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The empowering influence of applied colleges on entrepreneurial success in the Kingdom of Saudi Arabia

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ABSTRACT

This study examines the transformative role that applied colleges play in fostering entrepreneurial performance. The study methodically surveyed 356 students currently enrolled in the Applied College of the University of Ha'il. Contrary to previous research, the findings reveal a crucial difference, suggesting that social class has an insignificant impact on entrepreneurial intentions, while self-confidence emerges as a paramount determinant. This disparity is due to the distinctive educational methodologies employed in applied colleges, including hands-on instruction, mentorship initiatives, workshops, and experiential learning opportunities, which collectively foster self-confidence. Notably, the survey results reveal a compelling statistic: 75% of female students in applied colleges demonstrate empowerment and cultivate entrepreneurial aspirations. The hands-on approach to entrepreneurship education empowers them to recognize their importance in the business landscape, thereby contributing to the improvement of Saudi Arabia's economic development. In addition, a remarkable 67.3% of students demonstrate a willingness to collaborate with peers of the opposite sex in entrepreneurial ventures, indicating a mature blend of social and economic acumen among applied university students. Furthermore, this study highlights the critical role of applied colleges in bridging the gap between theoretical academic knowledge and practical business acumen. By immersing students in authentic experiences and simulations that reflect the demands of the business world, applied colleges successfully equip them to address real-world business challenges, thereby mitigating potential pitfalls in commercial and agricultural projects.

1. Introduction

Entrepreneurship has emerged as a significant driving force behind economic growth and societal development worldwide (Wang, 2022). In response to this global trend, applied colleges and universities have recognized their pivotal role in cultivating and promoting the entrepreneurial mindset among the student population. These institutions serve as fertile ground for aspiring entrepreneurs, nurturing their innovative ideas, providing relevant education, and supporting their journey toward successful business ventures. The synergy between applied colleges, universities, and entrepreneurship represents a powerful catalyst for economic transformation, job creation, and societal advancement (Wang et al., 2021).

At its core, entrepreneurship encapsulates the spirit of innovation, risk-taking, and problem-solving (Ouni and Boujelbene, 2023). Applied colleges play a pivotal role in fostering these essential qualities among students, equipping them with the knowledge, skills, and resources required to embark on their entrepreneurial journey. By offering specialized programs, incubators, technology transfer offices, and entrepreneurship centers, these institutions provide a conducive environment that inspires and empowers students to realize their entrepreneurial aspirations. The first notable benefit of applied colleges in promoting entrepreneurship lies in their provision of targeted education and training. These institutions offer a wide range of programs and courses dedicated to entrepreneurship, allowing students to gain theoretical knowledge in various aspects of business management, market analysis, financial planning,

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and innovation strategies. Moreover, these programs often include practical elements, such as internships, case studies, and hands-on projects, enabling students to develop the necessary entrepreneurial skills through real-world experiences. In addition to formal education, applied colleges foster an entrepreneurial mindset through experiential learning opportunities. By implementing mentorship programs, hackathons, startup challenges, and pitch competitions, these institutions encourage students to think creatively, take calculated risks, and develop problem-solving abilities. Through these initiatives, students gain exposure to real-world scenarios, network with industry professionals, and cultivate the resilience necessary for entrepreneurial endeavors (Hou et al., 2023).

Collaboration between applied colleges and the local business community is another essential aspect of the promotion of entrepreneurship. These institutions actively engage with industry partners and local entrepreneurs to create meaningful connections, facilitate knowledge exchange, and nurture a vibrant startup ecosystem. Through partnerships, students gain access to valuable resources, such as funding opportunities, mentorship, and industry-specific expertise, which are crucial for successfully starting and managing their own ventures. Moreover, applied colleges facilitate entrepreneurship through their contribution to local economic development. Successful startups often emerge from these institutions and play a pivotal role in job creation, innovation, and economic growth within their communities. Through their collaboration with local businesses, governments, and other stakeholders, applied colleges and universities become integral components of regional entrepreneurial ecosystems that foster prosperity and sustainability.

Recent literature on this topic, such as the work of Rosado-Cubero et al. (2022), Weng et al. (2022), Boubker et al. (2021), and Olokundun et al. (2018), focused primarily on entrepreneurship education, real-world problems and attitudes towards entrepreneurship. Interestingly, they did not study the role of the education system, such as the education-by-application system, in stimulating entrepreneurial success. Likewise, they disregarded cultural barriers and gender disparities in entrepreneurship interests. Furthermore, Alferaih (2022) suggested that 75% of students in Saudi Arabia have expressed an interest in creating new businesses. Given that entrepreneurship training is a key success factor (Fayolle, 2013; Mahajar et al., 2012), this paper focused on different teaching practices and stakeholder connections (Fayolle, 2013; Mahajar et al. 2012), in promoting entrepreneurship in universities in Saudi Arabia. Alferaih (2022) ignored the role of applied colleges in Driving Entrepreneurial Success. While applied colleges offer important advantages within the educational system, it is concerning that there is a lack of research focusing on these institutions. Additionally, there is a notable scarcity of work in Arab countries within this field. To fill this lack of literature, we have focused in this study on the Applied College of the University of Ha'il in Saudi Arabia.

This research makes several noteworthy contributions to the current literature on entrepreneurship. Firstly, it is the first study of its kind that specifically explores the topic of applied colleges and their teaching methodologies with respect to fostering entrepreneurship. Secondly, the study highlights Saudi women as entrepreneurs and recognizes their active participation in advancing the economic cycle of the Kingdom of Saudi Arabia. Thirdly, the research puts forth effective solutions to address real-world problems encountered by entrepreneurs. Fourthly, most academic studies on entrepreneurship tend to focus mainly on the entrepreneurial intent of university students, without acknowledging the new pedagogical approaches of education that emphasize the practical aspects of entrepreneurship. Unlike previous works, this paper highlights the implications of applied education in the context of applied colleges. The outcomes of this study are vital for the Ministry of Education to create a culture of entrepreneurship among young people and promote applied thinking across universities.

2. Literature review

The term entrepreneurship refers to the creation of an economic entity to meet an existing market need for a good or service. On the other hand, entrepreneurial opportunity refers to novelty, innovation, and originality. In this respect and as a continuation of the work of Thomas and Muller (2000), Liñán and Chen (2009), Krueger and Carsrud (1993), and Çolakoğlu and Gözükara (2016) studied the impact of personality traits on entrepreneurial activities. They were mainly interested in the locus of control, the spirit of innovation, and the entrepreneurial liveliness of Turkish students. The results of this study show that students with entrepreneurial intentions are more innovative, have a greater need for success, and greater locus of internal control than those who do not have such an intention. Thus, entrepreneurial education should focus on renewing attitudes and developing skills to encourage entrepreneurship. In the same spinning mill, Valdez-Juárez and Pérez-de-Lema (2023) investigated the impact of creativity, family business environment, and teacher creativity on the direct relationship between self-efficacy and entrepreneurial intentions of ITSON university students in the southern region of the State of Sonora in Mexico. Results showed that creativity has a positive and significant impact on self-efficacy and entrepreneurial intentions. In contrast, despite having a positive impact on self-efficacy, teacher creativity was not found to increase the entrepreneurial intentions of students. The study also found that students with entrepreneurial backgrounds are more likely to start a business.

Furthermore, Donaldson et al. (2023) and Ivanović and Kufenko (2023) have established a comparison of entrepreneurial intention types among female and male entrepreneurship students. The results show that women feel marginalized and are less suited to entrepreneurship.

Unlike the work of Barton et al. (2017), who adopted critical ethnography to investigate the engagement of socio-economically disadvantaged students, Weng et al. (2022) highlighted the role of adding the problems of the real world to entrepreneurial creation activities to facilitate the development of students' creativity and entrepreneurial skills. To do this, Weng et al. (2022) looked at the theory of the 5E learning cycle and a sample of seventy students from a school in Hong Kong. In accordance with the results of George et al. (2021), the results of this study suggested that a creative environment based on real-world problems encourages students to come up with and realize innovative solutions to problems through creative thinking and entrepreneurial skills. In the same spinning mill, Rosado-Cubero et al. (2022) focused on the personality traits of entrepreneurs. They suggest that the main aspects of the personality traits of entrepreneurs in Spain are prior knowledge of the business, a high level of initiative, open-mindedness, and an entrepreneurial environment. In addition, Rosado-Cubero et al. (2022) found that the type of education program followed is a central factor in entrepreneurship. Similarly, the results advanced by Din et al. (2016) showed the existence of a strong relationship between the business plan, the reflection of the risk, and the effectiveness of the educational program. Thus, the university entrepreneurship program is crucial in the phenomenon of refining the entrepreneurial skills of students.

Furthermore, Din et al. (2016) stated that the study of entrepreneurship should be done on three educational levels. In this educational process, primary school is the phase of discovery. Then, at the secondary level, entrepreneurial education should be oriented toward the basic steps to start and enter the world of entrepreneurs. Finally, the strategy for solving real problems will be the subject of university studies.

Moreover, Oganisjana and Laizans (2015) looked at the learning model focused on opportunities and the resolution of real problems in order to create new products and services that could be marketed. Alongside, Littunen and Virtanen (2009) stated that universities should adopt a problem-solving and opportunity-oriented education system. This comes down to the fact that the promotion of knowledge and skills, to identify opportunities, has become a crucial element.

On the other hand, Jansen et al. (2015) focused on encouraging entrepreneurship as a driver of business creation. They have focused on three prestigious universities namely; MIT in the United States, IIIT in India, and Utrecht University in the Netherlands. The results of this study stipulate that initiatives aimed at stimulating entrepreneurship contribute positively to the creation of new businesses and the creation of employment. A close examination of these research works shows that they are exploratory, paying little attention to the Arab countries. Similarly, previous studies on the Arab Gulf countries did not focus on students of applied colleges or their economic situation in the face of the 2019 health crisis. Thus, what distinguishes this study from the aforementioned studies is that it will focus on applied colleges and their teaching methodology that can serve entrepreneurship. Consequently, these results allow decision-makers to have an idea about applied colleges and how they can drive the local and global economy.

3. Methodology

An entrepreneur can be defined as a person who possesses the spirit of adventure and the courage to adopt and implement new projects in light of a deliberate and calculated risk in which creative and innovative ideas are embodied. An entrepreneur is distinguished by leadership abilities and skills, including influence on others and influence on achievement. Based on these definitions and in continuation of the work of Ouni and Boujelbene (2023), Hou et al. (2023), Brändle and Kuckertz (2023), Rosado-Cubero et al. (2022), Zhang et al. (2022), Sancho et al. (2022), and Adebusuyi and Adebusuyi (2020), a survey of 47 questions was conducted. This survey collected the views of 356 students enrolled in the Applied College of the University of Ha'il and covered seven key areas detailed in Table 1.

Table 1: Quiz item breakdown: Number of questions per item

Items	Number of questions
Planning and follow-up	5
The art of persuasion and dialogue	3
Independence and self-confidence	14
Risk-taking	4
Cultural barriers	3
Sense of initiative	12
Curricula	6

4. Results and discussion

The results of this study reveal that 84.85% of Applied College students have strong entrepreneurial aspirations. However, the results highlight that 66.6% of students with strong entrepreneurial aspirations come from low-income backgrounds. This indicates that entrepreneurial intentions are not influenced by social class but rather by self-confidence. On the other hand, recent research, such as Brändle and Kuckertz (2023), Zhang et al. (2022), and Adebusuyi and Adebusuyi (2020), showed that entrepreneurial intentions are influenced by social class. These studies suggest that individuals from higher social classes are more likely to pursue entrepreneurship, as they tend to have

access to greater resources and social networks that can be leveraged to start and grow a business. Additionally, individuals from lower social classes may be discouraged from pursuing entrepreneurial endeavors due to a lack of access to resources, social networks, and mentorship opportunities. However, these studies have focused on the role of universities in supporting young entrepreneurs and overlooked the potential of project incubators, growth accelerators, and support and training agreements between applied colleges and businesses. These entrepreneurship institutions and associations can play a vital role in encouraging young entrepreneurs and promoting their success. Project incubators and growth accelerators can provide young entrepreneurs with hands-on support, mentorship, and access to funding, while close relationships between applied colleges and companies can help pave the way for the practical education of entrepreneurship. Therefore, these institutions and associations should be given the attention they deserve in entrepreneurship research and policy initiatives aimed at supporting young entrepreneurs.

Similarly, we found that 85.7% of male students and 72.9% of female students mastered the administrative rules on which entrepreneurial thinking is based. This refers to the quality of education in colleges of applied studies. To achieve this, the latest educational technologies and effective teaching strategies have been used to produce high scientific results and advanced practical skills in entrepreneurship. In the same spinning mill, and in accordance with the results of Rosado-Cubero et al. (2022), the results of this study suggest that the type of study program followed is a central factor in entrepreneurship. Indeed, the entrepreneurial education program in the applied colleges is designed to provide students with a comprehensive understanding of entrepreneurship and the skills necessary to pursue entrepreneurial ventures. This program goes beyond traditional academic knowledge, aiming to cultivate an entrepreneurial mindset and develop practical skills that are essential in today's rapidly changing business landscape. Students enrolled in this program are exposed to a diverse range of courses that cover various aspects of entrepreneurship, including idea generation, opportunity recognition, business planning, financial management, marketing strategies, and leadership development. Through a combination of classroom lectures, practical exercises, mentorship programs, and industry collaborations, students are given the opportunity to apply their theoretical knowledge in real-world scenarios. The program also fosters a supportive environment that encourages students to cultivate their innovative thinking, problem-solving abilities, and risk-taking capabilities. By equipping students with a solid foundation in entrepreneurship, the applied colleges' program empowers individuals to take charge of their own destinies, embrace entrepreneurial opportunities, and make a positive impact in the business world.

Considering the stimulating business environment in the city of Ha'il, many governmental and semi-governmental agencies and institutions have been established to support small, medium and large enterprises. These include the General Authority for Investment and Chambers of Commerce, Al-Inma Bank, and the Saudi Bank of Savings and Loans. The applied colleges in Ha'il also help their students to overcome the obstacles of creative thinking by organizing meetings, seminars and training courses on entrepreneurship to develop the culture of self-employment and stimulate the spirit of self-investment initiative. This is reflected in the rate of seeking advice from successful investors, specialists and entrepreneurs, which reaches 90.5% for male students and 72.9% for female students. In contrast to the work of Siu and Lo (2013), we find that students can create successful projects despite their failures in the past, but on the condition that there is effective supervision. In this regard, the applied colleges have implemented an encouraging program to stimulate business and create ideas by establishing an administrative and scientific department specialized in organizing and following up fields of Leadership and innovation in the university and its marketing. Approximately 95.2% of students in the colleges benefit from this department. This section is also concerned with issuing incentive prizes for entrepreneurship and innovation, to the extent of supporting the project financially, administratively, and logistically. This is in addition to the applied college's participation in a number of programs that sponsor and support entrepreneurial projects, such as the Business Incubator Program for Pioneers, the Industrial Clusters Program for Small and Medium Enterprises, and the Infrastructure System Program for Entrepreneurship and Innovation. These programs aim at assisting students to acquire the skills of preparing a detailed economic and technical project feasibility study. It also supports them in evaluating, establishing, and managing entrepreneurial projects to avoid their failure, especially since 23.05% of the total number of students experienced the failure of a commercial or agricultural project. The reason for their failure is the fact that they are unfamiliar with real-world problems. For this reason, they chose to enroll in applied colleges, which gives them the opportunity to learn through direct application in the field of business to gain personal experiences. This corroborates the research of Alam et al. (2019) and Sancho et al. (2022) in the fact that entrepreneurial behavior can be effectively promoted through training and practice which generally encourages entrepreneurial behavior.

As for the cultural barriers, contrary to the work of Donaldson et al. (2023) and Ivanović and Kufenko (2023), the results of this study suggested that 75% of female students in applied colleges feel non-marginalized and have entrepreneurial intentions. This comes down to the fact that entrepreneurial education through application gives the student the feeling that she is a powerful force in the

entrepreneurial landscape, that she is far from being marginalized, and that she can contribute to the advancement of Saudi Arabia's economic cycle. Even more, we noticed that 67.3% of the students accept the partnership of a person of the opposite sex in a project, and this reflects the maturity of the social and economic thinking of the applied college students. About this, Goraieb et al. (2019) found that cultural barriers can negatively impact foreign direct investment (FDI), thereby affecting entrepreneurial activity. Likewise, Aidis et al. (2012) reported a positive correlation between gender diversity and economic development. Thus, Gender differences can hinder entrepreneurial activities by discouraging women from pursuing entrepreneurial careers or limiting their access to institutional resources such as funding and mentoring. Cultural barriers can also influence the adoption of new technologies and business practices, with employees' lack of enthusiasm for new technologies being partly due to cultural barriers. Çetindamar et al. (2012) found that cultural and ethnic barriers can limit the success of international business ventures. Overall, recognizing and breaking down cultural barriers and gender differences is critical to fostering more diverse and inclusive entrepreneurial ecosystems that ultimately lead to greater innovation, job creation, and economic growth. In this regard, colleges of applied studies play a crucial role in breaking down cultural barriers to the business environment. One such barrier may be associations between people of the opposite sex in entrepreneurial ventures. This is a significant challenge in many cultures, where conservative norms cause young women aspiring to become entrepreneurs to avoid associating with men outside of their immediate family. Colleges of applied studies can help reduce these cultural barriers by promoting gender-neutral environments and providing mentorship, networking, and skill-building opportunities for aspiring entrepreneurs of all genders. By recognizing and addressing these cultural barriers, colleges of applied studies can help foster more diverse and inclusive entrepreneurial ecosystems, which in turn can lead to greater innovation, job creation, and economic growth. Therefore, colleges of applied studies should continue to promote gender equity and encourage young women's entrepreneurship to help create a more inclusive entrepreneurial ecosystem, which will ultimately lead to societal and economic benefits.

5. Conclusion

Entrepreneurship is a crucial aspect of economic growth and development. Entrepreneurs drive innovation, create new jobs, and contribute to the overall growth of the economy. They identify new business opportunities and develop innovative solutions to address existing market gaps. Moreover, entrepreneurship encourages competition, which leads to increased efficiency, productivity, and economic growth, as businesses strive to improve their products and services to meet customer needs better (Hou et al., 2023). Entrepreneurship also plays an essential role in social development, particularly in developing countries. It provides individuals with opportunities for self-employment and income generation, which, in turn, leads to poverty reduction. Additionally, entrepreneurial activity can stimulate economic growth in rural areas, creating jobs and reducing the urban migration of rural populations.

Applied colleges and universities are increasingly recognized as breeding grounds for entrepreneurship. These institutions offer focused programs and hands-on training that prepare graduates for specific careers and industries. This training equips students with practical skills and knowledge to start and run successful businesses, making them well-positioned to identify and capitalize on new business opportunities. Moreover, applied colleges often have close ties to local industries and businesses, creating opportunities for students to connect with potential partners, mentors, and investors. These institutions also foster a culture of innovation and problem-solving, encouraging students to be creative, collaborate, and take calculated risks.

For the aforementioned reasons, our focus lies on the technical and vocational aspects of applied colleges. Specifically, our research centers around examining the unique teaching practices and the relationship dynamics between various stakeholders.

The main findings of this paper showed that entrepreneurial intentions are not affected by social class but rather by self-confidence. In other words, self-confidence seems to be a critical factor that affects the entrepreneurial intentions of individuals. According to a study by Karami and Liñán (2022), self-confidence influences individuals' entrepreneurial intentions, regardless of their social class. Another study by Zhang et al. (2022) found the same result, where self-efficacy (the belief in one's ability to perform a task) was positively associated with entrepreneurial intentions, regardless of an individual's social class.

These findings suggest that self-confidence and self-efficacy play a more significant role in predicting an individual's intention to start a business than social class. Indeed, individuals who possess high levels of self-confidence are more likely to perceive themselves as capable of starting and running a business successfully. As a result, they are more likely to pursue an entrepreneurial career despite their social class or perceived limitations. Therefore, policymakers and educators who seek to promote entrepreneurship should focus on developing programs and initiatives that aim to improve individuals' self-confidence, rather than relying on social class as a predictor of entrepreneurial intentions. In addition, the results of this study indicate that the reasons for the failure of undergraduate students, in previous business, revolve around their lack of knowledge of real-world

problems. For this reason, they choose to enroll in the applied college at the University of Ha'il, which gives them the opportunity to learn through direct application in the field of business to gain personal experiences. In other words, traditional academic models may not be adequate to prepare students to effectively navigate real-world problems. A study by the Society for Human Resource Management found that employers often prefer applicants with practical experience over those with only advanced degrees, indicating a potential bias towards the value of vocational training. Additionally, a 2020 report from the World Economic Forum noted that while universities have traditionally focused on theoretical education, employers are increasingly demanding practical skills such as critical thinking, communication, and problem-solving. This gap between employer needs and graduate skills highlights the limitations of traditional university models in meeting real-world challenges. Alternative models, such as experiential learning and vocational training, can provide students with the practical skills and knowledge needed to solve complex problems and succeed in the global job market.

As for the cultural barriers in the entrepreneurial environment, this study reveals that 3/4 of female students enrolled in colleges of applied studies do not experience marginalization and display entrepreneurial intentions. This can be attributed to the impact of entrepreneurial education through application, which empowers students and enables them to actively contribute to Saudi Arabia's business ecosystem. Additionally, the study indicates that a majority of students in applied colleges are open to the idea of partnering with individuals of the opposite sex for collaborative projects. This finding reflects the students' mature social and economic thinking. Future research can explore the specific effects of online degrees on student retraining and the promotion of entrepreneurship.

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Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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