

Articles

The Role of Egyptian Educational Institutes in Entrepreneurship Value Co-Creation

Mohamed A. Badie¹, Mohamed Ragheb^{2,3}, Fahd A. Hemeida⁴, Adel Zayed⁵

¹ Graduate School of Business Administration, Arab Academy for Science, Technology and Maritime Transport, ² Arab Academy for Science Technology and Maritime Transport College of Management and Technology: Alexandria, EG, ³ Dean of Cardiff Metropolitan programs (Graduate School of business), ⁴ College of Engineering and Technology, Arab Academy for Science, Technology and Maritime Transport, Alexandria, EGYPT, ⁵ Professor of HRM, Faculty of Commerce, Cairo University, EGYPT

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In recent years, studies on entrepreneurial education have called for further research that investigates the precise nature of the entrepreneurial ecosystem by exploring how learning impacts entrepreneurship and the role that educational establishments play as enablers and contributors in this process. This paper add to the existing literature by exploring the current state of entrepreneurship education in Egypt, where many programs suffer from an unclear vision about the precise role of the educational institution and have questions about the creation of more flexible learning environments and modes of delivery. Furthermore, in many Egyptian programs, there is a lack of understanding as to how entrepreneurial ecosystem elements interact, making it challenging to comprehend the dynamics of the entrepreneurial ecosystem in Egypt. In order to explore the role of educational institutes within entrepreneurship value co-creation in Egypt and other developing countries, this paper uses the mainstream literature to create a conceptual Framework that provides a context for exploring value co-creation among educational and professional training institutes, and illustrates how interactions and relationships among elements within the Entrepreneurship Ecosystem can be used to guide the development of entrepreneurial education within developing countries.

Introduction

Continuous learning has always been a cornerstone of success for entrepreneurs. Not only does it provide the core knowledge and skills required to lead a business, but it also serves as an invaluable source of inspiration and motivation. By learning from experienced professionals, entrepreneurs can gain insights into the challenges and opportunities of launching a business. At its core, education is about the development of human potential. (Davey et al., 2016)

For entrepreneurs, a structured and well-designed learning process is the tool for driving innovation, creativity, and growth for entrepreneurs in Egypt. Education helps entrepreneurs gain the technical skills they need to run their businesses and provides them with the confidence and insight to make informed decisions.

The significance of the study started with a pivotal question: **What is the influence of learning on entrepreneurship?** Secondly, how to apply lessons learned from other cases identified, address the gaps, and share experiences from other countries that have already established and developed solid entrepreneurial studies and Innovation in Primary, Intermediate, and Higher Education Institutes as a benchmark for Egyptian education focusing on the entrepreneurial domain.

As promising as entrepreneurial education development sounds, plenty of risks and unsolved challenges are still ahead. Various research and studies have stated gaps and called for further research and advancing the Entrepreneurial ecosystems field as a pathway for further research. The core value is to identify and resolve critical matters, such as but not limited to, first, from the entrepreneurs' side, they need to stimulate their interest in entrepreneurial topics for such entrepreneurship growth. Second, there is still some public doubt about whether entrepreneurship should be considered an academic discipline and how exposure to such topics would be delivered.

Third, change is inevitable; therefore, it is not only about the role of educational institutions but also about enabling flexibility in the learning environment and methodology of delivery. (Davey et al., 2016). Furthermore, the lack of understanding of how Entrepreneurial Ecosystem elements interact makes it challenging to comprehend the entrepreneurial ecosystem dynamics; thus, developing a "Value Co-Creation" system is essential. Theoretically, building an improved understanding of the context of entrepreneurship studies is a vital component of the Egyptian Entrepreneurial Ecosystem. In addition, it aims to lay a foundational guideline and Initial Framework for entrepreneurship as a

baseline for future development in Egypt's Entrepreneurial Education.

Theoretical background

This section introduces definitions and the theoretical foundation for the research study. Over the years, the academic institution has developed numerous entrepreneurship programs to enhance its development and promote economic development. Duval-Couetil's (2013) study suggested a general way of evaluating program designs in entrepreneurship. The study noted that the assessed entrepreneurial education plan has a substantial and measurable impact on students' entrepreneurial intentions. Nevertheless, it registered that trained students need to have more direction on behaviour if they want to become entrepreneurs.

As stated by (Ali et al., 2021), sustainability inquiries require much research to uncover and learn about what other countries adopt in their entrepreneurial educational models and how they promote entrepreneurship, considering the cultural, educational systems, and environmental differences.

In this research, the aim is to increase knowledge regarding those models to achieve the purpose. Hence, more than fifty studies are subject to investigation.

Initial observation shows that the positive effects of entrepreneurial education programs are more significant when entrepreneurial experience is weak, or there is no entrepreneurial experience. Meanwhile, a recent study by (Yuan et al., n.d.) explored the role of entrepreneurial passion in identifying opportunities, developing entrepreneurial self-efficacy, and shaping entrepreneurial intentions when a proactive personality exists among students. Again, the key results support that students' visionary personality influences entrepreneurial choices. Awareness, mindset, and capability development require different educational approaches, but all rely on the autonomy an individual entrepreneurial needs to develop to be effective. The belief of university education as a "sage on the stage" gives way to offering students occasional advice, assistance, and adjustment while exploring a subject area independently or by interacting among themselves who are well networked and can harvest support (Jones et al., 2014).

The Guidance for Higher Education Providers is used for curriculum and extracurricular development and informs university-level teacher-training initiatives (Davey et al., 2016).

As stated in Entrepreneurial Ecosystems: a holistic and dynamic approach (Shwetter et al., 2019). Countries such as Switzerland, the Netherlands, and Finland stand out as the most prevalent innovation-driven economies when considering thriving Entrepreneurial Ecosystems.

On the other hand, London, New York, and Silicon Valley continue to dominate as startup hubs. As a result, the top ten ecosystems for local integration are Silicon Valley, Greater Helsinki, Sydney, London, Houston, Los Angeles, Atlanta, Amsterdam, Tel Aviv, and Singapore.

According to (Supporting Entrepreneurship and Innovation in Higher Education in Lithuania, n.d.) Europe, for ex-

ample, is undergoing a profound transformation. Changes in climate, technology, demography, and the COVID-19 pandemic transform their and our societies and way of life. Therefore, as with other global nations, the EU States need a strong higher education sector to catalyse innovation and entrepreneurship and drive skills and knowledge. Moreover, the conditions in which our societies operate are changing. As a result, there is broad agreement across the EU nations that higher education institutions must adapt and contribute to shaping societal transformation.

The COVID-19 pandemic has further confirmed the potential of Higher Education Institutions (HEIs). Across Europe and the globe, HEIs transitioned to new forms of teaching and learning that connected their research to their community's needs and now play a crucial role in recovery plans.

According to a study at the University of Turku, Finland records (Feola et al., 2021), the significance of the educational system fosters entrepreneurship in many ways, based on a three-pillared concept: **People** (developing entrepreneurial competencies), **Collaboration** (with businesses), and **Outputs** (creating new companies). Regarding **People**, the Turku School of Economics is at the heart of the University's entrepreneurial education, which offers many programs open to students from all departments and executive courses. In addition, UTU collaborates with companies in interdisciplinary research projects or collaboration platforms in the **Collaboration** pillar.

Regarding **Outputs**, the University supports startups and spin-offs through Innovation, Entrepreneurship, and Transnational Education. Digitisation spans all entrepreneurial activities as an underlying concept. Furthermore, graduates positively influence entrepreneurship education, as students who pass the higher education system will take a program or entrepreneurship program that motivates them to create new businesses.

Research is progressively paying more attention to the Role of Education in realising entrepreneurial intentions, which has drawn attention to entrepreneurship education (Zhou et al., 2021). Therefore, improvements in the Educational and training programs related to entrepreneurship and the educational environment must be addressed.

Many of these were offered initially on brick-and-mortar sites, with some available through online courses like Harvard (Harvard Business School Online). However, due to the pandemic, more courses are now available through distance learning (e-learning or Online Live Classes).

So, in the next five years (by 2027), entrepreneurs should expect more specialised programs to pop up in their local colleges, universities, or e-learning platforms. Moreover, entrepreneurship is a lifelong commitment to learning. Thus, keep current on emerging entrepreneurship and business education trends, as young entrepreneurs want to be included (The Output of Educational Institutions and the Impact of Learning, 2022).

In addition, companies are experiencing market pressures to make better data-driven accurate decisions; this is thanks to a business climate that is more **data-conscious**

than ever. Henceforth, the demand for analysts is increasing; continuous education should be considered.

In summation, continuous learning has always been a cornerstone of success for entrepreneurs. Not only does it provide the foundational knowledge and skills required to lead a business, but it also serves as an invaluable source of inspiration and motivation. In addition, by learning from experienced professionals, entrepreneurs can gain invaluable insight into the challenges and opportunities of launching a business.

At its core, learning is about the **development of human potential**. It is the process through which people gain the knowledge, skills, and understanding necessary for success in the workplace and beyond. For entrepreneurs, this learning process can be a powerful tool for driving innovation, creativity, and growth.

Not only does learning help entrepreneurs gain the technical skills they need to run their businesses, but provides them with the confidence and insight to make informed decisions. By receiving feedback from experts on the ins and outs of the business, entrepreneurs can gain the confidence they need to take calculated risks, challenge the status quo, and make decisions based on data-driven insights.

The Method

Departing from the call for a well-established model that would clearly define the educational institute's role, best practices, and valuable insights into how pioneering institutes promote and support entrepreneurial programs. A qualitative research approach includes articles used in this research composed of scholarly peer-reviewed journal articles, case studies, and web-based online search terms "entrepreneurial ecosystems, entrepreneurial education, educational institutes' role, best practices, and entrepreneurship." Each source is filtered based on its relevance to the search keywords. The review used electronic search engines and research websites to cover sources published between 2017 and 2022. The research considers various sources to gather information and insights from different perspectives, bearing in mind the quality of the resources, gathering factual evidence, and studying various case studies from real-life implementations for educational institutes across the globe.

Data Gathering and Case Selection

The study's pivotal question is, "What is the impact of education on entrepreneurship?" in conducting my research, several case studies were utilised as references to support the study. These case studies served as valuable sources of information to gain insights on specific topics related to the research. In addition, the case studies provided concrete examples and real-life scenarios that helped illustrate points and strengthen arguments—incorporating these case studies in the research enabled the development of a comprehensive understanding of the research topic.

Case Study 1: Digital transformation and entrepreneurship at Hasso Plattner Institute Germany (Digital Transformation and Entrepreneurship at Hasso Plattner Institute (HPI), Germany, n.d.)

The Digital Transformation and Entrepreneurship at the Hasso Plattner Institute Germany has succeeded dramatically. The institute has created a vibrant and innovative environment, enabling students to develop their digital and entrepreneurial skills in a supportive and stimulating environment.

Furthermore, the institute has created a strong network of experts and mentors who provide valuable guidance and support to the students, which enabled the students to develop various skills in web design, data analytics, machine learning, and artificial intelligence. The institute also provides a platform for students to share their ideas and find potential partners and collaborators. As a result, the institute has become an excellent platform for digital transformation, innovation, and entrepreneurship.

Dr. Stefan Lilischkis prepared this case study from empirical Gesellschaft für Kommunikations- und Technologieforschung mbH, Bonn, Germany, by collecting and analysing comprehensive documentation about HPI and feedback from crucial HPI representatives. The status of information in this case study is December 2018.

Case Study 2: Does College Education Promote Entrepreneurship in China? (Zhou et al., 2021)

The outcome of this study is that college education does have a positive effect on entrepreneurship in China. The study found that college graduates are more likely to become entrepreneurs and have a higher success rate than non-graduates. College graduates also have better access to resources and networks to help them in their business endeavours. Furthermore, college-educated entrepreneurs have better access to capital and are more likely to have access to government policies and subsidies. Overall, this study suggests that college education does promote entrepreneurship in China.

Case Study 3: Entrepreneurship and digital transformation at the University of Finland. (Entrepreneurship and Digital Transformation at The, n.d.)

The University of Finland has seen a significant impact from the combination of entrepreneurship and digital transformation; it has created new digital tools and platforms to support innovation and collaboration and encourage students and faculty to explore innovative ideas and engage in creative problem-solving.

Many startup companies launched out of the University and increased international collaborations with universities worldwide. In addition, the University has seen an increase in digital technologies across many of its departments, improving efficiency and effectiveness in teaching, research, and administrative activities.

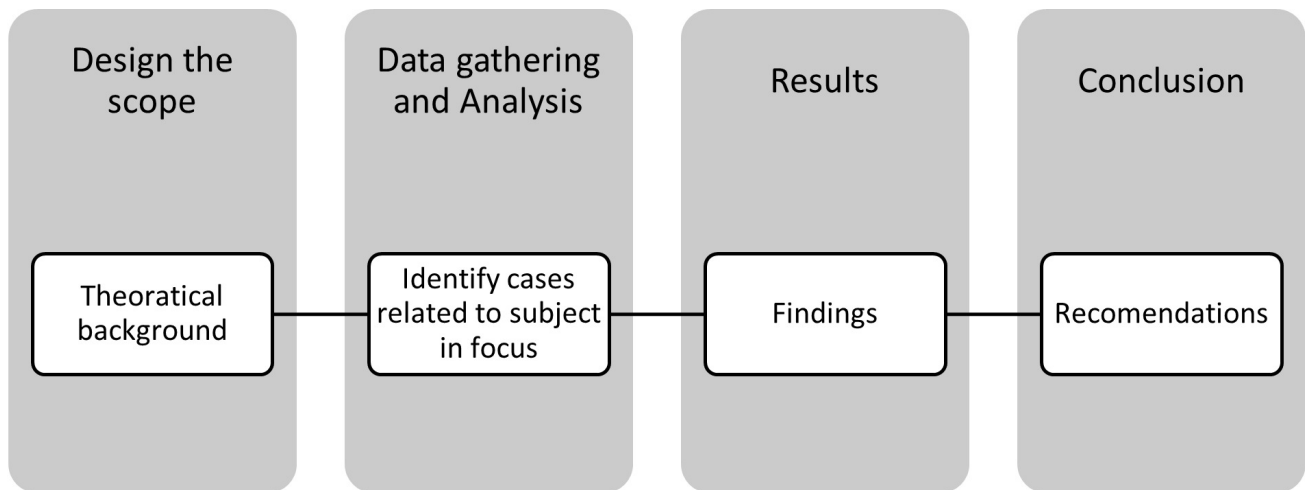


Figure 1. research approach

Finally, the University has also seen an increase in courses, events, and activities focused on digital transformation and entrepreneurship, which have helped increase students' knowledge and skills.

Case Study 4: Supporting Entrepreneurship and Innovation in Higher Education in Lithuania (Supporting Entrepreneurship and Innovation in Higher Education in Lithuania, n.d.)

The Lithuanian higher education system has been under a process of reform over the last decade, with efforts to improve the quality of teaching and merge HEIs to be more efficient and focused on funding. Funding for higher education and research significantly decreased in 2017, and it is only beginning to rebound. Lithuania has invested in improving the salaries of academic staff. Lithuania remains highly dependent on European funding for its research programs, significantly shaping how it conducts research there.

Lithuania has dramatically improved entrepreneurial teaching and learning over the past decade. By:

Increase the number of university-industry collaborations to promote innovative partnerships supporting entrepreneurial skills development. Develop more programs and courses to develop students' creative and innovative problem-solving skills. Create a supportive environment for student entrepreneurs by providing mentorship, resources, and guidance. Establish incubator hubs in universities to foster the growth and development of student-led businesses.

Promote the use of technology to support the development of innovative products and services. Increase public and private funding for research and development projects that support entrepreneurship and innovation. Encourage universities to create an environment of cooperation and collaboration with industry partners and other universities. Develop curricula that focus on teaching the fundamentals of entrepreneurship and innovation.

Increase the availability of resources and support systems for student entrepreneurs. Facilitate workshops and events to allow students to network and share ideas.

Case Study 5: Entrepreneurship and Digital Transformation at the University of Turku, Finland (Feola et al., 2021)

The University of Turku, Finland, is at the forefront of entrepreneurship and digital transformation. The University has been actively engaging in the digital transformation of its business operations, services, and products. It has established a **Centre of Excellence in Digital Transformation that provides students and faculty members guidance, training, and advice.**

The University is also actively developing innovative technologies and services to help businesses stay competitive in the digital world. Furthermore, the University strongly focuses on promoting entrepreneurial activities among its students.

Case Study 6: Supporting Entrepreneurship and Innovation in Higher Education in Greece (Supporting Entrepreneurship and Innovation in Higher Education in Greece, n.d.)

The Hellenic higher education system has been making significant efforts to promote entrepreneurship. Several initiatives have been implemented to encourage entrepreneurship among students and graduates. The first is the National Academic Entrepreneurship Initiative (NAEI), established in 2010. This initiative supports higher education institutions in producing a helpful environment for entrepreneurship and developing skills, knowledge, and attitudes. It also provides guidance and funding to incubators, accelerators, and other organisations that support entrepreneurship. The second initiative is the "Entrepreneurship Initiative of the Hellenic Higher Education Institutions", launched in 2011. This initiative aims to develop and promote entrepreneurship in higher education institutions by funding activities such as seminars, workshops, and compe-

titions. The initiative also supports the development of an entrepreneurial network between universities and research institutions.

Finally, the “Entrepreneurship Education Network” was launched in 2015. This initiative provides universities and research institutions a platform to share information and best practices in entrepreneurship. It also encourages collaboration between universities and research institutions to develop innovative solutions to problems in the field. In addition to these initiatives, individual universities and research institutions have launched several programs and initiatives to promote entrepreneurship.

Case Study 7: Supporting Entrepreneurship and Innovation in Higher Education in Slovenia (Supporting Entrepreneurship and Innovation in Higher Education in Slovenia, n.d.)

Higher Education (HE) in Slovenia is integral to the national innovation and entrepreneurship agenda. Slovenia’s innovation system comprises national research units within higher education institutions (HEIs) and national research institutes (RIs). In addition, the HE system has expanded to include new universities and independent HEIs (faculties and professional colleges). “Slovenia has a diverse HE system despite its relatively small size.

The Government supports Education, research, and entrepreneurship development through several bodies, including the Ministry of Education, Science and Sports, and Economic Development and Technology.

The Republic of Slovenia is a small and young country in Central Europe. However, despite its size and economic challenges, Slovenia has successfully promoted entrepreneurship and innovation in higher education due to the establishment of several important initiatives implemented over the last decade. The most significant of these initiatives is the Slovenian Higher Education and Research Program (SHERP), launched in 2008.

This program was designed to support entrepreneurship and innovation in higher education by funding entrepreneurship and research activities. The program has also been instrumental in creating a network of universities, research institutes, and private sector organisations collaborating to foster innovation and entrepreneurship in higher education. Another key initiative is the Centre for Entrepreneurship and Innovation in Higher Education (CEIHE), which was established in 2014. This centre supports universities and other educational institutions in their efforts to create an entrepreneurial culture, promote innovation, and stimulate economic growth. In addition, CEIHE provides resources and mentorship through its activities to help students, faculty, and staff members enrich their entrepreneurial skills and launch their businesses. Finally, the Slovenian Ministry of Education, Science, and Sport has actively promoted entrepreneurship and innovation in higher education through its National Program for the Promotion of Entrepreneurship and Innovation (NPEEI). This program was launched in 2015 to support innovative projects and initiatives in higher education and provide guid-

ance and resources to universities, research institutes, and private sector organisations. Overall, the initiatives and programs implemented in Slovenia have successfully promoted entrepreneurship and innovation in higher education. Through the SHERP and NPEEI programs, the Government has provided funding for research and entrepreneurial activities, while the CEIHE has provided mentorship and resources to students, faculty, and staff. These initiatives have created a vibrant entrepreneurial culture in higher education and contributed to developing new businesses and products.

Study outcomes stated the leverage of existing initiatives, ensuring that entrepreneurship teaching and learning activities are embedded in all schools and faculties of an HEI rather than being limited to the Faculties of Management and Economics.

Offer access to entrepreneurship education in lifelong learning courses to allow working professionals to develop entrepreneurial skills. Promote joint monthly events with high-level speakers from Slovenia and elsewhere, involving all interested HEIs and inviting participants from outside academia, including entrepreneurs, angel investors, and venture capitalists.

Create resources to support teachers and mentors involved in entrepreneurial teaching and learning activities, including experts and industry professionals. Leverage national initiatives like INOVUP (Innovative Learning and Teaching for Quality Careers of Graduates and Excellent Higher Education), which could be cascaded at the HEI level.

Case Study 8: Preparing teachers for entrepreneurial education at the University College of Christian Churches for Teacher Education Vienna/Krems, Austria. (Preparing Teachers for Entrepreneurial Education at University College of Christian Churches for Teacher Education Vienna_Krems-Converted, n.d.)

The University College of Christian Churches for Teacher Education Vienna/Krems (KPH) teaches pre-service and in-service teachers in primary and secondary schools. In addition, the University has a Centre for Entrepreneurship Education and value-based Business Didactics, which aims to empower scholars to shape society and the economy responsibly. Therefore, it employs a unique combination of pedagogics and entrepreneurship, enabling aspiring teachers to provide entrepreneurship education to scholars from six (6) to nineteen (19) years of age.

The didactic concept is based on the **TRIO entrepreneurial education model**, which leads from core entrepreneurial Education via entrepreneurial culture to entrepreneurial civic education. Furthermore, the KPH Vienna/Krems participates in developing the European program Youth Start for primary and secondary schools, especially in the scientific support of field trials and teacher training. Moreover, KPH is an active partner in the Austrian National Action Plan for Entrepreneurship Education (2020-2025);

this Plan emphasises an understanding of entrepreneurship oriented towards a sustainable society and economy.

The program also explores the various facets of entrepreneurial education, including the diverse types of entrepreneurs, how entrepreneurs think, the role of the Government and other regulatory bodies, and the importance of networking and collaboration. Through lectures, case studies, project-based learning, and hands-on activities, the program helps teachers understand the fundamentals of entrepreneurial education and develop the skills to apply those principles in their classrooms. In addition, the program allows teachers to experience entrepreneurship firsthand through various experiential activities. These activities include visits to local businesses,

participation in business plan competitions, and internships. Through these experiences, teachers gain exposure to the entrepreneurial spirit and develop the confidence and skills to apply the principles of entrepreneurship in their teaching.

The program equips teachers with the knowledge and skills to lead their students to succeed in business. By teaching their students the fundamentals of entrepreneurship, teachers can nurture the entrepreneurial spirit within their classrooms and create an environment where students can turn their ideas into reality.

Case Study 9: Supporting Entrepreneurship and Innovation in Higher Education in Sweden (Supporting Entrepreneurship and Innovation in Higher Education in Sweden, n.d.)

Sweden's innovation system is firmly rooted in its HEIs, which receive a comparatively high percentage of research funding and are significantly larger than other publicly funded research bodies. All 21 Swedish regions have HEIs, aiming to improve accessibility to higher education and innovation nationwide. However, a small group of research-focused HEIs, often in metropolitan areas, receive the lion's share of research funding. Autonomy is an essential characteristic of the Swedish HE system, and individual HEIs have considerable discretion in running their operations and how they spend the funding. In addition, national entities such as Vinnova, the Swedish public national innovation agency, and several other bodies, including private foundations, support research and development (R&D) in higher education and promote the creation of new interdisciplinary spaces, generating opportunities for innovation and innovative practices. The study resorted to ten recommendations:

Monitoring of innovation spending is included in the annual monitoring program run by the Swedish Higher Education Authority, with an evaluation every four years. Establish thematic innovation offices. Increased funding for early-stage commercialisation. Establishment of a national centre for entrepreneurship. The centre will be financed through appropriations of EUR 1.9 million per year.

All HEIs should have an intellectual property strategy. Research councils play a more active role in the commer-

cialisation establishment of a Holding Company at each HEI.

Holding companies take on broader roles, including representing the HEI with third parties and offering more services. Addressing governance and capacity issues, the report proposes that higher education institutions with holding companies be commissioned to form a consortium to manage a joint limited company. Joint management will be regulated by a shareholder agreement whereby the Government will determine the more critical components. At the time of writing, the Swedish Government is still considering the inquiry's recommendations.

The suggested Framework

After researching and studying multiple case studies and observing the relationship among the components of successful delivery of value-added education and training programs, the advised Framework focuses on interactions, establishing relationships, and how the proposed elements connect within the Entrepreneurship Ecosystem. Entrepreneurship education, training, and Competency development are the core engines of creating value through the value co-creation system influenced by the Institutional Environmental factors (external and internal) and the dynamics of relationships, among other Entrepreneurship Ecosystem Attributes, as stated in the figure, are explained below:

Mentorship: Connecting Education and entrepreneurship through mentorship can be a powerful way to co-create value. Students can benefit from the experience and expertise of entrepreneurs, while entrepreneurs gain from the enthusiasm, fresh perspectives, and innovative ideas of students.

Innovative Learning: Incorporating elements of entrepreneurship into the education system can create a more valuable learning experience for students, including teaching practical problem-solving, encouraging creativity in the classroom, and providing real-world examples to illustrate concepts.

Collaborative Cohorts: Collaborative projects between education and entrepreneurship can be a fantastic way to foster innovation and create value. For example, students can work with entrepreneurs to create new products, services, or businesses.

Digital Transformation awareness: Embracing digital transformation awareness as a value-add for entrepreneurship can position businesses for long-term success in a rapidly changing digital landscape. It is about staying ahead of the curve, innovating, and delivering more value to customers.

Internships: Internships allow students to gain real-world experience in entrepreneurship. It also benefits entrepreneurs as they can bring fresh perspectives and ideas to their businesses.

Networking Events: Networking events between education and entrepreneurship can be a fantastic way to create value. Not only do they provide students with the opportunity to meet potential employers and mentors, but they also

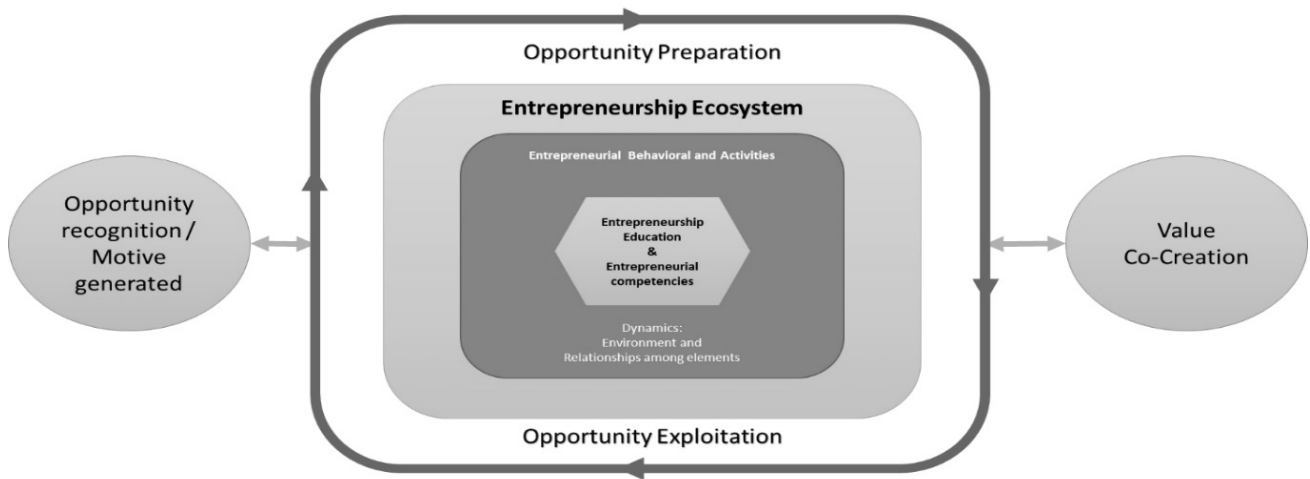


Figure 2. Value Co-Creation System

Entrepreneurial Ecosystems Integrated Attributes are triggered by beneficiaries (Opportunities, Recognition, Motives) as Independent Variables and Value Co-Creation as Dependent.

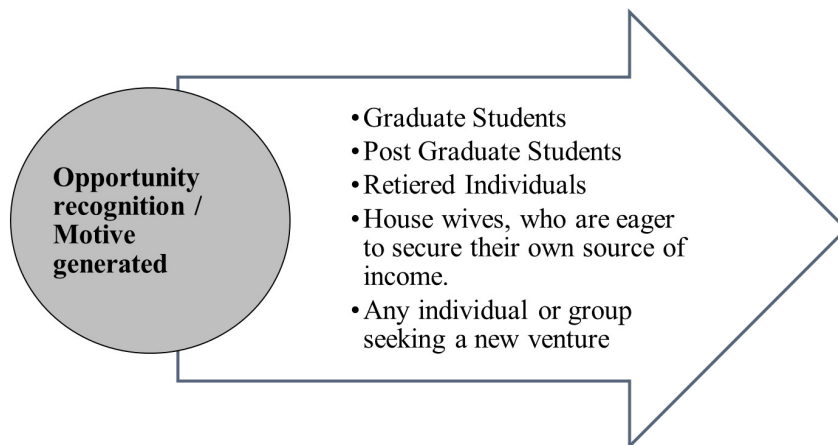


Figure 3. Inputs in value co-creation

The above are the beneficiaries and critical components in the Value Co-Creation framework.

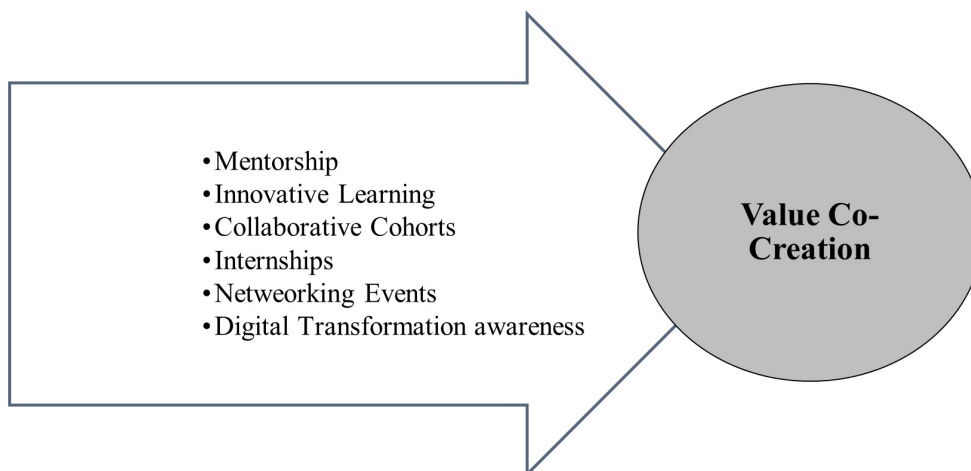


Figure 4. Towards Value Co-Creation

give entrepreneurs a chance to find potential partners and investors.

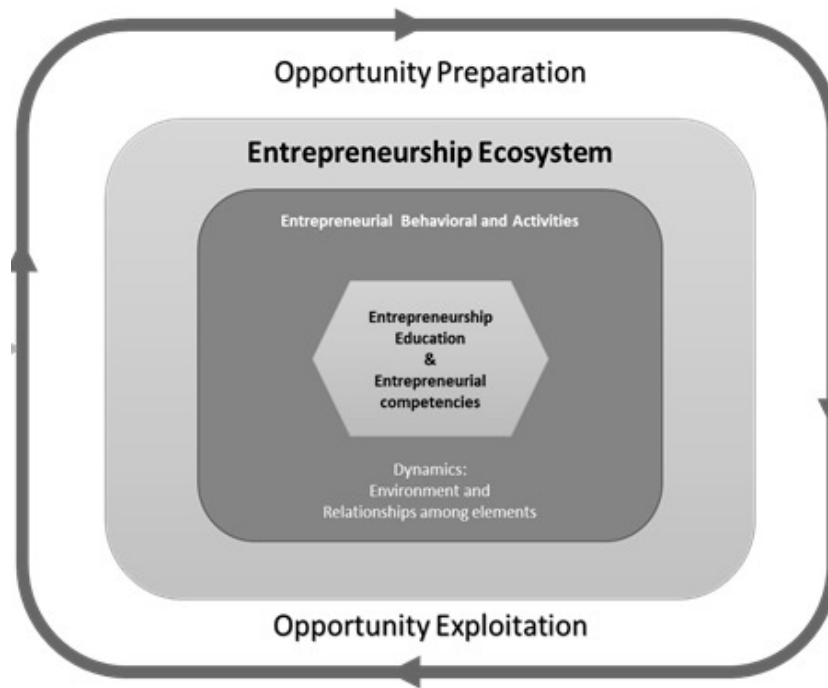


Figure 5. Value Co-Creation Approach

The Operating Model

Driving Value Co-Creation requires massive collaboration between educational institutes and the beneficiary (Entrepreneurs) to develop and be sustainable. The following are suggestions but, of course, are not limited to only them:

Opportunity Preparation / Creation: Create an entrepreneurial skills development program to equip students or individuals with the essential skills to build an entrepreneurial mindset and run a successful business.

Opportunity Preparation / Creation: Establish a business incubator to provide resources and guidance to student entrepreneurs throughout their startup journey.

Opportunity Preparation / Creation: Foster an environment of collaboration and mentorship between educational institutions and startups, encouraging the open exchange of ideas and resources.

Opportunity Preparation / Creation: Encourage the formation of student-run venture funds to help fund student-run ventures.

Opportunity Preparation / Creation: Develop a university-level entrepreneurship certificate program to help students gain knowledge and experience in entrepreneurship.

Opportunity Preparation / Creation: Create a student-run accelerator program to mentor student entrepreneurs and provide them with resources to launch their businesses.

Opportunity Preparation / Creation: Support the development of student-run coworking spaces to provide a vibrant environment for students to collaborate and build their businesses.

Opportunity Exploitation: Encourage universities to offer classes on developing entrepreneurial skills and knowledge.

Opportunity Exploitation: Develop internship programs to connect students to established entrepreneurs and allow them to gain hands-on experience, not just theoretical education.

Opportunity Exploitation: Promote entrepreneurship integration into higher education institutions' curricula to allow students to explore entrepreneurial ideas.

Opportunity Exploitation: Develop Joint Curriculum: Develop a joint curriculum between education and entrepreneurship stakeholders to ensure that learners can **learn the skills and knowledge** they need to become influential entrepreneurs.

Opportunity Exploitation: Facilitate Collaborative Research: Facilitate collaborative research between education and entrepreneurship stakeholders to identify further innovation and value creation opportunities; also, it is an opportunity for educational institutes to get up to speed with market trends and demands.

Opportunity Exploitation: Recognise the achievements of entrepreneurs and educators through awards, scholarships, and other incentives to encourage collaboration and value creation further.

In conclusion, Co-Creation between Education and entrepreneurship is essential in driving value for both parties, Education institutions, and future or current Entrepreneurs.

Education institutions can help foster innovation and risk-taking in their student's **Opportunity Preparation / Creation**. At the same time, entrepreneurs can bring their experience and expertise to help develop innovative ideas and solutions and **exploit opportunities**.

By succeeding together, both parties can benefit from each other's knowledge and experience, creating more value for society. However, it is also critical to consider that co-creation requires an **Ongoing Commitment** from both sides and that the relationship should be mutually beneficial. Nevertheless, with the right mindset and dedication, co-creation between education and entrepreneurship ecosystem components can be a powerful tool for driving value.

Results and Discussions

Let us recap. The study's pivotal question is, "*What is the impact of education on entrepreneurship?*". Our primary focus is to identify a baseline and share lessons learned from countries' initiatives that have established and developed solid entrepreneurial studies and Innovation in Primary, Intermediate, and Higher Education Institutes as benchmarks for Egyptian education institutes to apply and be guided by such initiatives in developing a better learning ecosystem in Egypt.

Research has found that education is an effective mechanism for creating value for entrepreneurship. **Education gives entrepreneurs the knowledge and skills to understand business complexities** and identify and create innovative solutions; several case studies were utilised as references.

It is a fact that education contributes to increased entrepreneurial activity by providing individuals with knowledge, such as business management and financial literacy.

Education and professional training programs can also help people develop the confidence to take risks and launch a business. As a result, levels of education can lead to more innovative ideas and higher-value businesses subject to the readiness of the individuals.

Well-structured specialised educational programs developed in several countries help entrepreneurs remain ahead of the competition and build successful businesses by providing the tools necessary for digital innovation. In addition, learning also fosters creativity, which is essential for entrepreneurs to produce new products and services that are successfully marketed.

In summation, a common factor among all pioneering countries in such development is the unobstructed vision and understanding of entrepreneurial learning in the context of entrepreneurship studies as a vital component in the Entrepreneurial Ecosystem.

Studies have shown that entrepreneurship education and training positively impact entrepreneurship intentions because they allow entrepreneurs to develop the skills and knowledge necessary to solve complex problems and create new business opportunities. The studies further suggest that courses, programs, and competitions organised in schools promote the acquisition of strategies that encourage self-employed rather than focusing only on jobs that might not exist. Does College Education Promote Entrepreneurship in China? (Zhou et al., 2021)

Educated entrepreneurs are likelier to recognise and capitalise on emerging markets, trends, and technologies. Furthermore, education can give entrepreneurs the critical

thinking and problem-solving skills necessary for success. In addition, higher-education entrepreneurs are more likely to have access to resources and connections that can help them succeed. Finally, education can help entrepreneurs develop strong core values and ethics for long-term success.

The Conceptual Framework is introduced as a baseline to Develop a Value Co-Creation system for entrepreneurship education targeting the Egyptian market specifically.

Second, Recommendations to enhance relationships among business professionals and academic staff by utilising communication and collaboration tools. Email, video conferencing, instant messaging, and other online collaboration tools facilitate communication and collaboration between business professionals and academic staff—Utilise networking opportunities. Take advantage of networking opportunities such as conferences, seminars, and other events to build relationships and foster collaboration between business professionals and academic staff.

They establish clear guidelines and expectations. Establish clear guidelines and expectations for how business professionals and academic staff interact and collaborate. Promote mutual respect, respecting the knowledge and experience of the business professionals and academic staff and ensuring that each other respects and values them.

Foster a culture of collaboration. Encourage business professionals and academic staff to collaborate, share ideas, and achieve common goals and encourage open dialogue between business professionals and academic staff to foster cooperation and collaboration.

Moreover, provide ongoing feedback. To ensure productive and effective interactions and collaboration, provide ongoing feedback to business professionals and academic staff.

Conclusion

In conclusion, the impact of digitally transformed active learning and well-designed educational programs on entrepreneurship can be defined by assessing the degree to which educational or learning experiences and knowledge acquisition contribute to the development, success, and sustainability of entrepreneurial ventures, measured through indicators such as business growth, innovation, and economic outcomes. Thus, the absence of structured programs provided by the educational institutes in Egypt compared to existing initiatives elaborated in the research from several countries would impact the design of the running entrepreneurial education programs due to various initiatives and reviewed case studies.

Education institutes in Egypt should develop a Value Co-Creation system for promoting entrepreneurship education by encouraging teachers to experiment and fail, creating a safe environment for educators to explore and experiment with digital tools and technologies. Allow for mistakes to be made and celebrate successes. Secondly, increase access to technology, such as providing access to equipment, such as tablets and laptops, for students and staff. Technology as an enabler will encourage exploration and reduce the digital divide. Thirdly, digital transformation learning projects in-

Introduce digital projects into the curriculum that encourage students to think creatively, develop innovative solutions to real-world problems, and promote collaboration between students, teachers, and community organisations to foster a culture of innovation.

Developing digital citizenship would Teach students to be responsible and use technology safely and ethically. Another significant matter is to utilise online resources and research by encouraging online educational resources and tools to help bring entrepreneurship and innovation into the classroom.

Recognition and awards: Recognise the successes of students and teachers embracing digital culture in education. Finally, support online Learning: Support online learning opportunities such as webinars to help students learn new skills and gain valuable experience.

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