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## Higher Education Institutions in the Era of Innovations

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**Abstract:** This paper examines innovative modes of higher education provision, as well as ways in which the management and governance of higher education are changing in support of innovations in higher education provision. At a time when more students than ever are attending higher education, its provision is becoming more fluid, global and competitive. Developments in new technologies mean that higher education institutions can make their courses available all over the world. These developments bring into question the traditional delivery model of higher education institutions, which tends to be confined to physical – and hence geographically defined – course offerings.

**Key words:** *Innovative Potential of Higher Education Institutions, Organizational Structures, Governance Models, Elements of Innovation, Relationship between Innovation and Governance and Management*

### INTRODUCTION

Due to previous engagement in international projects subsidised by European Commission University of Ss. Cyril and Methodius in Trnava was invited to the project GAIHE - Governance and Adaptation to Innovative Modes of Higher Education Provision, based on a uniform methodology in order to promote the exchange of best practices across higher education institutions (HEIs) in the European as well as global context.

The methodology was aligned with the other two streams of the GAIHE research, namely the literature review on innovation in education provision and the questionnaire survey outcomes that were focused on identification of innovation in education and its provision, on unveiling the major obstacles and motivating factors for innovation as well as on governance, management, and HR-related prerequisites for the raise of the innovative potential and competitiveness of European universities in the global arena.

Our report covers, in compliance with the European Commission template for public reports, the project's objectives, approach, outcomes and results,

partnerships, plans for the future and contribution to EU policies.

A majority of university leaders responding to a survey conducted as part of this project think that their higher education institution will require significant changes in the coming five years (68%, or 21 out of 32 respondents). Half of the respondents thought that the pace of change was too slow in their institution (51.6%, or 16 out of 32 respondents) (for the full report on the findings of our survey see Gibson et al. [1; p.41]).

This somewhat pessimistic view reflects the fact that higher education is changing worldwide, and that, as evidence shows, European institutions recognise the need to adapt (see Viliani et al. [2]). While innovation is not limited to technology enabled changes, technology is a significant facilitator of innovation in HEIs. New technologies, and more specifically Internet access, mean that learning material can be accessed and delivered from anywhere, anytime, and that it is no longer solely the remit of HEIs. A changing financial climate is also a driver for innovation in higher education.

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decreasing [3-4], have responded by expanding their distance learning programmes, allowing for the delivery of qualifications through franchises abroad. Moves to establish branches of world-renowned educational institutions in other countries, such as the creation of the Harvard Center in Shanghai or NYU in Abu Dhabi, have been widely publicised among the higher education community (see Viliani et al. [2] for further information on the pressures for change in higher education).

The innovations can both be affected by and can themselves affect the management and governance arrangements of HEIs, and thus pose several dilemmas (and offer opportunities) to higher education institutions. The way in which a HEI is governed can act as a facilitator or barrier to innovation; those leading and governing HEIs can, for example, respond or adapt to emerging innovations (for example, by creating a support unit). Or the governance and management of institutions can take measures to encourage the creation of new innovations (for example, through financial incentives).

## PROJECT OBJECTIVES

The project addresses several objectives:

In line with the Lifelong Learning Programme (LLP) Guide 2013 [5; p.4), the objectives of this project are the following:

**General objective.** Foster interchange, cooperation and mobility among education and training systems within the EU so that they become a world quality reference Specific objective. Encourage the best use of results, innovative products and processes and exchange in the fields covered by the Lifelong Learning Programme

These objectives are fulfilled by:

- Identifying and discussing promising practices relevant to innovation in higher education provision
- Analysing and discussing the drivers of and barriers to innovation and the ways through which the governance and management of HEIs support these innovations
- Issuing recommendations regarding the role of university governance and management
- Disseminating the results of the project to relevant stakeholders outside of our consortium

In doing so, the project fosters multilateral cooperation among HEIs in Europe, providing a platform for mutual learning and furthering the understanding of new modes of provision, including several HEI partnerships (e.g. in hubs or branch campuses).

We fulfill these objectives by answering the following key questions:

Q1: What are some of the promising modes of education provision across Europe?

Q2: How does the governance and management support these practices (or change to adapt to them)? What is the role of HEI governance and day-to-day management processes in establishing and regulating innovative modes of provision?

Q3: What are the main barriers and drivers for innovative education provisions?

Q4: Which recommendations can be issued regarding higher education institution management in innovative provision?

## DEFINITION OF TERMS

Defining innovation is largely a matter of perspective, context and time horizon.

The following elements of innovation are important to our project.

First, innovation is adopted to add value. In other words, an innovation would be introduced not only to 'do something different', but to 'do it better' [6].

Discussions surrounding the added-value aspect of innovation in the context of HEIs raise important questions regarding the beneficiary of this added value (for example, Does it provide added value for all HEI students or for only a subset of students, such as distance learners or under-represented learners?) and regarding the measure of this added-value (for example, in terms of better learning outcomes, better performance of HEIs on specific indicators, better societies).

Innovation can be of various types, including a process which brings together various novel ideas in a way that impacts society, a new product or service, a new technology or a new idea.

Including added value in our definition of innovation is important, because innovation may provisionally disrupt the traditional organisation, system and process of an institution (a process called 'disruptive innovations' [7].1 HEIs may mitigate the challenges

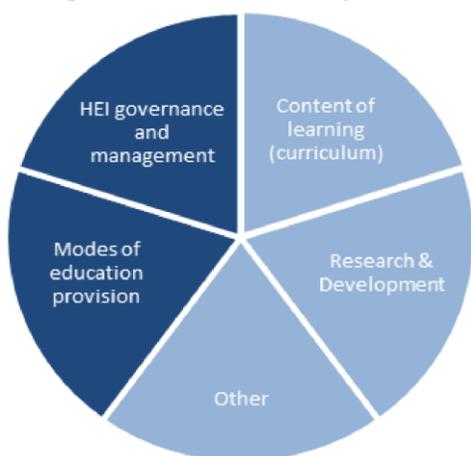
posed by such disruptive innovation by forging partnerships with disruptive innovators (such as in the case of universities collaborating with private massive open online course (MOOC) providers). Alternatively, institutions must either adapt internally or risk being left behind by what may prove to be a paradigm shift in higher education provision [8-9]. Furthermore, the GAIHE project conceives of innovation in a context-specific manner. In other words, an initiative in one HEI might be common practice and is thus not considered innovative, while if introduced

Christensen and Eyring define disruptive innovation as a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up-market, eventually displacing established competitors. They have also applied this concept to higher education worldwide.

Taking the context into account can also be interpreted in terms of time scale. An innovation over a short period may have a historical precedent if one looks at a longer time period.

Finally, while innovation can be applied to a wide range of contexts in higher education, this project focuses specifically on innovations related to the modes of higher education provision, and how the governance and management of higher education institutions support or adapt to these innovations. The dark sections in Figure 1 illustrate the spheres of innovation in higher education which are the focus of the GAIHE project.

Figure 1: Spheres of innovation in higher education



In order to address the research questions, the following understanding of ‘innovation’ is used in this project:

- First, what is considered as innovative in one institutional context may have in fact been in place for some time in another institution. Hence, we define innovation locally, in terms of the particular context of each higher education institution. This is to respect the diverse histories and priorities in which each European higher education institution evolves, as well as to encourage a mutual exchange<sup>3</sup> of practices (rather than promote a one-size-fits-all approach).

- Second, we concentrate on identifying ‘promising’ rather than ‘unequivocally innovative’ practices which have the potential to be transferable, add value and are sustainable, and have the property of being institution-wide.

- Third, we also place a time horizon on our research and discuss innovations having occurred since 2008.

## GOVERNANCE AND MANAGEMENT

Understanding and accurately reporting on the governance and management of universities is a complex task, given that different institutions have different models across the countries of the EU:

Governance includes ‘the framework in which an institution pursues its goals, objectives and policies in a coherent and co-ordinated manner’ [10, p. 12].

In other words, governance pertains to the distribution of power across an institution. In its simplest and most traditional form, HEI governance typically includes a head and its office, an entity including academic representatives (such as the academic senate) and another body, which can include other stakeholders, i.e. students or community representatives (sometimes called a council). This governance model understandably has some variants across countries and institutions. For example, decisions at the University of Alicante are taken by a Board of Directors, in addition to the Governing Council, Social Council and University Senate. Queen Mary, University in London has a Principal, Vice-Principals, a Chief Operating officer, an academic senate (which includes academics) and a council (which includes representatives from various stakeholder groups within and outside the institution).

Management includes the ‘implementation of a set of objectives pursued by a higher education institution on the basis of established rules’ [10, p. 12]. More precisely, management pertains to the day-to-day

running of the institution, which can cover such aspects as leadership styles, the type and number of relevant appointments or what support structures are in place to promote innovation.

This project covers both of these terms in order to understand different levels of the decision making chain. Changes in governance and management relate to two core aspects of the functioning of an institution:

**Allocation of power.** The first aspect covers how power is allocated within an institution, from heads of the institution to central bodies or heads of departments. In a traditional university, power tends to be concentrated around the faculties, with a fairly strong representative structure composed of an academic council and/or senate, and faculty members typically enjoying the privilege of regulating themselves.

**Boundaries of the institution.** In a traditional institution, teaching and learning remain allocated on the ground of the institution, with students having to be physically present to enjoy the benefits of their courses. In contemporary universities, teaching and learning increasingly occur in a network outside of the physical boundaries of the institution.

## THE RELATIONSHIP BETWEEN INNOVATION AND GOVERNANCE AND MANAGEMENT

The title of our project implies that governance and management adapt to innovations in higher education provision, which raises the question of the causal link between, on the one hand, governance and management and, on the other, innovations in higher education provision.

This relationship could occur in one of two ways. The university management and governance could have identified and magnified an existing initiative. For example, the Vice-Chancellor for Teaching and Learning at Queen Mary, University of London identified an example of 'lecture capture' in one of the faculties and promoted its adoption institution-wide (in this example the senior leader supported an identified innovation). In this case, the management adapted to an innovation to support it.

The relationship could, conversely, occur top-down. The governance body of an institution could decide to invest in managerial changes in order to stimulate

innovation. For example, the senior leaders of the University of Alicante have invested in the creation of new vice-chancellor position in order to promote innovation (in this example the senior leadership has adapted its structure to innovation by creating a new position). In this case, the intent is to have the innovation following the change in governance and management.

## DEFINING 'PROMISING PRACTICES'

The material collected in this project allows us to:

- Gather evidence and perceptions on elements of management and governance which support innovation in order to issue some further guidance and recommendations on what HEIs should be concentrating on.
- Identify promising practices in governance, management and innovations in education provision. Which characteristics of HEI's governance, management, organizational structures and human resource management are proven helpful in promoting fast and effective implementation of innovations? In other words, what are the best organizational structures, best governance models, best management practices with regards to facilitating the introduction of innovative modes of provision?

## FINANCIAL INCENTIVES FOR INNOVATION

The third element of governance and management identified by the consortium as playing an important role in facilitating innovation is financial incentives.

Developing financial incentives would address, on the one hand, the fact that survey respondents reported that the main inhibitor to innovation is the lack of financial resources, and on the other hand, the fact that efficiency and the better use of resources is reported to be a strong factor driving innovation (according to 27 out of 32 respondents). For example, some innovations, such as the expansion of online courses, were reported to stem from an effort to improve efficiency in response to funding shortages.

Some national governments are providing seed funds to encourage HEIs to pursue joint or external funding, or to encourage innovation, as is the case in France with the National Plan for Innovation (Plan National pour l'Innovation) in France, which includes 12 million euros for developing digital technologies within HEIs

and 4.6 million euros to create student centres for innovation, entrepreneurship and technology transfer. Other institutions have created academic positions to help generate alternative sources of funds, including, for example, the 'Innovative Chairs' in ESSEC, academic chairs which are funded by businesses. Financial incentives also include rewards to staff for relevant initiatives. For example, Anglia Ruskin University provides leadership awards for certain staff categories. Incentivising good leadership, as these awards do, may indirectly promote innovation. Finally, incentives for innovation can be part of human resource policies (as covered by the case study of Comenius University in Bratislava, the University of Ss. Cyril and Methodius and the University of Alicante), for example, by including some elements of innovation in job descriptions, as a criterion on recruitment and promotions/remuneration decisions, or in punctual rewards (such as limited prizes and awards).

#### **MAIN OBSTACLES FACED BY HEI'S WHEN DEALING WITH IMPLEMENTATION AND UTILIZATION OF INNOVATION IN EDUCATION**

Most serious external obstacles are: an unsatisfactory legislative environment, serious problems in public procurement, non-transparent administration, lack of finance in the educational sector. Although the stakeholders of the university would like to engage in innovative activities, there is often lack of funds for innovation implementation.

The internal obstacles for innovation lie especially in the person-based barriers: Prejudices of teachers, encrusted (inflexible) thinking of educators, failure to adopt new methods and workflows, reluctance of older teachers to innovate the teaching process, obsolete forms, methods and procedures for evaluating students by teachers, lack of awareness of teachers about innovative ways of learning. Further, HR functions are not well designed especially in regard to raising innovative potential of the academic and administrative staff at the university.

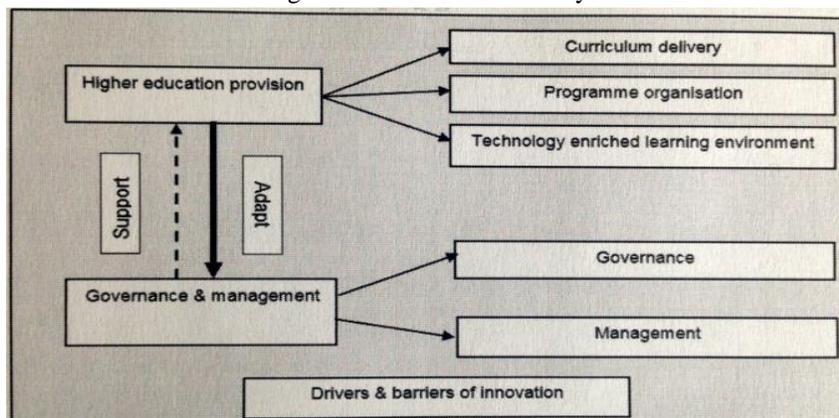
Other barriers relate to the personal negative attitudes of certain individuals and their resistance to change, fear, uncertainty as well as worries that things cannot be changed. Furthermore, there is another factor and it is a generational gap. Otherwise, some respondents pointed to the fact that modern trends represent the shift from contact teaching to online forms, hence affecting the direct contact; and thereby reducing the quality of interpersonal communication.

The last recommendation would be to communicate clearly that innovation in education is one of the contemporary pillars of university education. All HRM functions have to be aligned with this basic idea of requiring quality in teaching thus increasing pressure on the academic staff.

#### **CONCLUSION**

Innovation relies first and foremost on an institution-wide leadership and strategy which bind the institution around a sense of purpose, the implementation of which needs to be regularly evaluated. Leaders include senior representatives supporting innovation. But staff and students also have a role to play in generating ideas. As Burton Clark [11] has argued, university autonomy and financial resources are not sufficient conditions for innovation if the leadership of the institution chooses to concentrate on the past rather than look to the future. We therefore recommend that each HEI include innovation objectives, defined in measurable performance targets, in its strategy. In addition, HEIs need to provide the right institutional support; organizational flexibility; financial incentive; and evaluation, impact and quality assurance framework to support innovation. We therefore recommend that each HEI consider how the types of institutional support, organisational layout, financial Governance and adaptation to innovative modes of higher education provision and evaluation procedures enhance the institution's innovation potential. Innovation needs to be understood broadly. It does not only include new technologies (although digital innovation was understandably popular).

Figure 2: Dimensions of analysis



Our survey material suggests that competency-based methods of teaching, for example, relying on student's problem-solving skills rather than the lecturer's narrative, are also gaining ground in Europe. In addition, new technologies are not an end product; they need to be included in a coherent pedagogical approach.

We recommend that HEIs consider not just investing in technology, but also prioritising training staff and developing support structures to facilitate the inclusion of innovation in a coherent teaching and learning approach. We welcome and encourage the further exchange of practices across institutions of higher education in Europe as well as other stakeholders, in order to facilitate the transmission of ideas. This further exchange could be articulated around the dimensions to support innovation, using relevant tools, such as the self-assessment tool used in this project.

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