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Type of the Paper: Original scientific paper

Received: 10.07.2023.

Accepted: 20.07.2023.

DOI: <https://doi.org/10.69899/edtech-en-230302048k>

UDK: 378.147:004.4

378.014.3

Reenvisioning Higher Education for Innovation and Entrepreneurship: The SMART4FUTURE Initiative

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Abstract

The SMART4FUTURE project aims to redefine the role of higher education in promoting innovation and entrepreneurship. Its primary objective is to facilitate the integration of cutting-edge technology and entrepreneurial expertise among students and faculty in educational institutions. The project seeks to achieve sustainable outcomes by enhancing organisational processes and establishing an innovation ecosystem to facilitate the transformation of ideas. The focus is on fostering collaborative networks, enhancing skill development, and sharing knowledge and best practices widely. This effort establishes a novel model for educational institutions as catalysts for societal and technical growth.

The article offers a wise and progressive perspective on higher education. It fulfils an essential requirement in the current dynamic technological environment: incorporating intelligent technology and entrepreneurial mindset into educational institutions.

Keywords: Innovation ecosystem, education focused on entrepreneurship, advanced technology integration, higher education transformation, spreading knowledge.

Introduction

SMART4FUTURE represents a revolutionary approach to higher education, positioning academic institutions as central hubs of technologically enhanced innovation ecosystems. This article presents a detailed plan to encourage an entrepreneurial mindset and effective use of advanced technologies among students, instructors, and non-academic staff. The core of this effort revolves around creating captivating educational material, practical training, and mentorship programmes, all supported by cutting-edge digital technologies [1].

The primary goal of SMART4FUTURE is to improve organisational procedures that support and maintain innovation and entrepreneurial education. This is accomplished by cultivating cooperative networks and alliances to tackle social problems and establishing a robust and dynamic innovation ecosystem. The research also aims to modify the requisite conditions for converting ideas into sustainable ecosystems.

Moreover, the project focuses on disseminating knowledge and cultivating essential skills for entrepreneurship and innovation. This involves academic and non-academic individuals, such as students, assuring a broad and far-reaching influence. SMART4FUTURE also places great importance on promoting knowledge sharing, exchanging experiences, and disseminating best practices. The initiative prioritises widely distributing its findings and results to enhance its influence and scope.

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SMART4FUTURE offers a framework for educational institutions to serve as drivers of innovation and entrepreneurship. This paradigm fosters and supports individual talents and ideas, substantially contributing to societal and technological progress. The project's comprehensive approach holds the potential to fundamentally transform the higher education sector, bringing it closer to the needs and possibilities of the 21st century.

The article focuses on the SMART4FUTURE project, which aims to transform higher education institutions into hubs of innovation and entrepreneurship. This project is notable for its holistic approach, encompassing improving organisational procedures to facilitate innovation, establishing collaborative networks to tackle societal concerns, and cultivating an atmosphere that promotes the practical realisation of ideas into ventures.

An essential element of the paper is its emphasis on students and academic and non-academic personnel, acknowledging the significance of a comprehensive approach to education and innovation. The focus on cultivating practical skills and facilitating knowledge transfer is especially pertinent in equipping individuals for the requirements of the contemporary labour market.

Furthermore, the article emphasises the significance of sharing knowledge and spreading the most effective methods, emphasising the project's dedication to reaching a wide range of people. This method shows a comprehension of the interrelatedness of contemporary global issues and the significance of education in tackling them.

The article convincingly argues that the SMART4FUTURE initiative is an exemplary paradigm for revolutionising higher education into a flexible and adaptable force that can propel societal and technological advancements.

Method

The SMART4FUTURE initiative emphasises the significance of including the knowledge triangle (consisting of the academic community, industry, and innovation) and adopting a multidisciplinary approach to foster the development of sustainable technologies. Higher education institutions (HEIs) are crucial in bridging the gap between theoretical knowledge and practical application. The project enhances local and regional development, fostering competitiveness worldwide.

Co-design, which involves the interaction of the academic community, industry, and innovation, is crucial in determining the future of higher education institutions. This paradigm fosters the integration of many disciplines, the ability to adjust to new circumstances, and active involvement with the community, all of which are crucial in addressing current problems. Higher education institutions (HEIs), serving as catalysts for knowledge and innovation, play a pivotal role in collaborative design, serving as the basis for research, talent cultivation, and knowledge dissemination. The objectives of co-design within higher education institutions encompass the augmentation of innovation capabilities, the reinforcement of economic competitiveness, and the cultivation of contemporary yet socially conscientious solutions. By engaging in co-design, higher education institutions have the potential to foster the development of sustainable technologies that effectively address both local and global concerns.

This article uses a thorough review process, specifically examining the theoretical aspects of the domains identified in the SMART4FUTURE model, as illustrated in Figure 1. As a review study, it consolidates current literature, case studies, and empirical evidence to comprehensively comprehend how higher education institutions might proficiently incorporate innovation and entrepreneurial education into their frameworks. The process entails rigorous analysis of scholarly articles, information from educational institutions, and data from pertinent technical and entrepreneurial efforts.

This review approach thoroughly analyses the fundamental components and processes for promoting an innovation ecosystem in academic contexts. The text explores the functions of integrating innovative technology, improving organisational processes, fostering collaborative networks, and implementing skill development initiatives. The model provides a comprehensive perspective by incorporating theoretical viewpoints from multiple academic disciplines such as education, technology, entrepreneurship, and organisational studies.

The process additionally encompasses a comprehensive examination of Figure 1, which is a conceptual diagram illustrating the interrelationships and dynamics inside the SMART4FUTURE framework. This analysis not only identifies the individual components of the model but also clarifies the interdependent links between them. The study seeks to develop a clear and structured understanding of the project's goal and its practical implications for higher education by offering a theoretical overview of the areas depicted in Figure 1.

Problem statement: This work aims to resolve the absence of integration among innovative technology, creative practices, and entrepreneurial education in higher education institutions (HEIs). Although these factors are increasingly significant in the global economy, higher education institutions (HEIs) frequently face challenges in integrating them efficiently into their educational programmes and organisational structures.

Objective: This research aims to investigate and elucidate how the SMART4FUTURE project may convert higher education institutions (HEIs) into vibrant centres of innovation and entrepreneurship. This entails analysing the incorporation of intelligent technology and entrepreneurial methods into higher education institutions (HEIs) and how they might effectively contribute to developing sustainable innovation ecosystems.

Importance: This study carries considerable significance in contemporary higher education. In light of the growing importance placed on innovation and entrepreneurship worldwide, higher education institutions (HEIs) must adjust their

approaches to align with these changing requirements. This study presents a structure for higher education institutions (HEIs) to adapt and effectively address societal and technological progress, improving their significance and influence in the 21st century. Additionally, it provides valuable information about the capacity of higher education institutions (HEIs) to stimulate economic development and societal advancement through creative and entrepreneurial initiatives.

Research strategy: This research essentially adopts a qualitative and conceptual approach, which involves thorough literature evaluation. This technique is appropriate for examining theoretical frameworks and models and combining different academic viewpoints on innovation and entrepreneurship in higher education.

Data collection: The data for this study is obtained by conducting a comprehensive examination of current literature, which includes scholarly papers, reports, case studies, and empirical findings that are pertinent to innovation, innovative technology, and entrepreneurial education in higher education institutions (HEIs). This entails procuring information from scholarly journals, books, and reputable web sources.

Data analysis: The process entails carefully combining the gathered literature to uncover significant themes, patterns, and insights. The study synthesises theoretical frameworks from several academic disciplines, including education, technology, entrepreneurship, and organisational studies, to fully understand the SMART4FUTURE concept. It also encompasses a comprehensive examination of Figure 1, which depicts the amalgamation of higher education institutions (HEIs) inside the knowledge triangle of education, research, and innovation. This analysis aims to clarify the relationships and dynamics within the SMART4FUTURE framework and its practical consequences for higher education.

The review paper methodology facilitates a comprehensive and multifaceted examination of the SMART4FUTURE project, providing valuable perspectives and guiding principles for academic institutions aiming to innovate and adjust in a constantly changing educational environment.

This study uses a comprehensive literature review strategy to provide a theoretical overview of the domains outlined in the SMART4FUTURE model, as depicted in Figure 1. The methodology thoroughly analyses academic publications, reports, case studies, and empirical data about integrating innovation, innovative technology, and entrepreneurial education in higher education institutions (HEIs).

The report rigorously examines and combines material from multiple sources to construct a cohesive comprehension of how higher education institutions (HEIs) might be converted into centres of innovation. The assessment encompasses various aspects of the SMART4FUTURE project, such as establishing organisational procedures that facilitate innovation, forming innovation ecosystems through collaborative networks, and converting ideas into prosperous and sustainable ecosystems.

Theoretical components of these fields are emphasised, using established theories and models in education, technology, entrepreneurship, and organisational development. Examining Figure 1 is crucial to this approach since it offers a graphical depiction of the interrelated elements of the SMART4FUTURE model. This diagram provides a theoretical structure for analysing the functions and interconnections of various components within the innovation ecosystem.

This review technique facilitates a thorough examination of the unique aspects of the SMART4FUTURE project and situates these aspects within a more comprehensive theoretical and practical framework. The objective is to contribute value to the scholarly conversation surrounding innovation and entrepreneurship in higher education. This will involve providing valuable perspectives and potential strategies for higher education institutions to address the problems of the 21st century effectively.

Results

The data for this study is gathered by conducting a comprehensive literature review encompassing scholarly papers, reports, case studies, and empirical findings pertinent to innovation, innovative technology, and entrepreneurial education in higher education institutions (HEIs). This entails procuring information from scholarly publications, books, and reputable online open resources.

HE Innovate is designed and executed as a tool inside the innovation ecosystem of higher education institutions (HEIs) to aid in evaluating their entrepreneurial and creative practices. It is a proactive instrument for incorporating enterprise expertise into the education system.

Furthermore, it facilitates collaboration among businesses, society, and higher education institutions (HEIs) to promote the exchange of knowledge among esteemed partners [5],[6]. Innovation and entrepreneurship are widely seen as the fundamental drivers for enhancing globalisation and technological advancements [9]. Entrepreneurship is currently the most significant field of study in European higher education institutions (HEIs) due to its focus on developing skills and sharing knowledge [10].

Regarding entrepreneurship education at higher educational institutions, the findings emphasise the beneficial impact of such education in encouraging students to start their businesses and engage in practical entrepreneurial activities [3]. Students perceive entrepreneurship as a viable choice for entering the job market. There is a positive correlation between the level of preparedness and the likelihood of individuals becoming entrepreneurs [7]. European higher education institutions (HEIs) strengthen the skills of students who aspire to promote their entrepreneurial mentality [8].

The inclusion of smart technology has a positive impact on instructors' attitudes towards entrepreneurship instruction [4]. The notion of higher education institutions (HEIs) within the knowledge triangle, as elucidated by Cervantes in "Higher Education Institutions in the Knowledge Triangle" (2018), is a component of a wider discourse on innovation and the entrepreneurial university found in the book "Innovation and the Entrepreneurial University" edited by Meissner, Erdil, and Chataway. This notion is fundamental in the field of Science, Technology, and Innovation Studies.

The concept of the knowledge triangle entails the seamless integration of education, research, and innovation, which are fundamental and indispensable activities carried out by higher education institutions (HEIs). This concept emphasises the importance of universities not only as hubs of education and research but also as proactive contributors to advancing innovation. The objective is to establish a mutually beneficial link among these three aspects of the triangle, thereby amplifying the total influence of higher education institutions (HEIs) on both society and the economy [2].

Education: This aspect of the triangle highlights the role of higher education institutions (HEIs) in providing knowledge and skills. The focus is not solely on conventional instruction, but also on fostering students' abilities in critical thinking, creativity, and entrepreneurship. This programme equips graduates with the necessary skills to not only enter the workforce but also make unique contributions to it.

Research: Universities have traditionally been known for their significant focus on research. Within the framework of the knowledge triangle, research encompasses not only academic endeavours but also joint initiatives involving industry and government. The emphasis lies on conducting applied research that may be effectively transformed into practical solutions and improvements, hence closing the divide between theoretical concepts and real-world applications.

Innovation: This section focuses on the use of knowledge and research findings to generate novel products, services, or procedures. It entails higher education institutions (HEIs) actively collaborating with the industry and other sectors to stimulate economic expansion and societal progress. In addition, innovation cultivates an environment of entrepreneurialism within the university, motivating students and staff to conceive and actualise their inventive concepts.

The integration of education, research, and innovation fosters a dynamic environment that facilitates the creation, dissemination, and successful application of knowledge. Higher education institutions (HEIs) evolve beyond their teaching role and emerge as dynamic centres of knowledge and innovation, making substantial contributions to both regional and national economies.

Cervantes' work emphasises the necessity for higher education institutions (HEIs) to transform and adjust to this threefold function. This entails the reorganisation of educational programmes, cultivating collaborations with business and government, and encouraging an innovative mindset among the academic community. The knowledge triangle model offers a structured approach to comprehending and executing these modifications, ultimately resulting in universities that are more entrepreneurial and inventive.

Discussion

The SMART4FUTURE initiative presents an innovative plan to convert higher education into a potent catalyst for innovation and entrepreneurship. This project positions academic institutions at the forefront of tackling current societal concerns by incorporating intelligent technologies and cultivating entrepreneurial mindsets. The project's focus on collaborative networks, information transfer, and skill development is crucial in establishing a sustainable innovation ecosystem. The all-encompassing strategy of SMART4FUTURE, which includes students, academics, and non-academics, guarantees a broad and significant influence, equipping a new generation to excel in a digitally sophisticated society.

The success of this initiative hinges on its capacity to adjust educational methodologies to meet the changing requirements of the 21st century, transforming higher education institutions into not just places of knowledge acquisition but also centres of practical innovation and entrepreneurship. The widespread distribution of knowledge and optimal methods enhances the influence of SMART4FUTURE, establishing a model for future endeavours in educational restructuring.

The SMART4FUTURE initiative delivers a visionary perspective that redefines the societal function of higher education. The successful application of this might greatly alter the role of academic institutions in technical developments and societal growth, establishing them as essential collaborators in driving global progress.

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Acknowledgements

This research has been greatly enabled by the support and funding provided by the EIT HEI Initiative: Innovation Capacity Building for Higher Education through project "SMART4FUTURE" (Smart Innovation for a Sustainable Future), ID 1029. This initiative is pivotal in guiding higher education institutions through the intricate landscape of technological advancement. Our heartfelt thanks go to the coordinator, Algebra University College, Zagreb, Croatia; and consortium members, including Sabancı University, Istanbul, Turkey; University of Naples "Federico II", Italy; MentorTec – Serviços de Apoio a Projetos Tecnológicos, S.A., Matosinhos, Matosinhos, Portugal; LINKgroup, Serbia; Griffith College (trading as Bellerophon Ltd), Ireland; Medical University of Lublin, Poland; and Infobip d.o.o., Croatia, for their invaluable contributions.



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