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AN INNOVATIVE MODEL FOR HIGHER EDUCATION

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Abstract

As the landscape of education evolves in the 21st century, there is a pressing need for innovative models that can adapt to the dynamic demands of a rapidly changing world. This abstract introduces a model for higher education, designed to foster an enriched learning experience within university settings. The model combines interdisciplinary real-world elements with critical thinking and problem-solving skills. Furthermore, the model advocates for a flexible curriculum that adapts to the evolving needs of industries and society. By forging partnerships with industry leaders, the university can offer students opportunities for experiential learning, internships, and research projects that bridge the gap between academia and the professional world. The aim of the presented model was to suggest to the faculty a methodology for selecting courses so that the study programme contains subjects that will improve the graduate's position on the labour market. Preliminary assessments of the model on selected faculty (Faculty of Chemical and Food technology in Bratislava) reveal positive outcomes, including increased student engagement, improved academic performance, and enhanced readiness for the workforce. The innovative model for higher education presented in this abstract serve as a blueprint for universities seeking to innovate their educational approaches, ensuring graduates are equipped with the skills and knowledge needed to thrive in an ever-changing global landscape.

Keywords: *Education, innovation, study program, model for education, critical thinking.*

1. Introduction

Developing innovative models for higher education is essential for addressing the needs of the national economy and guaranteeing the prosperity and competitiveness of higher education institutions (Jakovljevic, 2018). For the establishment of a superior lifelong learning system, it is imperative to integrate higher education, science, and business (Andreev, 2023). The implementation and administration of novel educational methodologies are crucial in enhancing the standard of education and the competitiveness of higher education establishments (Kuchynska et al., 2022). Major catalysts for innovation in higher education institutions include knowledge management, technological advancements, competitive advantage, and globalization (Mazorodze & Mkhize, 2022). The literature examines institutional innovation and several innovation models in higher education, highlighting the significance of fostering an inventive environment that advances the field of higher education and science (Romanovskyi et al., 2020). The text emphasizes the importance of socio-philosophical analysis, research paradigms of innovation development, and the mechanism of innovative climate construction in fostering the inventive development of higher educational institutions (Klimova, 2019).

Moreover, higher education systems, such as universities and public research laboratories, have a significant impact on interactive innovation processes. They both influence and are influenced by technological innovation and the innovative activities of companies (Lanciano-Morandat et al., 2006). Innovative concepts, especially in the context of globalization and internationalization of higher education, have impacted the organizational, content, and technical components of the educational process in higher education institutions (Kalimullin, 2017). The adoption of an interdisciplinary approach is acknowledged as offering novel prospects for organizing and enhancing efficacy in the realm of engineering education against the backdrop of digital change (Миронова, 2022).

Ultimately, the literature underscores the importance of establishing suitable business models and frameworks to foster innovation in higher education institutions. This involves integrating higher education, science, and business, as well as effectively implementing and overseeing innovative educational practices. Furthermore, this text emphasizes the factors that drive innovation in higher education, the involvement of higher education systems in interactive innovation processes, and the significance of creating an inventive environment that will advance the field of higher education and science.

2. Results

Figure 1 illustrates the general model of education. The model was developed according to the PDCA Deming cycle. The process has a series of 8 sequential steps. An initial phase involves doing an assessment of the current condition of higher education. This step examines the existing data on higher education institutions, specifically focusing on the patterns in the quantity and composition of graduates, financial support, legislative and legal prerequisites for study programs and subjects taught, and the quantity, composition, and ranking of higher education institutions in the area.

The second step is labor market analysis. The requirements of practical experience should serve as the fundamental cornerstone upon which study programs are built. The primary objective of higher education institutions is to provide graduates with the necessary skills and knowledge to succeed in the job market. Therefore, it is essential for individual topics to consider the specific requirements of employers. This task can be achieved by market analysis, employer surveys, or research undertaken by specialist institutions that specifically concentrate on the labor market or employment supply.

Next, it is necessary to examine the specifications of the National Qualifications System (NQS) and the National System of Occupations (NSO). These registers, which are accessible to the public, serve the purpose of delineating the knowledge, skills, and competency prerequisites necessary for carrying out particular occupations. They consider not just technical talents but also interpersonal skills. Through the analysis of these registries, we can have a comprehensive understanding of both present and future demands.

The fourth step centers on acquiring information regarding students' knowledge, requirements, and challenges. This model presupposes the participation of students in intermediate years, senior years, and postgraduates. Based on this analysis, we have a perspective from the students' point of view.

After acquiring information from previous steps, a direct comparison is made with the subjects that are actually taught. Through an examination of the courses and their syllabuses, we can gain insight into how well the requirements from the previous steps are met. We analyze vulnerabilities and capabilities, provide prospects for enhancement, and pinpoint areas of deficiency. Within this section, we analyze the outcomes derived from consultations conducted with teachers and course supervisors.

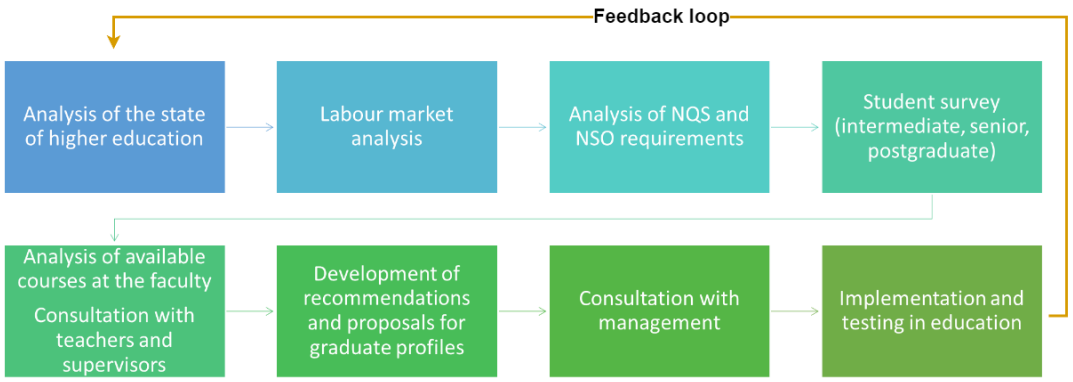
The sixth stage is formulating recommendations and developing a graduate profile. Based on the preceding assessments, we may develop a profile of graduate that integrates the demands of professional practice, national registries, students, and the existing capacities of the educational institution. Simultaneously, during this stage, criteria for incorporating or enhancing courses are established to ensure the comprehensive development of the graduate's profile by addressing any areas that may be lacking. The guidelines have already been revised to include feedback from teachers and course supervisors.

The second-to-last step involves presenting the graduate profile that has been developed to the faculty management and the relevant staff of the educational institution. Obtaining the endorsement and consent of the management is an essential prerequisite for implementing the required modifications and adaptations.

The final stage involves incorporating the outcomes into the educational process. Depending on the magnitude of the required alterations, this phase can either be a singular step or be subdivided over multiple intervals.

Once implemented in the teaching process, a feedback loop is established to verify that the introduced modifications and the updated curriculum align with the specified criteria. Periodically, the initial 4 stages undergo re-evaluation and, if needed, the graduate profile, courses, and curriculum are revised.

Figure 1. The general model of education.



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3. Conclusion

The proposed innovative education model offers a comprehensive strategy for institutions to update their curricula in order to align with the current demands of the job market, students, and legal regulations. The model is universally applicable across several educational domains and can be easily customized to suit the unique attributes and needs of any educational establishment. The specific details and arrangements of each step must be determined and modified throughout the initial phase of implementation to align with the intended goal.

First and foremost, this model will undergo testing and then be utilized to provide a comprehensive profile of a technical student, incorporating economic factors, for all aspects of the Slovak University of Technology. Consequently, the graduate will acquire soft skills that align with the labor market demands, making them more attractive to potential employers. This will serve as the primary result of the project under which the paper is processed.

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