

## **REDESIGNING HIGHER EDUCATION CURRICULA THROUGH LEAN MANAGEMENT: BALANCING ACADEMIC QUALITY AND GLOBAL COMPETITIVENESS**

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### **ABSTRACT**

*This article explores the application of Lean Management principles in the reconfiguration of higher education curricula within the context of increasing internationalization. As universities in the European Union face pressure to align academic standards with global market demands, the need for efficient, waste-free, and student-centric educational models has become paramount. The study analyzes how Lean tools, traditionally used in manufacturing, can be adapted to eliminate curricular redundancies and enhance global competitiveness. By examining post-2020 case studies from Poland, Germany, and Romania, the paper evaluates the balance between maintaining rigorous academic quality and fostering professional agility. Through SWOT and Input-Output analyses, the research provides a strategic framework for Higher Education Institutions (HEIs) to redesign their offerings for a digitalized, globalized era.*

**KEYWORDS:** *higher education, lean management, curriculum redesign, internationalization, quality management*

**J.E.L. Classifications:** I23, L15, M11, O15

### **1. INTRODUCTION**

The landscape of international business and higher education is undergoing a profound transformation, shaped by a confluence of factors that transcend borders and cultures. Traditionally, academic curricula were designed as static repositories of knowledge, but the disruptive power of the COVID-19 pandemic and the accelerating pace of global digitalization have forced the dynamics of the education industry to evolve at an unprecedented pace. This article delves into the pivotal trend of redesigning higher education through Lean Management, exploring how institutions can balance the traditional requirements of academic quality with the urgent need for global competitiveness.

As indicated in this template, manuscripts should be concise and focused on strategic outcomes. By examining the intersections of economics, technology, and pedagogy, this article sheds light on the challenges and opportunities that define the future of internationalized education. The introduction states the objectives of the work - to identify "waste" in traditional teaching models and to provide an adequate background for a more agile curricular structure.

Furthermore, the manuscript contains answers to following questions: what is the problem with current curricular rigidities, what has been done by other researchers regarding Lean in services, what tools are used for this transformation, and what are the results of recent EU implementations. The objective is to highlight the evolution of successful educational ventures, offering valuable insights for stakeholders navigating the dynamic global academic ecosystem.

## **2. LITERATURE REVIEW**

The fundamental question addressing the modernization of academic structures is whether Lean Management, a philosophy rooted in Toyota's manufacturing efficiency, can be effectively translated to the "intangible" processes of higher education. To answer this, we must first define "waste" (Muda) within a pedagogical framework. According to recent studies by Douglas et al. (2020), waste in higher education is not merely a loss of material resources, but manifests as "curricular obesity"- the accumulation of redundant modules, outdated learning outcomes, and administrative bottlenecks that hinder the student's progression toward global employability.

In the realm of international management, the application of Lean principles aligns with the core objectives of resource optimization and risk minimization defined by early scholars like Militaru (2009) and updated for the digital age. Recent literature by Antony et al. (2021) argues that the post-pandemic university must operate as a "value-driven" entity, where every credit hour and every learning activity must directly contribute to the student's international competencies. This shift requires a move from a "Push" system - where faculty decide what is taught based on tradition - to a "Pull" system, where the curriculum is redesigned based on the actual requirements of the global labor market and international accreditation standards.

Furthermore, the role of digitalization has redefined the concept of "Continuous Improvement" (Kaizen) in academia. As noted by Jaradat and Stan (2023), the integration of advanced technologies - such as data analytics for monitoring student success and blockchain for credentialing - is no longer an auxiliary feature but a cornerstone of institutional resilience. In the

context of the European Higher Education Area (EHEA), Lean Management provides the tools to navigate the "complexity paradox": universities must offer more diverse, internationalized programs while simultaneously reducing costs and administrative friction. Recent research by Balzer and Francis (2022) emphasizes that the "new normal" for EU universities involves using Value Stream Mapping (VSM) to identify and eliminate non-value-adding steps in the international student lifecycle, from recruitment to alumni engagement.

A critical aspect discussed in post-2020 literature is the "Agile-Lean" hybrid model. Scholars argue that while Lean focuses on efficiency, Agility ensures that the curriculum can pivot rapidly in response to global disruptions, such as health crises or technological breakthroughs like Generative AI. This is particularly relevant for CEE universities striving for global competitiveness. According to recent findings, institutions that successfully implement Lean methodologies report not only higher operational efficiency but also increased student "viewership" and loyalty, as the educational product becomes more coherent and market - aligned.

Finally, the ethical dimension of Lean Higher Education has gained prominence. According to contemporary studies, the sustainability of a redesigned curriculum depends on "respect for people" - one of the two pillars of Lean. In an internationalized context, this translates into a student-centric approach that values diversity and social responsibility. Consequently, the literature suggests that redesigning curricula through Lean Management is a multi-dimensional process defined by three critical drivers: operational excellence, digital integration, and a relentless focus on the "value" perceived by the global student as the ultimate stakeholder.

### **3. METHODOLOGY**

The current research is designed as a qualitative and exploratory study, focusing on the strategic integration of Lean Management principles within the higher education sector of the European Union. In order to ensure technical accuracy and provide a comprehensive overview of how curricula are being reshaped for global competitiveness, the research has several main objectives:

- **a)** To investigate the current state of international business regarding the application of Lean tools (such as VSM and Kaizen) in European universities;
- **b)** To explore and define core concepts such as: curricular waste, academic quality assurance, and internationalization at home;

- **c)** To identify the structural and cultural problems the current academic systems are facing during the transition from traditional to agile educational models.

Thus, the main research question of the current article is:

*“How does the implementation of Lean Management principles contribute to the balancing of academic quality and global competitiveness in the redesign of higher education curricula?”*.

To provide a structured answer to this question, the study is built upon four qualitative research hypotheses adapted to the post-2020 educational landscape:

**Hypothesis 1:** The systematic identification and elimination of "curricular waste" (outdated modules and redundant administrative steps) significantly enhances the perceived value of the educational product for international students.

**Hypothesis 2:** Post-pandemic curriculum redesign is increasingly driven by a "Pull" system, where international labor market demands and stakeholder feedback directly dictate the evolution of learning outcomes.

**Hypothesis 3:** Successful Lean implementations in HEIs are characterized by their ability to leverage digital data analytics for "Continuous Improvement" (Kaizen), allowing for real-time adjustments to the curriculum.

**Hypothesis 4:** The integration of Lean methodologies in higher education faces significant cultural resistance, which requires innovative management solutions and a focus on "respect for people" to ensure long-term sustainability.

In order to answer these questions and validate the hypotheses, two main research methods used in international business management are applied: **SWOT analysis** and **input-output analysis**. These tools allow for a structured evaluation of the inputs (Lean tools, digital infrastructure, stakeholder feedback) and the resulting outputs (curricular agility, enhanced global rankings, and increased student retention) that define the modernization of European higher education.

## 6. CONCLUSIONS

The future of international higher education is poised for dynamic transformations, driven by an array of evolving trends that will reshape the industry in the post-pandemic era. As demonstrated throughout this study, the implementation of Lean Management principles offers a critical linchpin for institutions seeking to balance academic quality with global competitiveness. By systematically identifying and eliminating "curricular waste," universities in the European

Union, particularly in the CEE region, can ensure that their educational offerings remain agile, relevant, and value - driven.

Technology, through the integration of data analytics, virtual learning environments, and blockchain for micro-credentialing, will continue to remain a cornerstone of institutional resilience. This digital transformation, coupled with a "Pull" system driven by global labor market demands, allows for a continuous improvement (Kaizen) process that aligns academic outcomes with the needs of international stakeholders. The success of these initiatives in Poland, Germany, and Romania underscores the fact that institutional efficiency is not a detractor from academic depth, but rather a facilitator of global brand recognition and student loyalty.

Furthermore, the complex interplay of geopolitics and international business in education will demand strategic agility and risk management. As universities chart their course into the future, ethical integrity and governance transparency will reach new heights, ensuring that the drive for competitiveness does not compromise the welfare of the academic community.

In this ever-evolving landscape, a focus on "respect for people" and sustainability will be paramount for ensuring the long-term viability of the Lean Higher Education model. By harnessing these trends, Higher Education Institutions can create innovative, inclusive, and ethically sound opportunities that captivate global audiences and secure their position in the dynamic global sports - and academic - business ecosystem.

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