

Entrepreneurial Leadership in Higher Education for Human Resource Improvement in Indonesia: A Narrative Literature Review

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Abstract. This narrative literature review examines the role of entrepreneurial leadership in Indonesian higher education as a strategic approach to enhancing human resource quality and national competitiveness. Amid rapid changes in the higher education landscape, entrepreneurial leadership emerges as a critical framework that integrates innovation, visionary thinking, calculated risk-taking, and collaborative governance. This leadership style fosters an institutional culture that encourages creativity, flexibility, and continuous improvement among faculty and students, aligning educational outcomes with labor market demands. The review synthesizes current research on how entrepreneurial leadership influences institutional strength, academic quality, and socio-economic development through partnerships involving universities, government, industry, and communities. It highlights challenges such as low entrepreneurial motivation among business students and the need for integrating practical entrepreneurial education effectively. Furthermore, digital transformation and internationalization are identified as key enablers for cultivating entrepreneurial mindsets and skills. The study underscores the importance of comprehensive policies, stakeholder engagement, and contextualized educational programs to support entrepreneurial ecosystems in higher education. Ultimately, fostering entrepreneurial leadership is essential for preparing graduates equipped with critical thinking, project management, and communication skills, thereby contributing to sustainable economic growth and innovation in Indonesia.

Keywords: Entrepreneurial Leadership; Higher Education; Human Resource Development; Innovation; Student Entrepreneurship.

1. INTRODUCTION

The higher education scene in Indonesia is changing quickly, requiring new leadership methods to deal with the challenges in local and global settings. In this shifting landscape, entrepreneurial leadership stands out as an important framework. It features a mix of forward-thinking ideas, taking calculated risks, and working together in academic institutions. This literature review looks into the role of entrepreneurial leadership in Indonesia's higher education field, examining how it affects the strength of institutions, academic quality, and economic growth. By bringing together current studies, this research will highlight important trends, obstacles, and chances that shape entrepreneurial activities in Indonesian universities. Understanding these aspects is vital for developing leaders who can improve educational results and boost the country's competitiveness in a connected world Meung (2023), making this study important for educators, policymakers, and researchers.

Entrepreneurial leadership mixes innovation, vision, and strategic thought, significantly affecting higher education, especially in Indonesia's changing environment. This type of leadership values creativity and flexibility, helping institutions deal with complex issues and grab new chances. Generally, entrepreneurial leaders create a space that promotes trying new things and taking risks among lecturers and students, which leads to a culture focused on ongoing improvement and responsiveness to market needs (Kayyali, 2023). This kind of leadership is important in developing nations since it encourages shared knowledge-based decision-making and boosts commitment from stakeholders. Additionally, by adding sustainable development goals (SDGs) into their plans, entrepreneurial leaders encourage teamwork between universities, government, industry, and the community, which improves local socioeconomic development efforts. Thus, entrepreneurial leadership goes beyond standard management ideas, focusing on building lively systems that encourage innovation and progress in higher education.

Entrepreneurial leadership is essential in changing higher education, especially in Indonesia, where adding enterprise education is seen as key to building student skills. This type of leadership promotes a culture of new ideas and active learning, giving students essential abilities like creative thinking and problem-solving. For example, studies show that students involved in enterprise programs gain strong project management skills and better communication skills, which are both important for future jobs. In addition, initiatives like SEHATI show that giving students practical resources, like Halal certification, can significantly increase their interest in digital entrepreneurship. Thus, encouraging entrepreneurial leadership in schools not only connects what students learn to job market needs but also develops a generation of flexible, socially responsible leaders ready to face the challenges of today's economy.

The Indonesian education system for higher learning is diverse and has different types of institutions, which is important for the country's economy and social growth. This system includes public colleges, private schools, and vocational training centers, all of which add to a rich educational landscape. Recent studies show that changing universities to focus on entrepreneurship is a big move toward promoting innovation and sustainability in education. By creating a quadruple-helix model that connects universities, the government, businesses, and the community, schools can improve their role in driving social and economic growth (Astuty et al., 2024). In addition, adding Islamic views into entrepreneurship training adds another layer to this system, pushing involved parties to think outside traditional ideas (Meutia et al., 2020). This mix of different education options and teamwork is essential for developing

entrepreneurial leaders and makes Indonesian higher education key for the country's advancement.

Meanwhile, a literature review is an important base for understanding entrepreneurial leadership in higher education, especially in Indonesia. The literature review used in this research aims to bring together current research, spot gaps, and assess useful methods that promote innovation and entrepreneurship among college students. With the rise of university accelerators (UAs) in Indonesia, connecting these programs with the best global practices is crucial to improve entrepreneurial intent effectively (Maritz et al., 2023). Additionally, the review points out the key role of absorptive capacity, which is the ability of institutions to take in and use global knowledge flows. This factor is crucial to economic growth in many countries, including Indonesia. By examining the link between entrepreneurial leadership and educational systems, this literature review seeks to enhance understanding and practical approaches to creating a strong entrepreneurial environment in Indonesian higher education.

In looking at research questions about entrepreneurial leadership in higher education in Indonesia, it is clear that understanding students' entrepreneurial interests is important for developing leadership. The systematic literature review shows that many business students do not have strong entrepreneurial motivation, pointing to the need for specific educational efforts to build entrepreneurial skills effectively. The review also supports findings from a Scottish study, which points out that enterprise education helps develop important skills in students, like communication and creative thinking. However, it does not necessarily promote an entrepreneurial mindset (Turner & Mulholland, 2017). These findings highlight how important educational programs are in providing students with technical and interpersonal skills, filling the gap in entrepreneurial orientation and preparing future leaders who can help boost Indonesia's economic growth.

A clear structure is essential for making good research, especially for a systematic literature review on entrepreneurial leadership in higher education in Indonesia. The introduction lays the groundwork, explaining the study's goals and importance and giving necessary background details. After the introduction, a careful review of related literature is arranged by themes to shed light on different aspects of entrepreneurial leadership in education. This section might include findings showing that many business students lack entrepreneurial interest, as highlighted in recent research. Next, the analysis brings these thoughts together, evaluating the role of institutions in promoting entrepreneurship and addressing gaps found in the literature. Lastly, the conclusion summarizes the main findings, highlighting the need for

strategies that boost students' entrepreneurial spirit, which in turn helps economic growth in Indonesia.

2. METHOD

A literature review is important for understanding entrepreneurial leadership in higher education, especially in Indonesia. The way the narrative literature review was done for this research took a detailed and organized method to find, assess, and combine related research studies. At first, a search plan was made, using databases like Scopus and Google Scholar to collect information on entrepreneurial leadership in Indonesian higher education. The rules for including papers focused on peer-reviewed articles and reports published in the last ten years to keep the information relevant and up-to-date. Moreover, this method allowed for a careful review of themes and trends in the research, giving a better understanding of the current situation of entrepreneurial leadership education in Indonesia, which will help guide future research and policy decisions.

3. RESULTS AND DISCUSSION

The theoretical framework of entrepreneurial leadership includes many parts that explain how leadership helps create an entrepreneurial environment, especially in colleges and universities. By combining ideas like social motives and entrepreneurial orientation, this framework shows how leaders can build a space that promotes innovation and knowledge-sharing behaviors among both students and faculty. Studies show that colleges and universities greatly influence entrepreneurial learning outcomes, encouraging important qualities like passion and creativity, with links found between institutional support and student development (Porkodi et al., 2023). Moreover, creating a culture that focuses on social motives such as achievement, power, and belonging, has been associated with improved entrepreneurial orientation, which in turn boosts knowledge management in educational settings (Hadipoespito et al., 2024). These points highlight the significance of strategic leadership in nurturing an entrepreneurial mindset, ultimately preparing students to welcome innovation and contribute positively to the changing educational context in Indonesia.

Entrepreneurial leadership in higher education includes several main theories that explain the relationship between innovation, management, and educational results. Fostering entrepreneurial qualities in students is especially important, as it meets the demand for job creators over job seekers in a tough job market, particularly in Indonesia, where economic conditions require this change (Riza, 2024). Different theoretical models, such as sustainable

development and human resource management, have arisen to show how schools can develop these entrepreneurial skills in their courses. By adding entrepreneurial ideas to higher education, colleges can make a setting that encourages innovation and flexibility, key for dealing with today's economy. In the end, grasping these theories helps shape strong educational plans and develops the upcoming group of entrepreneurial leaders able to tackle both local and global issues.

Entrepreneurial leaders have specific traits that help them encourage innovation and promote teamwork among various stakeholders, which is important for effective governance in higher education. These leaders usually have a vision and can see future trends, turning those insights into practical plans that fit institutional goals. They also show resilience and can adapt when faced with the complex problems that come up in education, especially in developing nations like Indonesia. A key part of their success is their ability to build a sustainable entrepreneurial culture (SEC) within their institutions, changing traditional universities into entrepreneurial universities (EUs) that support sustainable development goals (SDGs) (Astuty et al., 2024). Moreover, entrepreneurial leaders enhance stakeholder involvement by including community and industry views in decision-making processes, ensuring these perspectives are part of educational systems (Supardi et al., 2020). In the end, these leaders are vital in pushing institutional goals and boosting socioeconomic development through innovative collaborations.

Innovation is an important part of leadership in entrepreneurship, especially in higher education in Indonesia. It helps teachers and school leaders to keep up with the fast-changing economy, encouraging a culture that supports creativity and trying new things. Research shows that students who participate in enterprise education often improve skills like project management and creative thinking, which are very important in today's tough job market (Turner & Mulholland, 2017). Additionally, Indonesian universities are crucial in developing these skills by using innovative teaching methods in their programs, but many business students lack interest in entrepreneurship. This issue points to the pressing need for a focus on innovation in education systems, so students can gain vital entrepreneurial skills and develop a mindset ready for starting new businesses, which will help boost the country's economic growth.

The comparison of traditional leadership and entrepreneurial leadership is important to see how they affect higher education in Indonesia. Traditional leadership usually focuses on strict hierarchies, following set rules, and ensuring stability, which can unintentionally limit innovation and creativity among students and faculty. On the other hand, entrepreneurial

leadership creates a more active and adaptable environment, promoting taking risks and solving problems creatively, which is crucial for creating successful university startups. Research from Raharja University's Alphabet Incubator shows that business incubators play a key role in connecting theory with practice, giving students important tools to turn ideas into successful businesses (Bist, 2023; Lutfiani et al., 2020). Adding entrepreneurial leadership into educational systems boosts student involvement. It builds an innovative culture, preparing graduates with the skills needed to do well in a competitive global market, thus supporting Indonesia's overall economic growth.

The effect of entrepreneurial leadership on the culture in higher education institutions in Indonesia is complex and important. Entrepreneurial leaders create an atmosphere that promotes innovation, teamwork, and flexibility necessary for adapting to the fast-changing education sector. Recent studies show that solid leadership training is key to developing strategic plans that align with institutions' core values and missions, improving faculty and staff commitment (Simanjuntak & Usmanij, 2024). Additionally, by advancing policies that empower workers and support open communication, entrepreneurial leaders build a culture that appreciates knowledge sharing, which is connected to higher commitment and performance (Zarkasyi, 2024). This relationship between entrepreneurial leadership and organizational culture drives personal growth and enhances the overall effectiveness of institutions, thereby improving the quality of higher education in Indonesia. Thus, grasping this relationship is essential for future studies and institutional improvements.

Using theoretical models in higher education is important for promoting entrepreneurial leadership, especially in Indonesia's changing educational scene. These models, like transformational leadership and the competency-based framework, offer a straightforward method to help students develop entrepreneurial skills. Transformational leadership focuses on inspiring and motivating, which fits the goal of creating innovative thinkers among future leaders in higher education. Additionally, the competency-based framework highlights the need for practical entrepreneurial experiences and knowledge so students can apply what they learn in real life. This idea is supported by the view that entrepreneurship education can significantly improve entrepreneurial skills, which in turn benefits new business performance. By incorporating these theoretical models into their programs, higher education institutions in Indonesia can better equip graduates to handle the challenges of the global economy and promote sustainable development.

When looking into the theories about entrepreneurial leadership in higher education in Indonesia, there are some clear gaps that need more investigation. The current literature often

overlooks the unique traits of Indonesia's cultural and socioeconomic settings, resulting in a broad use of theories created in very different contexts. For example, many frameworks often divide entrepreneurial figures into groups like knowledge, entrepreneurial, and political elites, but the specific reasons and problems these elites face in Indonesia are not well explored. Also, the role of micro, small, and medium enterprises (MSMEs) as important contributors to nurturing entrepreneurial potential is often ignored, even though there is proof of their big influence on human resource growth and innovative strategies. Improving theoretical models to include these aspects would help close important gaps and make entrepreneurial leadership research more relevant and useful for higher education in Indonesia.

Higher education in Indonesia currently faces many challenges that connect to the country's goals for global competitiveness. Although there are significant investments in educational facilities and policy changes, issues regarding quality, access, and alignment with job market needs persist. Research indicates that while entrepreneurial education is gaining attention, many schools find it hard to effectively include entrepreneurship concepts into their programs (Turner & Mulholland, 2017). Additionally, the uneven spread of educational resources worsens the gaps between urban and rural schools, affecting the overall impact of education. Broader studies suggest that the success of higher education in promoting economic growth relies on its capacity to utilize international knowledge flows and adjust to local situations. Together, these elements show a need for new leadership methods that can boost the entrepreneurial skills of Indonesian higher education, making it a key player in national development.

In Indonesia, the higher education system includes different types of schools, from well-known public universities to new private colleges. Each kind of school is important for meeting the country's educational and economic needs. Public universities are often seen as leaders in academics, focused on research and preparing students for the global job market. On the other hand, private colleges typically address gaps in access and provide specific programs for local communities. Recent studies point out that these schools should implement sustainable practices to improve their programs, research, and partnerships.

Indonesian higher education has many problems that slow down its growth in entrepreneurial development and innovation. Even though places like Bogor Agricultural University (IPB University), among others, are seen as entrepreneurial universities due to their research-focused technology transfer, there is a big gap in adding entrepreneurial education to their courses (Mudde et al., 2017). This issue is made worse by not having enough university accelerators, which shows a mismatch between what institutions want to achieve and actual

entrepreneurial practices (Maritz et al., 2023). Additionally, the lack of consistent involvement with wider entrepreneurial networks limits chances for cooperation and knowledge sharing, which are important for improving society. Without a clear plan that includes academic and hands-on entrepreneurial leadership, Indonesian universities might find it tough to prepare students for the changing needs of the global economy. In the end, tackling these issues is vital for turning higher education into a strong foundation for innovation and economic growth in Indonesia.

Government policies are important for shaping higher education, especially for creating an environment that supports entrepreneurial leadership. In Indonesia, these policies focus on improving universities' ability to participate in research, technology transfer, and innovation, which are key parts of an entrepreneurial ecosystem. The achievements of institutions like IPB University highlight the need for effective policy frameworks that allow universities to become entrepreneurial centers, encouraging collaboration with businesses and boosting student entrepreneurship. Additionally, as developing nations seek economic growth, their ability to utilize global knowledge impacts their educational policies and practices. Therefore, a solid policy environment not only aids current entrepreneurial efforts in higher education institutions but also lays the groundwork for ongoing economic growth and development within Indonesia's changing educational system.

Technology in higher education is critical, especially for encouraging entrepreneurial leadership in Indonesia. As schools use more digital tools, they can improve learning results and create innovative cultures. Technology helps in collaborative learning and using data to make decisions, which permits teachers to customize learning experiences for various students. This is highlighted by a literature review showing that digital leadership is key for managing changes in educational institutions, where accepting digital change is necessary for success (Sukandi, 2024). Moreover, properly using technology can give students important entrepreneurial skills, filling the gaps found in Indonesia's current education systems. Therefore, technology not only helps improve education but also acts as a driver for developing an entrepreneurial mindset, which is essential for Indonesia's economic growth and competitiveness.

The internationalization of Indonesian higher education is seen more and more as important for building entrepreneurial skills in academics. Universities want to improve their global presence and competition, so they are creating policies to bring in international students and set up partnerships with foreign schools. These global efforts help improve the learning environment, encourage new teaching methods, and boost research abilities. According to Chen

et al. (2021), the growth of entrepreneurship education in colleges, especially those using mixed and online learning styles, shows the need to change teaching methods, something that international partnerships can boost. These collaborations can take advantage of new technology and teaching practices, ultimately helping students develop more entrepreneurial attitudes. Thus, the process of internationalization is essential for getting Indonesian graduates ready to succeed in a global economy, which strengthens the country's entrepreneurial system.

When looking at entrepreneurial leadership in colleges in Indonesia, the demographics of students are an important factor that affects how they develop as leaders. Several studies show that students' cultural backgrounds and family support greatly influence their motivation and approach to entrepreneurship, which in turn affects their leadership skills. For example, differences between Asian and African students indicate that cultural context significantly influences business mindset and learning styles, impacting their potential for leadership in teamwork settings. Additionally, research on enterprise education shows that when students participate in practical projects, it improves key skills like communication and creative thinking, which are necessary for good leadership. Recognizing these demographic impacts enhances educational methods and adds to a richer understanding of how diverse backgrounds can promote innovative leadership in Indonesia's entrepreneurial scene.

Studies of successful colleges show important lessons for building entrepreneurial leadership in education, especially in Indonesia. Colleges that do well in teaching entrepreneurship have a strong setup that helps students build skills and be creative. For example, higher education settings that focus on connecting with global knowledge greatly improve their students' ability to learn, use technology, and innovate overall, as recent studies of successful development highlight. In addition, research shows that these colleges improve educational results and help develop key qualities like passion and creativity in students, with findings indicating a strong connection between school support and personal growth. Looking at these successful examples, we can learn important lessons for Indonesian higher education, stressing the need to create helpful environments promoting entrepreneurial activities.

In Indonesian institutions for higher learning, leaders who focus on business play an important role in driving new ideas and improving how well institutions work. A review shows noteworthy improvements in how colleges implement business education, but many hurdles still exist. For example, while studies point out the necessity for customized teaching approaches that consider Indonesia's specific people and economic situations, there is still a lack of effectiveness in current programs. Additionally, sound planning is necessary for the development of quality, but several schools find it hard due to poor leadership training and

support, which affects the success of business initiatives. Therefore, it is crucial to develop strong entrepreneurial leaders to satisfy market needs and improve overall education results, getting students ready to succeed in a more competitive world economy. Ensuring institutions' goals match community requirements is vital for promoting business practices in higher education.

Entrepreneurial leadership efforts in Indonesian higher education are shown more through case studies and teamwork that encourage new ideas and address real-world challenges. For example, IPB University is a clear case, where data from a well-structured survey showed strong involvement with technology transfer and innovation projects based on research. Even though there is a need for better focus on teaching entrepreneurial skills, the university has produced many student entrepreneurship results, proving its position as a leading entrepreneurial institution in a challenging regional setting (Mudde et al., 2017). Additionally, adding enterprise education to university courses helps students develop important skills like project management and creative thinking. This example highlights the need for focused entrepreneurial programs that connect educational results with industry needs in Indonesia's higher education system.

In Indonesia's higher education, lecturers are important in helping students develop entrepreneurial skills. Their job goes beyond just lecturing; it includes mentoring, creating new courses, and interacting with the business community. Studies show that universities greatly impact how students feel about entrepreneurship, with teachers being major supporters of this. By adding real-world experiences like internships and projects focused on entrepreneurship to their lessons, lecturers can help students build the necessary skills and self-assurance for the competitive business world. In the end, how involved lecturers are impacts not just the success of individual students but also the overall economic development and job creation in Indonesia.

Student involvement in entrepreneurial activities is significantly crucial for boosting innovation and preparing students for today's complicated job market. This involvement helps students develop key skills like project management, creative thinking, and communication, and greatly increases their confidence in real-world business situations. Additionally, when schools focus on entrepreneurial leadership, they create a supportive environment for sharing knowledge and fostering innovation, which ultimately helps both students and the larger community. By focusing on these entrepreneurial skills, higher education institutions in Indonesia can better prepare students for jobs and business ventures, reflecting a comprehensive approach to changes in education that align with global trends in enterprise education.

Working with industry and community in Indonesian higher education is very important for promoting innovation and sustainable growth. These partnerships create a complex model of engagement that not only boosts the university's ability to tackle social issues but also helps transfer knowledge needed for economic progress. For example, one study shows that changing traditional universities into entrepreneurial ones requires working with stakeholders within the quadruple helix framework: government, industry, academia, and communities, to improve local socioeconomic growth through innovative methods. Therefore, building a solid network with outside groups is essential for higher education institutions in Indonesia to fulfill their goals related to entrepreneurship and community.

The checking and judging of leadership actions in higher education places in Indonesia are important for creating an entrepreneurial culture. Good leadership is needed to direct colleges towards their main goals, especially when forming partnerships that fit with sustainable development ideas, as seen in studies looking at the quadruple-helix model, which highlights teamwork between schools, government, business, and the community. By judging leadership actions, schools can find their strengths and weaknesses in entrepreneurial projects, allowing a complete approach to changing the school. Additionally, the judging process helps reach necessary agreements inside and outside the institution for new ideas, which helps grow sustainable entrepreneurial cultures in schools. This ongoing check not only makes higher education a major contributor to local economic growth but also improves how leaders carry out the university's third mission, thus aiding a complete development framework.

Looking at best practices from around the world is important for building entrepreneurial leadership in higher education, especially in Indonesia. Successful methods used in other countries can be useful examples for Indonesian universities aiming to improve their entrepreneurial environments. For example, the use of university accelerators (UAs) has had good outcomes in matching strategic goals with entrepreneurial goals, providing systems that help stakeholders through teamwork strategies. Also, studies show that adding enterprise education to school programs helps develop key skills like project management and creative thinking, which are necessary for students in the competitive job market. By using these global best practices, Indonesian schools can fill gaps in entrepreneurial education and create a stronger base for students to succeed in their business efforts, leading to the improvement of society as a whole.

The effect of entrepreneurial leadership on educational results in higher education institutions is increasingly seen as an important element in determining academic success and growth of institutions. Entrepreneurial leaders create innovative environments that promote

creativity and flexibility, which are necessary traits in today's fast-changing educational setting. Studies show that this kind of leadership is linked with better student performance, increased faculty involvement, and improved institutional effectiveness, indicating that these leaders foster cultures that focus on teamwork and ongoing improvement. Additionally, entrepreneurial leadership plays a crucial role in using predictive learning analytics, as mentioned in which enhances educational methods by recognizing students who may be at risk and tailoring learning experiences. This active approach not only improves academic results but also prepares students for real-life challenges by developing necessary skills such as problem-solving and critical thinking. In the end, the impact of entrepreneurial leadership can result in a transformative educational experience that greatly enhances learning outcomes in Indonesian higher education.

The relationship between entrepreneurial education and student job readiness is an important factor in achieving positive results for graduates, especially in the context of higher education in Indonesia. A review shows that entrepreneurship classes can greatly improve key skills like leadership, risk-taking, and creative thinking among students (Susantiningrum et al., 2023). However, the results also reveal that many vocational students have decent entrepreneurial skills, yet there are large gaps between these skills and the desired learning outcomes. This gap highlights the need for educational institutions to create environments that support not just academic skills but also real-world entrepreneurial skills that are essential for today's job market. Furthermore, research indicates that family influence is important in strengthening these skills, particularly in areas like leadership and reflective communication. Therefore, well-rounded strategies that combine academic programs with family and community involvement may greatly improve student success and job prospects in a more competitive environment.

In Indonesia, research and innovation in higher education are heavily shaped by entrepreneurial leadership, which creates a space for creativity and new ideas. Recent research shows that students' interest in entrepreneurship differs widely, highlighting the need for schools to improve their support for future entrepreneurs. For example, studies show that many students in business programs do not have strong entrepreneurial skills or a desire to start their own businesses, revealing a gap between what they can do and what they actually do (Chen et al., 2021). This link between gender studies and entrepreneurship not only adds depth to academic discussions but also helps shape policies that encourage inclusive entrepreneurship, which is vital for Indonesia's economic progress.

The growth of soft skills in students is being seen more as an important part of higher education, especially for encouraging entrepreneurial leadership. In Indonesia, the Merdeka Belajar Kampus Merdeka (MBKM) program is a key framework for building these skills. It focuses on learning through real-life experiences like internships, community service, and student exchanges (Saputri et al., 2024). These activities aim to develop important skills like communication, teamwork, and problem-solving, which are needed for success today. Additionally, the cooperation between policymakers and schools is vital for helping students gain the digital and soft skills they need, particularly in the realm of AI startups. By adding soft skill training into academic programs and providing hands-on experiences, higher education in Indonesia can generate graduates who are not only knowledgeable but also flexible and ready to tackle the challenges of a changing entrepreneurial environment.

The reputation and competition of higher education institutions (HEIs) are very important in the global academic world, especially in Indonesia, where entrepreneurial leadership can make a big difference. With competition getting tougher due to outside pressures like government rules and ranking systems, institutions need to use different strategies to boost their visibility and attract good students and faculty (Hart et al., 2024). This competitive situation requires a focus on sustainable performance, matching institutional values with new methods that meet changing educational needs and market demands (Marques et al., 2021). Entrepreneurial leadership creates an environment of innovation and quick reactions, helping institutions adapt and succeed in difficult times. By building strong partnerships with industry and community groups, HEIs can improve their service quality and ensure their academic programs are relevant and effective. Thus, finding a strategic balance between competitiveness and a dedication to social responsibility is key for improving institutional reputation and gaining a competitive advantage in Indonesia's higher education sector.

The long-term survival of higher education institutions in Indonesia depends largely on their willingness to adopt entrepreneurial leadership and creative practices. This change not only builds resilience but also improves the institutions' relevance in a quickly changing economic environment. Therefore, for Indonesian higher education institutions to succeed in the future, they need to develop an entrepreneurial mindset that fits with both academic achievement and societal progress.

In the area of entrepreneurial leadership in higher education in Indonesia, feedback systems are very important for continuous improvement. Good feedback loops allow schools to quickly react to what students need and to the changing job market. By using organized feedback from different groups, like students, teachers, and business partners, educational

leaders can find ways to improve curriculum and teaching methods. Also, using the Triple Helix model, which focuses on teamwork between schools, businesses, and government, can help these feedback systems by creating a space for meaningful conversation and shared knowledge. This ongoing method not only helps build educational frameworks that respond well but also promotes an entrepreneurial mindset, which increases schools' ability to create new solutions and tackle modern issues in higher education.

As education changes, knowing future trends in educational results is very important, especially in the realm of entrepreneurial leadership in higher education in Indonesia. New technologies, especially tools like ChatGPT, are set to change teaching methods and create engaging learning spaces that improve student involvement and understanding. These developments require a new look at educational plans and leadership styles. Good leaders must support new ideas while making sure that technology is used in a responsible way to promote honesty and inclusion in academics. Also, as researchers stress the need for thorough assessments of teaching methods, it is vital for all involved to create systems that not only focus on academic achievement but also promote entrepreneurial skills. In the end, the blend of technology use and entrepreneurial leadership will influence future educational results, helping students gain skills they need to handle a fast-changing world.

4. CONCLUSION

In conclusion, the review of entrepreneurial leadership in Indonesian higher education shows both improvements and ongoing issues. There is a clear rise in focus on entrepreneurship education, particularly in building entrepreneurial skills among students, but there are still major problems with program effectiveness. The addition of digital transformation to the curriculum has become important for encouraging an entrepreneurial mindset, as it provides students with useful skills and boosts their digital abilities. Still, it is very important to have teamwork among everyone involved including the government, schools, and businesses. These partnerships are key for creating courses that meet current economic needs and for pushing policies that back entrepreneurial activities. Therefore, a varied strategy is necessary to overcome existing challenges and to fully take advantage of entrepreneurship education in Indonesia's higher education system.

The review of the literature about entrepreneurial leadership in higher education in Indonesia shows important information about how universities can change. Main results show that schools like Bogor Agricultural University (IPB) are good examples of entrepreneurial universities because they transfer technology and innovate based on research well. However,

areas like improving entrepreneurial skills in teaching and learning need work. Additionally, data from student surveys indicate that learning about enterprise helps improve student skills, enhancing their project management, creative thinking, and communication abilities. This detailed analysis highlights the difficulties of creating entrepreneurial environments in educational settings and points out the need for complete frameworks that match education with market demands. In conclusion, these results indicate a major move to include entrepreneurial ideas in academic programs, which can greatly help both students and society in Indonesia.

In Indonesia's higher education, entrepreneurial leadership is very important for policy and practice. Educational institutions need to promote innovation and adaptability, so policies should focus on building entrepreneurial skills in students and faculty. This requires a combined effort that promotes collaboration between schools and businesses while creating a place that values creative ideas. Also, the review's findings show that institutions should make it easier to access resources, mentorship, and funding that help entrepreneurial projects. This way, all parties will be more prepared to deal with the changes in education and strengthen the institutions. In the end, making sure policies align with entrepreneurial leadership principles will drive sustainable growth and benefit society within Indonesia's higher education system.

Future studies on entrepreneurial leadership in colleges in Indonesia should focus on long-term research that looks at the lasting effects of entrepreneurial education on student results and how well institutions do. These studies might look into how different teaching methods, especially those shaped by local culture, influence students' business mindset, as shown by results regarding cultural roles in entrepreneurship education. Also, it is important to look into how practical entrepreneurship experiences can be mixed into technical colleges, given earlier research that highlights the potential for promoting entrepreneurship in these schools. By looking at the connection between technical training and entrepreneurial leadership, researchers can create specific suggestions to boost the role of colleges in encouraging innovation and cutting down on unemployment. In the end, future research should aim to build a strong framework that backs up the importance of entrepreneurial leadership in the world of higher education in Indonesia.

The current review of literature about entrepreneurial leadership in higher education in Indonesia has some clear limitations that need to be looked at closely. A main issue is the lack of empirical studies focused on the cultural and contextual aspects that are unique to Indonesia, which restricts the use of these findings in local situations. Moreover, current research often does not pay enough attention to inter-organizational learning, which can improve sustainable

competitive advantages in different industries, as shown by recent studies. Additionally, the review shows there are few insights into how well sustainable business models work in Indonesian higher education, even though they are becoming more important. This lack of research not only makes it hard to fully understand entrepreneurial leadership dynamics but also emphasizes the need for more studies that combine theoretical models with real-world evidence to fill these important gaps. These improvements will help build a more detailed and useful knowledge base.

To sum up, entrepreneurial leadership in higher education is important for boosting innovation and flexibility in Indonesia's education system. This study shows how good entrepreneurial leaders can enhance organizational speed, which is needed for schools facing fast market changes, similar to what is seen in areas like hospitality. Also, focusing on building human talent and social resources shows that entrepreneurship education is key for developing leaders who can handle the challenges of today's academic world. As colleges and universities work to stay relevant and competitive, adopting entrepreneurial leadership is crucial not only for their own progress but also for creating a workforce ready to tackle socioeconomic issues. In the end, the literature review highlights how entrepreneurial leadership can change higher education, making it a crucial factor for sustainable growth in Indonesia.

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