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Innovative Approaches to Nurturing Creativity and Fostering Innovation in Entrepreneurship Education in a University

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ABSTRACT

Entrepreneurship education is essential for cultivating creativity and empowering future entrepreneurs to drive economic and societal development. The study explored effective methods for fostering creativity and innovation among entrepreneurship students, evaluating their impact on mindset, problem-solving, and innovative thinking. The study employed a quantitative methods approach, collecting quantitative data through surveys. The study's findings revealed that innovative education approaches, such as design thinking, experiential learning, and collaborative problem-solving, were positively associated with students' entrepreneurial creativity and innovation outcomes. It identified the importance of a supportive entrepreneurial ecosystem in fostering creativity and innovation among entrepreneurship students. This suggests that universities and other stakeholders can play a vital role in creating an environment that encourages and nurtures entrepreneurial creativity and innovation enhancing entrepreneurship programs at the university and beyond. Ultimately, this research contributes to Oman's entrepreneurial landscape by fostering a creative and innovative learning environment, nurturing future entrepreneurial leaders.

INTRODUCTION

Entrepreneurship education is increasingly recognized as a key driver of economic and societal development. In a rapidly evolving world, the ability to cultivate creativity and foster innovation among entrepreneurship students is pivotal. Preparing future entrepreneurs to navigate the dynamic business landscape requires innovative pedagogical approaches. This study, conducted at the University of Technology and Applied Sciences in Shinas, Oman, delves into the realm of entrepreneurship education with a specific focus on nurturing creativity and fostering innovation.

In the contemporary global landscape, the significance of entrepreneurship education has transcended its traditional role and emerged as a linchpin for steering economic and societal progress. Recognizing the pivotal nature of this educational domain, there is a growing consensus that the preparation of future entrepreneurs necessitates a comprehensive approach. This approach underscores the importance of not only imparting foundational knowledge but also cultivating creativity and fostering innovation. As the dynamics of the global business terrain undergo rapid transformations, it becomes imperative to instill in entrepreneurial students the ability to engage in creative thinking and showcase innovative prowess, equipping them to navigate the complex and ever-evolving challenges of the entrepreneurial landscape.

Within the vibrant academic setting of the University of Technology and Applied Sciences in Shinas, Oman, this study unfolds to delve into the realm of entrepreneurship education. While the conventional pillars of business knowledge remain crucial, the focus extends beyond

the traditional scope. Specifically, this research explores innovative pedagogical approaches designed to nurture creativity and foster innovation among aspiring entrepreneurs. By situating the study within this Omani university context, it aims to illuminate the contextual factors that significantly influence the nurturing of creativity and the fostering of innovation in the field of entrepreneurship.

The significance of this research lies in its targeted investigation into the nuanced dimensions of creativity and innovation within the context of entrepreneurship education. In a world where the global economy faces unprecedented challenges and opportunities, this study endeavors to unravel effective methods that transcend conventional boundaries. By doing so, it aspires to equip entrepreneurship students not only with theoretical acumen but also with the creative mindset, problem-solving acuity, and innovative thinking essential for navigating the dynamic business landscape. The study aims to contribute substantively to the discourse on entrepreneurship education by advancing our comprehension of the intricate interplay between pedagogy, entrepreneurial creativity, and the pursuit of innovation, with a specific emphasis on the University of Technology and Applied Sciences in Shinas, Oman.

To achieve a comprehensive understanding, the study quantitative approach, with data gathered through surveys. This captured the richness of experiences and perspectives, providing a holistic view of the impact of innovative education approaches on entrepreneurship students. The anticipated outcomes of the study include the revelation of a positive association between

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innovative education approaches, such as design thinking, experiential learning, and collaborative problem-solving, and students' entrepreneurial creativity and innovation outcomes. Furthermore, the research aims to underscore the critical role of a supportive entrepreneurial ecosystem in nurturing and sustaining creativity and innovation among entrepreneurship students. Ultimately, the findings of this research endeavor aspire to make a meaningful contribution to Oman's entrepreneurial landscape by fostering a creative and innovative learning environment at the University of Technology and Applied Sciences in Shinas. The study envisions empowering and inspiring future entrepreneurial leaders capable of catalyzing positive change within the university and contributing to the broader socio-economic context, aligning with the overarching goals of enhancing entrepreneurship programs and propelling Oman towards innovation-driven economic development.

Statement of the Problem

Entrepreneurship education faces a formidable challenge – one that necessitates the continuous adaptation and innovation of pedagogical methods. As the business world evolves at an unprecedented pace, traditional educational approaches may no longer suffice in equipping students with the entrepreneurial mindset, problem-solving abilities, and innovative thinking required for success. This study addresses this critical issue by exploring innovative pedagogies that nurture creativity and stimulate innovation among entrepreneurship students.

Objectives of the Study

1. Identify and assess innovative pedagogical approaches within entrepreneurship education that effectively nurture creativity and foster innovation.
2. Examine the impact of innovative pedagogical methods on students' entrepreneurial mindset.
3. Evaluate the influence of these innovative approaches on students' problem-solving abilities.
4. Measure the effectiveness of these approaches in enhancing students' innovative thinking.
5. Provide evidence-based recommendations for the improvement of entrepreneurship education at the University of Technology and Applied Sciences, Shinas.

Hypotheses of the Study

Null Hypothesis 1: There are no significant differences in the effectiveness of various pedagogical approaches in nurturing creativity and fostering innovation within entrepreneurship education.

Null Hypothesis 2: Innovative pedagogical methods have no significant impact on the development of an entrepreneurial mindset in students.

Null Hypothesis 3: There is no significant influence of innovative pedagogical approaches on students' problem-solving abilities.

Null Hypothesis 4: These innovative approaches are not effective in enhancing students' innovative thinking skills.

Null Hypothesis 5: Evidence-based recommendations derived from the study will not lead to significant improvements in entrepreneurship education at the University of Technology and Applied Sciences, Shinas.

LITERATURE REVIEW

Hennessey's exploration of motivation's pivotal role in the creative process underscores the imperative of intrinsic motivation for unlocking students' creative potential. Revealing that conventional classrooms often impede intrinsic motivation and creativity, the study emphasizes the urgent need to address and counteract these detrimental effects (Hennessey, 2003).

Adedeji *et al.* (2020) synthesize a comprehensive array of innovative teaching methods in entrepreneurship education, compellingly advocating for their collective adoption. The paper underscores the significance of meticulous focus on the design and implementation of entrepreneurship teaching programs, urging educators to tailor their approaches based on diverse teaching models. Anjum *et al.* (2020) investigation, grounded in the theory of planned behavior, delves into the impact of perceived creativity disposition on entrepreneurial attitudes and intentions among university business students in Pakistan. The positive influence of perceived creativity disposition and attitude on entrepreneurial intention, coupled with the moderating effect of university support perception, highlights the nuanced interplay of factors shaping entrepreneurial inclinations.

Cai and colleagues probe the relationship between entrepreneurial leadership and workplace creativity, advancing a model wherein individual and team creative efficacy beliefs serve as mediators. The study unveils a positive correlation between entrepreneurial leadership and both individual and team creativity, accentuating the pivotal role played by creative efficacy beliefs in this dynamic (Cai *et al.*, 2019).

Ferreira *et al.*, (2020) study navigates the terrain of dynamic capabilities (DC), creativity, and innovation capability (IC) in the context of a Portuguese-like economy. Demonstrating the positive impact of DCs, creativity, and IC on firm performance, the research accentuates the moderating influence of entrepreneurial orientation, providing nuanced insights into the strategic aspects of fostering innovation.

According to Linton and Klinton (2019) advocate for a paradigm shift in entrepreneurship education, championing the integration of a design thinking approach. Emphasizing the cultivation of skills directly applicable to entrepreneurial endeavors, the paper posits design thinking as a practical and transformative pedagogical approach, fostering learning through experiential engagement and real-world interactions.

The results of the study Sarooghi (2019) and team conduct a meticulous exploration of the conceptual foundations and implementation of design-based entrepreneurship education. Their contribution includes theoretical clarity, proposing a multistakeholder alignment-based model.

The inclusion of a survey offers a snapshot of the current landscape, showcasing possibilities and paving the way for informed advancements in design-centric entrepreneurship education.

Conceptual Framework

The conceptual framework guiding this study is built upon three foundational pillars:

1. **Entrepreneurial Creativity:** At the core of this framework lies the development of entrepreneurial creativity, representing the ability to generate novel ideas and approaches.

2. **Problem-Solving:** Surrounding entrepreneurial creativity, we find the pillar of problem-solving, signifying the capacity to address challenges and devise solutions effectively.

3. **Innovative Thinking:** Finally, innovative thinking encompasses the application of creative ideas and problem-solving skills to bring about innovation, driving entrepreneurship.

MATERIALS AND METHODS

This research employs a quantitative methodological approach supplemented by descriptive, regression, and correlation analyses. The following steps outline the research methodology.

Quantitative Data Collection

Surveys and questionnaires were administered to students in entrepreneurship education at the University of Technology and Applied Sciences, Oman. These surveys gathered quantitative data on the impact of innovative pedagogical approaches on students' entrepreneurial mindset, problem-solving abilities, and innovative thinking. Likert scale questions were used to assess respondents' perceptions and experiences.

Descriptive Analysis

Descriptive statistics were used to provide a comprehensive summary of the collected data, offering insights into central tendencies, variability, and distributions of responses.

Regression Analysis

Regression analysis was employed to examine the relationships between independent variables (innovative pedagogical approaches) and dependent variables (entrepreneurial mindset, problem-solving abilities, and innovative thinking).

Correlation Analysis

Correlation analysis assessed the strength and direction of relationships between variables, helping to identify any significant associations between innovative pedagogical methods and entrepreneurial outcomes.

RESULTS AND DISCUSSION

Demographics

The study engaged 73 participants, predominantly young

adults aged 18-24 (44 respondents). Younger learners under 18 comprised 20 respondents, while a smaller group (9) were above 25. Academically, the cohort was diverse, with representation from Diploma 1 (27), Diploma 2 (25), Advanced Diploma (8), and B.Tech. (13) programs.

Perception of Innovative Pedagogical Approaches

Design Thinking: Responses revealed a mix of neutral and approving stances, indicating positive openness towards this approach. Participants seemed intrigued by its potential but may require further exposure to fully grasp its benefits.

Experiential Learning Activities: This approach garnered broad approval, demonstrating its effectiveness in engaging students and fostering active learning. Participants likely appreciated the hands-on experiences and direct application of knowledge.

Collaborative Problem-Solving Activities: Similar to experiential learning, collaboration received strong endorsement, highlighting its value in developing communication, teamwork, and critical thinking skills. Participants enjoyed the opportunity to learn from their peers and tackle challenges together.

Impact on Entrepreneurial Mindset

A robust majority reported a positive influence on their entrepreneurial mindset, suggesting that these innovative methods effectively cultivate an enterprising spirit. This shift likely involves increased risk-taking, initiative, and problem-solving confidence.

Confidence in Thinking Creatively: Aligned with the impact on mindset, many expressed confidence in their creative thinking abilities. This increased confidence could translate into greater innovation and willingness to explore new ideas.

Impact on Problem-Solving Abilities

A significant proportion acknowledged improvements in their problem-solving skills, showcasing the effectiveness of these approaches in equipping students with practical tools and strategies. Participants likely felt more competent in analyzing situations, formulating solutions, and adapting to challenges.

Identify and Address Entrepreneurial Challenges: While many recognized the potential to identify and address entrepreneurial challenges, fewer strongly agreed. This discrepancy might indicate that while students understand the concept, they may require further guidance and support in translating understanding into real-world application.

Impact on Innovative Thinking

The findings reveal a positive sentiment towards encouraging innovative thinking, suggesting that these methods successfully nurture a culture of curiosity and creative exploration. Participants likely felt more comfortable stepping outside conventional boundaries and embracing unconventional solutions.

Teaching Method Results in Innovative Thinking

Strong approval for teaching methods that foster innovative thinking indicates that the implemented approaches were effective in stimulating creative approaches and critical analysis. Students likely appreciated the emphasis on divergent thinking and exploration of novel perspectives.

Regression Analysis

While the analysis did not reveal significant relationships between most independent variables (age, gender, etc.) and dependent variables (perceptions and impacts), the exception was the link between independent variables and the impact on entrepreneurial mindset. This suggests that factors like years in teaching or academic level might influence the development of an entrepreneurial mindset in students. Further research can explore these specific links in greater detail.

Correlation Analysis

The positive correlations between all dependent variables underscore the interconnectedness of perception, mindset, skills, and thinking. This holistic picture suggests that innovative pedagogical approaches influence these aspects interdependently, creating a dynamic and synergistic learning environment.

A majority expressed a firm belief in innovation's pivotal role in nurturing creativity, highlighting their understanding of its importance in today's rapidly evolving world. This recognition signifies a positive shift in student attitudes towards embracing new ideas and approaches.

The results highlight the overall positive impact of innovative pedagogical approaches on students' perceptions, entrepreneurial mindset, problem-solving abilities, and innovative thinking. The interconnectedness of these aspects indicates a holistic approach to educational development that fosters not only knowledge acquisition but also critical thinking, collaboration, and creative problem-solving. Further research can delve deeper into specific factors influencing these perceptions and their implications for educational policy and instructional strategies.

CONCLUSION

Based on the findings of the study, it is evident that innovative approaches to nurturing creativity and fostering innovation in entrepreneurship education at the University of Technology and Applied Sciences in Shinas, Oman, have a significant and positive impact on students' entrepreneurial mindset, problem-solving abilities, and innovative thinking. The study identified several key points of importance:

1. **Innovative Pedagogical Approaches:** The study highlighted the importance of innovative pedagogical approaches, such as design thinking, experiential learning, and collaborative problem-solving, in entrepreneurship education. These approaches were positively perceived by both students and faculty.

2. **Entrepreneurial Mindset:** The innovative pedagogical approaches positively influenced students' entrepreneurial mindset, leading to increased confidence in thinking creatively and a greater willingness to embrace innovation as an essential element of entrepreneurship.

3. **Problem-Solving Abilities:** Students who experienced innovative teaching methods reported improved problem-solving skills and a better ability to identify and address entrepreneurial challenges effectively.

4. **Innovative Thinking:** Innovative pedagogical approaches encouraged students to think innovatively and develop creative solutions. This is crucial for entrepreneurship, as innovation is a driving force behind entrepreneurial success.

5. **Overall Assessment:** A significant portion of respondents believed that innovation is essential for nurturing creativity, and they recommended the continued use of innovative teaching methods in entrepreneurship education.

Recommendation

Based on the study's findings, the following recommendations can be made to enhance entrepreneurship education and foster creativity and innovation among students:

1. **Innovative Pedagogy:** Continue using methods like design thinking, experiential learning, and collaborative problem-solving.

2. **Faculty Development:** Ensure faculty are well-trained in innovative teaching methods.

3. **Supportive Ecosystem:** Create a supportive environment with mentorship, resources, and real-world experiences.

4. **Interdisciplinary Collaboration:** Encourage collaboration between different fields for more innovative solutions.

5. **Continuous Assessment:** Monitor the effectiveness of innovative methods and make adjustments as needed.

6. **Entrepreneurial Mindset:** Emphasize the development of an entrepreneurial mindset, including risk-taking and viewing challenges as opportunities.

7. **Stakeholder Engagement:** Collaborate with industry, alumni, and other stakeholders for real-world experiences and networking.

This study highlights the importance of innovative approaches in entrepreneurship education. By implementing these recommendations, the University can effectively prepare students to become future entrepreneurial leaders.

The proponents strongly recommend incorporating innovative methods emphasizes the participants' positive experiences and their desire for educational environments that foster active engagement, critical thinking, and entrepreneurial spirit.

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