Management of a Technical University in the Context of Preparing Students for the 21st Century Careers in Science and Technology

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Abstract

Today, the delivery of educational services is accomplished in a diversity of ways due to the rules dictated by the ever-evolving global environment. As the global environment has changed drastically over the last decades and has become more uncertain, the prevailing management approaches do not seem to be well-suited for contemporary universities. Both public and private universities are now pressed to perform their traditional functions more efficiently. The expectations of students have also changed, which makes higher education institutions become more flexible for meeting the needs of new student populations. Thus, senior managers of a contemporary technical university have to re-examine their strategies aimed at achieving academic and research excellence, which requires flexible and responsive forms of management that are more inclusive of academic and research aspects in the decision-making process. This paper considers the implications for managers and academics, as key stakeholders of a higher education institution, in the highly globalized modern environment. The paper explores a few central issues faced by the management of a technical university in the framework of developing a competitive strategy with due account for the needs of new student populations, as well as employers and policy-makers.

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1. Introduction

Since the international environment has changed radically over the last decades and has become more uncertain, the prevailing management approaches do not seem to be well-matched for modern universities. Both public and private higher education institutions (HEIs) are now pressed to perform their traditional functions (such as teaching and research) more efficiently in an increasingly globalized environment characterized by severe competition (COM(2003) 58 final). The expectations of students have changed to a large extent, which makes universities become more flexible for meeting the anticipations of new student populations. Employers and policy-makers call for developing the 21st century skills such as critical and creative thinking, problem-solving and team-work skills, using technology for analysing and synthesizing information for application in the knowledge-based economy.

European HEIs must take the lead in preparing their graduates for the changing needs of the international labour market. From a managerial standpoint, higher education institutions must find the most capable methods to balance their position in the international education market in terms of internal strengths and weaknesses against external threats and opportunities. Universities have to compete for attracting students, staff and research funds in the agenda of the cross-border higher education. Senior managers of a contemporary technical university have to re-examine their educational strategies aimed at achieving academic and research excellence, which requires flexible and responsive forms of management that are more inclusive of academic and research aspects in the decision-making process.

This paper considers the implications for managers and academics, as key stakeholders of a higher education institution, in the highly globalized modern environment. The paper explores a few central issues faced by the management of a technical university in the framework of developing a competitive strategy with due account for the needs of new student populations, as well as employers and policy-makers.

1.1. The changing context of modern technical higher education

Experts admit that European higher education is “dynamic and evolving in a fast-changing context” (Higher Education in Europe 2009: Developments in the Bologna Process, 2009). Higher education in modern Europe is key to individual and social progress, as it provides the highly skilled human capital for supporting knowledge-based economies (COM(2013) 499 final). Education has become a strategic resource in the knowledge-driven society (Schleicher, 2003), technology, creativity and innovation being vital to economic growth and prosperity of any country. This demands affording citizens of the EU an opportunity to get access to first-quality higher education, and assisting students to succeed in their study programmes, which is vital for jobs and economic growth and their self-esteem (Standards and Guidelines for Quality Assurance in the European Higher Education Area, 2005; London Communiqué, 2007; The European Higher Education Area in 2012: Bologna Process Implementation Report, 2012; Report to the European Commission on Improving the Quality of Teaching and Learning in Europe’s Higher Education Institutions, 2013; Modernisation of Higher Education in Europe: Access, Retention and Employability, 2014).

Higher education is now rapidly evolving as the result of the accelerating pace of technological innovation in the knowledge-based economy. The results of the research conducted in 2008 by the Economist Intelligence Unit (The future of higher education: How technology will shape learning, 2008), in which 289 executives took part worldwide, have revealed the following tendencies in higher education:

- Higher education is responding to globalisation, and having an overseas presence will be the norm for the majority of universities over the coming years,
- Technology has had – and will continue to have – an important impact on higher education,
- Corporate-academic partnerships will form an increasing part of the university experience; for this purpose HEIs have to demonstrate a commitment to advanced technologies,
- Distance education is becoming increasingly global, universities are widely using advanced technologies to make education more accessible around the world,
- University respondents view technology as having a largely positive impact on their institutions.
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