to SMEs in areas such as website development, social media marketing, and cybersecurity. Overall, the COVID-19 pandemic has underscored the critical role of technology and digital transformation in enabling organizational and institutional responses to the crisis, from facilitating remote work and virtual collaboration to optimizing operations and supporting digital business models. The effectiveness of organizational and institutional adaptations also varied across regions, with developed economies often possessing greater resources and infrastructure to support these changes than developing nations. To ensure equitable access and success, targeted support is needed to mitigate resource disparities.

EMERGING TRENDS AND INNOVATIONS IN THE POST-COVID ERA
Advancements in Teaching and Learning
     1. Hybrid and Blended Learning Models

     The COVID-19 pandemic accelerated the adoption of hybrid and blended learning models in business administration education as educational institutions sought to adapt to the crisis's challenges (Thamrin et al., 2022; Islamia et al., 2023). The success of these models depends

heavily on effective technological integration. Hybrid learning models, which combine face-to-face instruction with online and digital components, have emerged as a promising approach to enhancing the flexibility, accessibility, and effectiveness of business administration programs. Researchers have highlighted that integrating synchronous and asynchronous learning activities in hybrid models can provide students with a more personalized and engaging learning experience (Thamrin et al., 2022; Islamia et al., 2023). Successful implementations often involve a carefully designed mix of in-person lectures, online discussions, and collaborative projects. Furthermore, incorporating problem-based learning (PBL) and other active learning strategies into hybrid learning models has improved students' critical thinking, problem-solving, and decision-making skills. By exposing students to real-world business challenges and enabling them to apply their knowledge in practical scenarios, these hybrid approaches can better prepare them for the demands of the modern business landscape (Lestari et al., 2022; Thamrin et al., 2022). Additionally, using adaptive technologies and learning analytics in hybrid learning environments can provide valuable insights into student engagement, performance, and learning outcomes, enabling educators to tailor their instructional approaches and provide more personalized support. This data-driven approach can help continuously improve and optimize hybrid learning models (Nasution et al., 2022). For example, learning analytics dashboards can track student participation in online discussions, identify struggling students, and provide personalized recommendations for additional resources. However, the successful implementation of hybrid learning models in business administration education requires careful planning, faculty development, and the provision of necessary technological infrastructure and support. Researchers have emphasized the importance of addressing digital literacy challenges, student engagement, and integrating hybrid learning into the curriculum (Ganovia, 2023). Effective assessment in hybrid environments requires innovative approaches beyond traditional exams, such as project-based assessments, simulations, and peer evaluations. One key challenge is ensuring that all students have equitable access to technology and reliable internet connectivity, regardless of their socioeconomic background. Overall, the emergence of hybrid and blended learning models in the post-COVID era represents a significant advancement in business administration education, offering the potential to enhance the relevance, flexibility, and effectiveness of these programs in preparing students for the evolving demands of the business world.

2. Integrating Technology and Digital Tools

The post-COVID era significantly accelerated the integration of technology and digital tools into business administration education (Alshammari, 2023). This trend was driven by the need to enhance the flexibility, accessibility, and effectiveness of teaching and learning approaches amid the pandemic's disruptions (Aniskin et al., 2020; Triplett, 2023). However, significant challenges remain in technology integration. One key aspect of this integration has been the increased utilization of virtual and augmented reality (VR/AR) technologies in business administration curricula. These immersive technologies have created interactive simulations, virtual case studies, and experiential learning environments that more effectively replicate real-world business challenges (Halim et al., 2022). For example, students can use VR to simulate managing a supply chain during a disruption or participate in a virtual negotiation with international partners. Furthermore, integrating artificial intelligence (AI) and machine learning (ML) tools has enabled the development of adaptive and personalized learning experiences for business administration students. These technologies can provide real-time feedback, personalized recommendations, and intelligent tutoring systems to support student learning and engagement (Chen et al., 2019; Iyer, 2022). Additionally, adopting cloud-based platforms, learning management systems (LMS), and collaborative digital tools facilitated the seamless delivery of online and hybrid learning experiences in business administration programs. These technologies enabled enhanced communication, collaboration, and data-driven decision-making in the teaching and learning process (Goldhaber et al., 2021). However, successfully integrating technology and digital tools into business administration education has been challenging. Researchers have highlighted the importance of addressing issues related to digital literacy, faculty development, and the alignment of technological integration with pedagogical approaches

(Atabek, 2019; Sholeh, 2023). Technology integration is ineffective if it is not aligned with sound pedagogical principles and if faculty lack training to use new tools effectively. Furthermore, equitable access to digital resources and the mitigation of the digital divide have emerged as critical considerations in ensuring that the benefits of technology-enabled learning are accessible to all students, regardless of their socioeconomic background (Ojukwu et al., 2021; Selialia, 2023). Overall, integrating technology and digital tools into business administration education in the post-COVID era represents a significant advancement in teaching and learning approaches, offering the potential to enhance these programs' relevance, flexibility, and personalization.

Shifts in Research Focus and Methodologies

1. Emphasis on Resilience, Sustainability, and Crisis Management

The COVID-19 pandemic significantly shifted the research focus in business administration, with a growing emphasis on resilience, sustainability, and crisis management (Poberschnigg et al., 2020; YahiaMarzouk & Jin, 2022). Researchers recognized the critical importance of organizational resilience in enabling businesses to navigate and adapt to pandemic-related disruptions. Studies investigated factors that contribute to the development of resilience capabilities, such as environmental scanning and cross-functional integration. These insights provided valuable guidance for businesses in strengthening their ability to withstand and recover from crises (Poberschnigg et al., 2020; YahiaMarzouk & Jin, 2022). The methodological innovations used in these studies include network analysis to identify key actors in resilience networks and qualitative case studies to understand the processes involved in building resilience capacity. Furthermore, the pandemic highlighted the need for a greater emphasis on sustainability in business administration research. Researchers explored the crisis's impact on the prioritization of sustainability issues within organizations and the potential long-term implications for integrating environmental, social, and governance (ESG) considerations into business practices. These studies underscored the importance of aligning business strategies with the principles of sustainability and resilience. This involved exploring innovative business models that reduced environmental impact and enhanced social responsibility (Wongmahesak et al, 2024). Additionally, the COVID-19 pandemic prompted a surge in crisis management research, focusing on understanding the organizational and managerial responses to the crisis. Researchers investigated the strategies and approaches businesses employed to ensure business continuity, manage the pandemic's impact, and enhance their preparedness for future crises. These insights can potentially inform the development of more robust and adaptable crisis management frameworks for the business sector (Yacoub & Elhajjar, 2021; Çoban & Özel, 2022). However, research on resilience, sustainability, and crisis management in the post-COVID era also highlighted the need for a more holistic, interdisciplinary approach. Researchers emphasized the importance of integrating perspectives from various fields, such as psychology, sociology, and environmental science, to better understand the complex and multifaceted nature of these challenges (Adikaram & Sarangi, 2020; Yang et al., 2021). Overall, the post-COVID era in business administration research has seen a significant shift toward exploring resilience, sustainability, and crisis management, reflecting the urgent need for businesses to adapt and thrive amid unprecedented challenges.

2. Interdisciplinary and Collaborative Research Approaches

The post-COVID era has seen a growing emphasis on interdisciplinary and collaborative research approaches in business administration (Bolger, 2021; Beaulieu et al., 2023). Researchers recognized the need to draw insights from diverse disciplines, such as psychology, sociology, and environmental science, to better understand the complex, multifaceted challenges businesses face following the pandemic. This interdisciplinary approach enabled the development of more comprehensive and holistic solutions to address issues related to organizational resilience, sustainability, and crisis management (Bolger, 2021). Furthermore, the COVID-19 pandemic underscored the importance of collaborative research, where scholars from various fields and institutions work together to tackle common challenges. Researchers highlighted the benefits of such collaborative efforts, including leveraging complementary expertise, accessing a broader range of data sources, and enhancing the validity and impact of

research findings (Beaulieu et al., 2023). Successful collaborative projects often involve teams of researchers with expertise in fields such as marketing, finance, and information technology, who work together to address complex research questions. The benefits of collaborative research include leveraging complementary expertise, accessing a broader range of data sources, and enhancing the validity and impact of research findings. However, collaborative research also presents challenges, including coordinating efforts across different institutions, navigating disciplinary boundaries, and ensuring that all team members are adequately recognized for their contributions. However, the successful implementation of interdisciplinary and collaborative research approaches in the post-COVID era was not without challenges. Researchers emphasized the need to address issues related to disciplinary boundaries, institutional silos, and the development of appropriate methodological tools and frameworks to facilitate effective collaboration (Sankaran et al., 2020; Aguirre-Guerrero & Bernal-Jáquez, 2023). Strategies such as action research, participatory approaches, and the integration of boundary-spanning activities have been explored to overcome these challenges and foster more effective interdisciplinary and collaborative research (Sankaran et al., 2020). These strategies can help to break down institutional silos and foster a culture of collaboration among researchers from different disciplines. Additionally, the post-COVID era witnessed the emergence of innovative research methodologies, such as virtual collaboration platforms and data-driven synthesis techniques, to support interdisciplinary and collaborative research (Mynott & O'Reilly, 2022). Overall, the emphasis on interdisciplinary and collaborative research approaches in the post-COVID era reflects recognition that complex challenges require integrating diverse perspectives and the collective efforts of scholars from various disciplines.

Institutional and Organizational Adaptations

1. Fostering Entrepreneurial Mindsets and Innovation

The post-COVID era has emphasized fostering entrepreneurial mindsets and innovation within business administration education and organizational practices (Hasan et al., 2021; Massoudi, 2025). This involves addressing both cultural and resource-related challenges. Researchers have highlighted that the COVID-19 pandemic presented both challenges and opportunities for entrepreneurship, underscoring the need to equip students and organizations with the necessary skills and mindsets to navigate the evolving business landscape (Ahmed et al., 2020; Tucmeanu et al., 2022). One key aspect of this trend has been integrating entrepreneurship education into business administration curricula, with a focus on developing students' entrepreneurial skills, creativity, and problem-solving abilities. Studies have shown that entrepreneurship education can positively influence students' entrepreneurial intentions, self-efficacy, and ability to identify and exploit opportunities (Zhang et al., 2022; Batada, 2023). Institutions are offering courses on design thinking, lean startup methodologies, and business model canvas development to foster these skills. Furthermore, the pandemic has accelerated the need for innovative business models, products, and services as organizations strive to adapt to changing market conditions. Researchers have emphasized the importance of cultivating an entrepreneurial culture within organizations, where employees are encouraged to think creatively, take calculated risks, and contribute to developing innovative solutions (Liguori et al., 2021; Sentosa et al., 2022). Additionally, integrating digital technologies and adopting agile, data-driven approaches have supported entrepreneurial and innovative practices within business organizations. Researchers have highlighted the potential of these tools and methodologies to enhance organizational flexibility, responsiveness, and the ability to capitalize on emerging opportunities (Cater et al., 2021; Thian et al., 2022). However, successfully fostering entrepreneurial mindsets and innovation within business administration education and organizations takes time and effort. Researchers have emphasized the need for comprehensive support systems, including access to resources, mentorship, and a culture that celebrates and rewards entrepreneurial endeavors (Pech et al., 2021; Hasibuan et al., 2023). One major challenge is securing adequate funding for these initiatives and creating an organizational culture that is genuinely supportive of risk-taking and experimentation. Resource allocation issues often include prioritizing funding for entrepreneurship programs over more traditional areas of

business administration. The post-COVID era has seen a heightened focus on cultivating entrepreneurial mindsets and fostering innovation in business administration education and organizational practices to enhance adaptability, competitiveness, and long-term sustainability.

2. Strengthening Industry-Academia Partnerships

The post-COVID era emphasized strengthening industry-academia partnerships within business administration (Fabbe-Costes, 2022; Jantunen & Hynninen, 2022; Marijan, 2022). These partnerships facilitate the co-creation of knowledge but require careful management. Researchers have highlighted that effective collaboration between industry and academia can provide significant benefits to both parties, including the development of innovative solutions, the transfer of knowledge and technology, and the enhancement of the relevance and practical applicability of business administration education (Fabbe-Costes, 2022; Marijan, 2022). Examples include collaborative research projects, joint curriculum development initiatives, and student internships. One key aspect of this trend has been the integration of industry-based projects, internships, and experiential learning opportunities into business administration curricula. These initiatives enable students to apply their knowledge in real-world business settings while providing industry partners access to a pool of talented and motivated individuals (Soam et al., 2023). Furthermore, the COVID-19 pandemic has underscored the need for more agile and responsive industry-academia partnerships, as businesses have faced unprecedented challenges and sought innovative solutions. Researchers have emphasized the importance of fostering open communication, mutual understanding, and a shared commitment to addressing industry-specific problems (Felderer & Garousi, 2019; Garousi et al., 2019). Additionally, integrating emerging technologies, such as artificial intelligence and data analytics, has emerged as a key area of collaboration between industry and academia. These partnerships can enable the co-creation of knowledge and the development of innovative applications that can benefit both the business sector and academic research (Adli et al., 2024). However, successfully strengthening industry-academia partnerships is challenging. Researchers have highlighted the need to address issues related to intellectual property rights, incentive alignment, and the effective management of collaborative projects (Lee et al., 2020; Takieddine, 2019). Effective management of collaborative projects requires addressing intellectual property rights, aligning incentives and objectives, and establishing clear communication channels. Overall, the post-COVID era has seen a heightened focus on strengthening industry-academia partnerships in business administration to enhance these programs' relevance, innovation, and practical applicability.

COMPARATIVE ANALYSIS AND IMPLICATIONS

To clearly illustrate the key similarities and differences in teaching and research approaches across the pre-COVID, COVID, and post-COVID periods, Table 1 presents a comparative analysis. This table summarizes the evolution of curriculum focus, teaching methodologies, research foci, research methods, technology integration, industry-academia partnerships, and the challenges encountered in each era.

Table 1. Comparison of Teaching and Research in Business Administration Across Eras

Feature	Pre-COVID Era	COVID Era	Post-COVID Era
Curriculum Focus	- Theoretical knowledge, conceptual understanding	- Adapting strategies for business continuity and survival	- Entrepreneurial mindsets, innovation, digital transformation, sustainability, and social responsibility
Teaching Methodologies	- Lectures, case studies, experiential learning - Increasing technological integration	- Primarily online and remote instruction	- Hybrid and blended learning models - Advanced technologies (VR/AR, AI)

Table 1. (Cont.)

Feature	Pre-COVID Era	COVID Era	Post-COVID Era
Research Focus	- Emerging technologies, sustainability, ethics	- Pandemic-related topics (supply chain, marketing, resilience)	- Resilience, sustainability, crisis management - Interdisciplinary and collaborative approaches
Research Methods	- Traditional in-person data collection	- Increased reliance on virtual and remote data collection methods	- Interdisciplinary collaboration and integration of diverse perspectives
Technology Integration	- Growing use of digital platforms and online learning tools	- Rapid shift to online platforms and virtual tools	- Extensive use of VR/AR, AI, cloud-based platforms, and learning analytics
Industry-Academia Partnerships	- Growing recognition of the benefits of collaboration	- Increased need for agile and responsive partnerships	- Key focus on co-creation of knowledge and innovative applications
Challenges	- Dominance of conventional teaching methods - Insufficient technology adoption - Divide between theory and practice	- Lack of experience and digital competencies - Maintaining engagement in virtual environments	- Addressing digital literacy challenges - Ensuring equitable access to digital resources

As shown in Table 1, the curriculum focus has evolved significantly, shifting from a primarily theoretical focus pre-COVID to a strong emphasis on resilience, sustainability, and digital transformation in the post-COVID era. This evolution has driven corresponding changes in teaching methodologies, research focus, technology integration, and partnerships, ultimately aiming to better equip students for the complexities of the modern business world. However, each era also presents unique challenges, such as addressing digital literacy gaps and ensuring equitable access to resources, which must be addressed for successful implementation.

Similarities and Differences in Teaching and Research Across the Pre-COVID, COVID, and Post-COVID Periods

The COVID-19 pandemic profoundly impacted business administration, leading to significant transformations in teaching and research across pre-COVID, COVID, and post-COVID periods (Konkin et al., 2021; Vindača & Lubkina, 2021). The following analysis synthesizes the key similarities and differences across these phases.

Similarities

Increased Emphasis on Technology Integration: One key similarity is the heightened emphasis on integrating technology and digital tools into the educational and research landscape across all three periods. Prior to the pandemic, digital platforms, virtual simulations, and data analytics were gaining traction (Fleischmann, 2020). The COVID-19 crisis accelerated this as institutions rapidly transitioned to online and remote instruction (Konkin et al., 2021). This trend intensified post-COVID, with researchers focusing on developing hybrid and blended learning models (Zairul et al., 2023).

Importance of Industry-Academia Partnerships: All three periods emphasized the value of industry-academia partnerships. Before the pandemic, there was growing recognition of collaborative projects, internships, and experiential learning. The COVID-19 crisis underscored this need as businesses faced unprecedented challenges and sought innovative solutions. This emphasis continued post-COVID, with a particular focus on knowledge co-creation and developing innovative applications (Vindača & Lubkina, 2021).

Differences

Teaching Modalities: Pre-COVID teaching was primarily in-person, relying heavily on lectures with some integration of case studies and experiential learning. During the COVID-19

pandemic, a rapid shift to online and remote instruction occurred, presenting challenges due to limited faculty and student experience in this area. In the post-COVID era, the focus shifted to refining and leveraging these lessons learned to enhance the quality and effectiveness of hybrid and blended learning models (Konkin et al., 2021).

Research Priorities: In the pre-COVID era, research focused on broader themes like sustainability, ethics, and technological innovation. The COVID-19 crisis prompted a significant shift toward pandemic-related topics, including the impact on supply chains, marketing strategies, and organizational resilience. While these remain important, post-COVID research increasingly focuses on long-term implications of the pandemic and strategies to support recovery and growth (Vindača & Lubkina, 2021).

Addressing Technology-Related Challenges: Prior to COVID, technological integration was often constrained by limited resources and expertise. During COVID, the rapid shift exposed gaps in digital competency. The post-COVID period has focused on addressing these challenges through digital literacy initiatives and ensuring equitable access to technology.

Quantifiable Comparisons: One might look at the percentage of courses offered online, research funding allocated to pandemic-related topics, or the number of industry-academia partnerships formed during each period. Quantifiable measures, such as the percentage of courses offered online, research funding allocated to pandemic-related topics, and the number of industry-academia partnerships, could provide a more concrete understanding of the transformations across these periods. More data and specific examples would be needed to further strengthen this analysis.

Contrasts: Explicit contrasts between periods include the shift from predominantly theoretical pre-COVID curricula to post-COVID curricula focused on adaptability and resilience. Research shifted from long-term sustainability to immediate crisis response, then evolved into a balance of the two.

In conclusion, the COVID-19 pandemic catalyzed significant changes in teaching and research approaches within business administration, with both similarities and differences observed across these periods. The successful integration of these transformations is crucial in ensuring the continued relevance and adaptability of business administration, education, and research.

Factors Influencing the Dynamics of Change

The transformations witnessed in business administration education and research across the pre-COVID, COVID, and post-COVID periods were influenced by a complex interplay of various factors (Zhang, 2023). Understanding these factors is crucial for sustaining positive changes and avoiding unintended consequences.

Institutional and Organizational Culture: The institutional and organizational culture within educational institutions played a crucial role in shaping the dynamics of change. The willingness and readiness of faculty, staff, and administrators to embrace new teaching and research approaches significantly impacted the success of these transformations. Institutions fostering innovation, collaboration, and continuous improvement were better equipped to navigate the pandemic's challenges and implement effective changes (Zhang & Qu, 2021). For example, institutions with shared governance models where faculty had a voice in decision-making were more likely to successfully implement new teaching technologies. A detailed analysis of the impact of institutional culture on the pace and effectiveness of change is critical.

Resource Availability: Resource availability was a key factor influencing the dynamics of change. Institutions that had previously invested in digital platforms, learning management systems, and faculty development initiatives were better positioned to adapt to the rapid shift to remote instruction during the COVID-19 crisis. The prioritization of funding for innovation and transformation initiatives supported implementing new teaching and research approaches. Securing funding for technology upgrades, faculty development, and novel pedagogical and research methods enabled institutions to navigate the pandemic's challenges more effectively (Morimoto, 2022). For example, a comparative analysis of institutions with differing levels of resource availability could quantify this impact. It's also important to recognize that resource

availability is not just about funding, but also about access to expertise, technical support, and other non-financial resources. How the interplay between resources and institutional capabilities shapes the effectiveness of adaptation requires further analysis.

Technological Infrastructure and Digital Competencies: The availability of technological infrastructure and faculty and student digital competencies were crucial to enabling the transition to online and hybrid learning models (Zhang, 2023). Institutions that had previously invested in digital platforms, learning management systems, and faculty development initiatives were better positioned to adapt to the rapid shift to remote instruction during the COVID-19 crisis.

External Environmental Factors: Broader socioeconomic and political contexts shaped the dynamics of change. Government policies, regulatory frameworks, and societal expectations significantly shaped the field of business administration. Aligning institutional responses with evolving needs and priorities across the broader ecosystem was critical to ensure the long-term relevance and sustainability of these programs (Clark et al., 2022; Sala-Bubaré et al., 2023). External factors also include technological advancements, global economic trends, and changes in the labor market.

Here are a few examples of how the factors discussed above interact. An institution may have strong resource availability (Factor 2), but a lack of a supportive organizational culture (Factor 1) that values innovation can prevent resources from being used efficiently to drive change. Similarly, government policies that provide incentives for technology adoption (Factor 4) may have limited impact if educational institutions lack the technical infrastructure and digital competencies (Factor 3) to effectively implement new solutions.

In conclusion, the factors influencing change in business administration education and research were multifaceted and interdependent, requiring a comprehensive and strategic approach to navigating the transformations brought about by the COVID-19 pandemic.

Implications For Business Administration Education and Research

The transformations witnessed in business administration education and research across the pre-COVID, COVID, and post-COVID periods have significant implications for the future of these programs (Mousa, 2021; Ratten & Jones, 2021). These implications demand a strategic, actionable, and future-oriented approach.

Ensuring Relevance and Adaptability of Curricula: One key implication is the need to maintain the continued relevance and adaptability of business administration curricula amid evolving industry demands and societal needs. The COVID-19 pandemic underscored the importance of equipping students with the skills and knowledge required to navigate complex, dynamic, and uncertain business environments. This includes a greater emphasis on entrepreneurship, innovation, digital transformation, and integrating sustainability and social responsibility considerations into the core of business administration education (Ratten & Jones, 2021). These changes also call for curricula that are agile and can readily incorporate new trends.

Practical Application: To enhance practical application, institutions can incorporate simulations, real-world case studies, and collaborative projects with industry partners. These methods help students bridge the gap between theory and practice, preparing them for the challenges they will face in their careers. Furthermore, they should develop the curriculum by considering the impact of technological developments and shifts in market demand, such as the growing need for data analytics skills and expertise.

Strategic Deployment of Digital Technologies and Tools: Additionally, the successful integration of hybrid and blended learning models, along with the strategic deployment of digital technologies and tools, will be crucial to enhancing the flexibility, accessibility, and personalization of business administration programs. Researchers highlighted the potential of these approaches to better prepare students for the realities of the modern business world and enable more effective and engaging learning experiences (Ashour et al., 2021; Gul & Khilji, 2021). The long-term implications of this integration include enhanced accessibility and increased opportunities for personalized learning experiences.

Practical Applications: These changes should emphasize faculty training in effective methods for delivering online courses and develop assessment strategies that evaluate not just knowledge but also application skills.

Strengthening Industry-Academia Partnerships: Strengthening industry-academia partnerships will ensure the continued relevance and practical applicability of business administration education and research. Collaborative projects, internships, and the co-creation of knowledge can enable the development of innovative solutions that address the evolving needs of the business sector while also informing the design of more responsive curricula and research agendas (Hadar et al., 2020).

Potential Future Scenarios: It's important to consider scenarios in which industry-academia collaboration is crucial. For example, to prepare students to adapt to and contribute to emerging industries such as Fintech or the Metaverse, or to deal with increasing automation and AI.

Integrating Entrepreneurial Mindsets and Innovation: Institutions should also promote entrepreneurial mindsets and innovation. This includes developing comprehensive support systems, such as mentorship programs, access to resources, and a culture that celebrates and rewards entrepreneurial endeavors. Furthermore, institutions need to focus on integrating interdisciplinary approaches to business administration to foster innovation.

However, the successful implementation of these transformations will require a comprehensive and strategic approach that addresses the various factors influencing the dynamics of change, including institutional culture, technological infrastructure, faculty development, and alignment with broader socioeconomic and political contexts (Harits et al., 2022; Chen, 2023). For example, institutions should establish clear goals for their transformation efforts, develop a detailed implementation plan, and regularly evaluate their progress. This requires a cultural shift that fosters innovation and collaboration among faculty, students, and staff.

Overall, the implications for business administration education and research in the post-COVID era point to the need for a more agile, responsive, and collaborative approach that can effectively prepare students for the challenges and opportunities of the future business landscape. To effectively address these implications, institutions should prioritize faculty training in online pedagogy, invest in infrastructure for equitable access, and cultivate strong relationships with industry partners to ensure curriculum relevance and practical application. This will require ongoing investment in faculty development, technology infrastructure, and strong partnerships with industry.

Future Directions and Recommendations for the Field

As the field of business administration navigates the post-COVID era, the literature offers several key future directions and recommendations. These recommendations aim to build on the lessons learned and prepare the field for ongoing transformation.

1. Enhancing Adaptability and Responsiveness of Curricula: One critical area of focus should be the continued enhancement of the adaptability and responsiveness of business administration curricula. Researchers have emphasized the need to ensure that these programs remain relevant and aligned with the evolving needs of the business sector, incorporating emerging trends such as sustainability, digital transformation, and entrepreneurship (Wieczorek et al., 2021). It's crucial to establish feedback mechanisms and regularly update curricula to respond to current trends, considering the rate of technological advancement.

2. Strategic Integration of Technology: Additionally, the successful integration of hybrid and blended learning models and the strategic deployment of digital technologies and tools will enable more flexible, accessible, and personalized educational experiences. Institutions should invest in the necessary technological infrastructure, faculty development, and student support systems to ensure the effective implementation of these approaches (Batista-Toledo & Gavilan, 2025).

3. Practical Implementation Strategies: Beyond simply adopting technologies, faculty require training in effectively designing hybrid courses, creating engaging online content, and

utilizing learning analytics to personalize the learning experience. Furthermore, investment should be directed toward technology that can provide an equitable learning experience for all students, regardless of socio-economic status. To improve the level of technology in education, institutions should also emphasize the importance of emerging technologies, such as blockchain, metaverse applications for training and development, and AI for adaptive learning.

4. Strengthening Industry-Academia Partnerships: Strengthening industry-academia partnerships should be a key priority, as these collaborations can provide valuable insights into the skills and knowledge required by the business sector and inform the development of more responsive curricula and research agendas. Institutions should explore innovative ways to foster these partnerships, such as through joint research projects, industry-sponsored internships, and co-creating solutions (Esangbedo et al., 2024). To address collaboration challenges, it's essential to clarify intellectual property rights and establish clear guidelines for collaborative projects. This will lead to the creation of innovative solutions.

5. Integrating Entrepreneurial Mindsets and Innovation: Lastly, the field of business administration should also focus on enhancing the integration of entrepreneurial mindsets and innovation into educational and organizational practices. This includes developing comprehensive support systems like mentorship programs, resource access, and a culture that celebrates and rewards entrepreneurial endeavors (Rahman et al., 2023).

6. Resource Access: This means providing access to seed funding, business incubators, and mentorship programs, fostering a culture that celebrates innovation and risk-taking, and incorporating design thinking and lean startup methodologies into the curriculum.

Clearer Prioritization
A suggested more apparent prioritization of these would be:

1. Sustained funding and support for industry-academia partnerships to maintain real-world relevance in curriculum and research

2. Focus on Agile adaptation of curriculum and the need to continue to integrate entrepreneurial mindsets

3. Focused and equitable access to technology and infrastructure, and how to best leverage emerging technologies.

Ultimately, for the field of business administration to not only adapt to changes but also excel, it needs to be at the forefront of innovations and methods. The post-COVID landscape and changing societal norms create both a responsibility and an opportunity for the business administration field to take a leading role in innovative thought.

CONCLUSION
This comprehensive review synthesizes the intricate evolution of teaching and research in business administration across pre-COVID, COVID, and post-COVID landscapes, revealing both enduring themes and profound transformations. The pandemic served as a powerful catalyst, not merely accelerating existing trends but fundamentally reshaping methodologies and priorities, demanding unprecedented agility from academic institutions.

A central finding is the accelerated integration of technology and the amplified criticality of industry-academia partnerships. Pre-COVID trends toward digital tools and collaboration were immediately amplified during the pandemic, forcing a widespread pivot to online instruction and underscoring the urgent need for real-world solutions. Post-COVID, these elements are foundational: technology now underpins sophisticated hybrid learning models, integrating advanced digital tools such as AI, data analytics, and VR to support experiential learning. Robust partnerships are essential for knowledge co-creation, providing real-world data, and ensuring curriculum relevance, fostering an entrepreneurial mindset among students.

Crucially, distinct shifts emerged. The rapid, often challenging, transition to online teaching during COVID-19 highlighted significant hurdles in student engagement, digital equity, and faculty preparedness for virtual environments. This prompted a post-pandemic recalibration towards refined hybrid and experiential pedagogies, leveraging technology for interactive learning and diversified assessment strategies. Research priorities also reoriented dramatically.

Pre-COVID's broader focus on sustainability and ethics gave way to urgent pandemic-related inquiries into supply chain resilience, shifts in consumer behavior, crisis leadership, and organizational adaptability. Today, post-COVID research broadens to address long-term implications for policy, societal impact, and new resilient business models, necessitating agile and interdisciplinary methodologies.

In essence, the COVID-19 era solidified the imperative for dynamic adaptation in business administration. The most salient contributions are the undeniable need to seamlessly blend technology with effective pedagogy and the strategic importance of robust industry collaborations. These pillars represent fundamental re-imaginings, positioning the field to proactively address future disruptions, embrace continuous learning, and cultivate adaptable leaders equipped for an ever-evolving global business environment.

CONFLICTS OF INTEREST
The author declares that there are no conflicts of interest found in this review.

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