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Artigos

Reconfiguring education and research in the European Higher Education Area

Reconfigurando a educação e a investigação no Espaço Europeu de Ensino Superior

Reconfiguration de l'éducation et de la recherche dans l'Espace Européen de l'Enseignement Supérieur

Reconfigurando la educación y la investigación en el Espacio Europeo de Educación Superior

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Abstract:

The objective of this paper is to contribute to the understanding of the reconfigurations of education and research within the European Higher Education Area. While higher education systems and institutions are pointed out as key to competitively positioning Europe in the global context, the articulations between education, research and innovation are reconfigured. Based on discourse analysis, the articulations between nodal points - education, research and innovation - associated with the discourses on mobility and employability, made visible the weight of innovation promoted by economic policy drivers. The analysis challenges the relevance attributed to innovation and its major economic prospects as it hinders the broader educational and social potential of the political achievements of European Higher Education Area related to mobility and employability.

Keywords: education, research, innovation, European higher education area.

Resumo:

O objetivo deste artigo é o de contribuir para a compreensão das reconfigurações da educação e dainvestigação no Espaço Europeu do Ensino Superior. Ao mesmo tempo que os sistemas e instituições de ensino superior são apontados como chave para posicionar competitivamente a Europa no contexto global, as articulações entre educação, investigação e inovação estão a ser reconfiguradas. Com base na análise do discurso, asarticulações entre os pontos nodais - educação, pesquisa e inovação - associadas às políticas sobre mobilidade eempregabilidade, tornaram visível o peso da inovação impulsionada pelos racionais económicos dessas políticas.Esta análise problematiza a relevância atribuída à inovação e ao seu potencial de desenvolvimento económico, namedida em que pode enfraquecer o potencial educacional e social mais amplo dos objetivos políticos do Espaço Europeu de Ensino Superior relacionados com mobilidade e com empregabilidade.

Palavras-chave: educação, investigação, inovação, espaço europeu de ensino superior.

Resumen:

El objetivo de este artículo es contribuir a la comprensión de las reconfiguraciones de la educación y la investigación en el Espacio Europeo de la Educación Superior. Al mismo tiempo que los sistemas e instituciones de enseñanza superior son apuntados como clave para posicionar competitivamente a Europa en el contexto global, lasrelaciones entre educación, investigación e innovación se están reconfigurando. Con base en el análisis del discurso,las articulaciones entre los puntos nodales - educación, investigación e innovación - asociadas a las políticas sobre movilidad y empleabilidad, tornaron visible el peso de la innovación impulsada por los racionales económicos deesas políticas. Este análisis problematiza la relevancia atribuida a la innovación y su potencial de desarrollo económico, en la medida en que puede debilitar el potencial educativo y social más amplio de los objetivos políticos del Espacio Europeo de Educación Superior relacionados con la movilidad y la empleabilidad.

Palabras clave: educación, investigación, innovación, espacio europeo de educación superior.

Mots clés: éducation, recherche, innovation, espace européen de l'enseignement supérieur

Introduction

The main political purpose of the European Higher Education Area (EHEA), as expressed in the Bologna Declaration, is to promote compatibility and comparability between European higher education systems in order to achieve three overarching objectives: mobility, employability and attractiveness of European higher education. Even though the Bologna process was based on intergovernmental decisions, the enactment of reforms was coupled with EU initiatives (e.g., the European Research Area) aiming to enhance European integration. The objective of this paper is to contribute to the understanding of political achievements within the EHEA by focusing on the re-configurations of education and research. These missions of higher education systems and institutions are pointed out as key to competitively position Europe in the global context. By doing this, rather than merely looking at numbers and figures associated with student participation in mobility activities and graduate employability, we aim to identify the political rationales in European higher education.

At the roots of the Bologna process there is a major policy driver promoting the interaction between education and innovation, the meaning of which has been discursively associated in the EU policy rhetoric to the ideograph of 'knowledge society'. In 1997, the notion of a Europe of Knowledge was introduced by the European Commission in putting forward the Agenda for 2000 "to make 'knowledge-based policies' (innovation, research, education and training), one of the four fundamental pillars of the EU's internal policies [and] to raise the level of knowledge and skills of all Europe's citizens in order to promote employment" (European Commission, 1997: 1). In 1999, the Bologna Declaration considered that the degree awarded after the first cycle should also be relevant to the European labour market as an appropriate level of qualification. Under the framework of 'knowledge society' the need to meet labour market demands calls for the development of competences and skills that higher education is expected to take on. In 2003, this concern was directed to the need to develop effective and closer cooperation between universities and industry, gearing more effectively towards innovation, new business start-ups and, more generally, the transfer and dissemination of knowledge (European Commission, 2003). In 2005, ministers stated, "As higher education is situated at the crossroads of research, education and innovation, it is also the key to Europe's competitiveness" (Bergen communiqué, 2005: 5). The Lisbon agenda assumes that 'Modernisation is needed in order to face the challenges of globalisation and to develop the skills and capacity of the European workforce to be innovative' (European Commission 2007: 1) while pointing out three areas of 'possible reform' in higher education: curricular, governance and funding.

Drawing on Etzkowitz's (1993) Triple Helix of university-industry-government relationships, the metaphor of the knowledge triangle, from 1997 onwards, has been driving the 'knowledge society' and bringing forward the relationships between education, research and innovation, underlining the dominance of innovation in its articulation with the two other vertexes. While the Triple Helix allowed for understanding the reconfiguration of the universities' 'third mission', the knowledge triangle emphasises the role of innovation in configuring the relationship between the university 'first' and 'second' missions, i.e., education and research.

Innovation refers to the focus on the impact of higher education systems on economic development, on the enhancement of competitive advantages of regional systems and on the generation of skills for that purpose. Knowledge for economic and social development, exchange of knowledge and strengthening its impact on the basis of international cooperation are the elements of the idea of innovation.

Borrowing from Laclau and Mouffe's (1985) concepts of articulation, floating signifiers and nodal points, we argue that in the idea of a Europe of knowledge, which European higher education policies setting up the EHEA and ERA draw upon, research, education and innovation are articulated in a consistent discourse on higher education. Laclau and Mouffe (1985) call articulation "any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice" (Laclau and Mouffe,

1985: 105). Nodal points refer to a moment of crystallization within a specific discourse and the meaning of research, education and innovation is to be found in the European higher education discourse. The term floating signifier "belongs to the on-going struggle between discourses to fix the meaning of important signs" (Phillips & Jørgensen, 2004: 28) and in this study is convened to analyse policy objectives such as mobility and employability. A nodal point may appear as an 'empty signifier' as "it is the reference to a 'pure' signifier, which gives unity and identity to our experience of historical reality itself" (Žižek, 1989: 97). These signifiers gain momentum when discourses invest in feeding and fixing their meaning, thus transforming 'empty signifiers' into 'floating signifiers'. Empty or 'pure' signifiers possess consensual, subjective or ideal values, for instance, "employability is desired and valued because it capacitates subjects to find work and stay in employment" (Martilla, 2013: 64).

In the first part of the paper, on the basis of the political texts endorsed by European ministers under the framework of the Bologna process, we will look at the relationships between education, research and innovation to grasp the articulations made visible in knowledge production, knowledge transfer and knowledge dissemination. In the second part, we examine how these articulations are put together fixing the meaning of mobility and employability either as political goals or as political instruments. Political texts charting and documenting the progress of Bologna reforms (ESU 2015; European Commission/EACEA/Eurydice 2015; Sursock 2015) will also be used. This analytical strategy aims to bring forward the issues moulding the agenda setting in national and institutional contexts with regard to education, research and innovation. The objective is to identify the discourses shaping European higher education policies and practices.

1. Shaping knowledge production, knowledge transfer and knowledge dissemination

The articulation between education, research and innovation is visible, for instance, in the views of the Bologna ministerial meetings. The analysis of this articulation underlines the fact that it is contingent on both the political coordination of the EHEA and on the enactment of education reforms by European institutions, national governments and higher education institutions. The role of knowledge is changing on the basis of that articulation (see Figure 1).

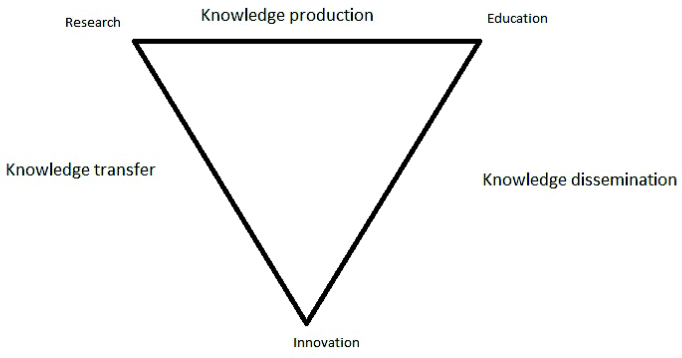

Figure 1 – The knowledge triangle and the reconfiguration of education and research

While the articulation between research and education features what is 'higher' in higher education, the emphasis on their articulation with innovation impinges on and reshapes both knowledge transfer and knowledge dissemination, shifting the education focus to competences and skills oriented towards economic

development. To this account, innovation involves the relationship with industry and the economic fabric, and the training of a qualified workforce.

To analyse the achievements within EHEA we draw on the articulations between education, research and innovation as nodal points associated with the discourses on mobility and employability. This association falls under the concept of what Laclau and Moufe (1985) called chains of equivalence that establish the relationality between concepts and the weight discourses attribute to them. From the follow-up of the Bologna declaration, what nourishes the knowledge triangle and the articulations between its vertices is the increasing importance of innovation. Mainly after the Bergen meeting (2005), innovation became tightly articulated with education and research. While in the Berlin communiqué (2003) the aim of preserving Europe's cultural richness and linguistic diversity was related to fostering "its potential of innovation and social and economic development through enhanced co-operation among European Higher Education Institutions" (Berlin communiqué 2003: 2), the Bergen communiqué (2005) clearly articulated innovation and education by assuming that "time is needed to optimise the impact of structural change on curricula and thus to ensure the introduction of the innovative teaching and learning processes that Europe needs" (Bergen communiqué, 2005: 1), bringing in the need to strengthen the link between research and innovation. This reflects the political assumptions associated with the establishment of the ERA to promote free circulation of researchers, knowledge and technology as "Economic and social development will depend essentially on knowledge in its different forms, on the production, acquisition and use of knowledge" (European Commission, 2000, p. 5).

The development of the ERA has been focusing on research performance to promote growth and job creation and on the connection of EU research systems. The ERA priorities are the promotion of more effective national research systems, the optimization of transnational co-operation and competition, the promotion of an open labour market for researchers, gender equality and the enhancement of circulation, access and transfer of knowledge (European Commission, 2012).

1.1. Articulating research and education - knowledge production

The relationship between research and education is matricial to higher education (Barnett, 1990; Magalhães & Veiga, 2013) and the Bologna process acknowledges that this foundational relationship is at the core of higher education mission and activities (Bologna Declaration, 1999). However, the development of Bologna feeds and is fed by the changing role attributed to knowledge, and consequently to education. The EU discourse is framed by the perceived need to increase "production, transmission and dissemination of knowledge" (Magalhães & Amaral, 2009: 192) and it is driven by the purpose of "the application of such knowledge and information to knowledge generation and information processing/communication devices, in a cumulative feedback loop between innovation and the uses of innovation" (Castells, 2000: 32), as within the 'network society' knowledge has become a central production factor.

The focus on innovation, on the one hand, reconfigures education as training, in the meaning of developing transferable skills to meet the needs of the employment market (Bergen communiqué, 2005); on the other hand, it encourages the creation and development of research in articulation with innovation (London communiqué, 2007). As higher education is mandated to guarantee a stronger link between research, teaching and learning, graduates are expected to combine transversal, multidisciplinary and innovation skills and competences with up-to-date subject-specific knowledge so as to be able to contribute to the wider needs of society and the labour market (Bucharest communiqué, 2012). In Yerevan in 2015, Ministers explicitly underlined that this link between education and research should be mediated by the concern with innovation: "We will promote a stronger link between teaching, learning and research at all study levels, and provide incentives for institutions, teachers and students to intensify activities that develop creativity, innovation and entrepreneurship" (Yerevan communiqué, 2015: 2). The articulation between education and research appears as a key factor of making the EHEA attractive as "the importance of research and research training in maintaining and improving the quality of and enhancing the competitiveness and attractiveness

of the EHEA" (Bergen communiqué, 2005: 3) is pointed out as crucial. By linking competitiveness and attractiveness to the education supply in Europe, innovation plays a major role in economic development and in the profile of higher educated workers.

1.2. Articulating research and innovation - knowledge transfer

Since Bergen, Bologna has been expected to enhance the links between higher education and research underpinning "higher education for the economic and cultural development of our societies and for social cohesion" (Bergen communiqué, 2005: 3). The articulation between research and innovation is key in moulding the discourses that assume "The Innovation Union" as the main driver for economic growth (European Commission, 2010a). Innovation went high in the EU agenda as reflected in the 2020 strategy. In line with this, EU public policies are to be focused on the creation of an environment that promotes innovation, i.e., "conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs" (European Commission, 2010a: 6). In addition, ministers of education recognised the need to improve "cooperation between employers, students and higher education institutions, especially in the development of study programmes that help increase the innovation, entrepreneurial and research potential of graduates" (Bucharest communiqué, 2012: 2).

These ideas radicalized the discourses on the shift from basic to applied research. More than emphasising the shift from mode 1 to mode 2 in knowledge production (Gibbons et al., 1997), innovation acting as a nodal point blurs the distinction between research and its applicability, and focuses on knowledge transfer "going beyond technological research and its applications" (European Commission, 2010: 32). The emphasis shifts from research per se to research + innovation as mediated by knowledge transfer. Consequently, under the framework of Bologna, "Study programmes must reflect changing research priorities and emerging disciplines, and research should underpin teaching and learning" (Bucharest communiqué, 2012: 2).

The links between research and innovation are based on the presupposition that more needs to be done to address innovation skills shortages and to implement European e-skills agenda. This is seen as crucial to accelerate the development and the adoption of innovative business models by European enterprises, especially Small and Medium Enterprises (SMEs)" (European Commission, 2010a: 9).

Moreover, "European Innovation Partnerships should be launched to accelerate research, development and market deployment of innovations to tackle major societal challenges, pool expertise and resources and boost the competitiveness of EU industry, starting with the area of healthy ageing" (European Commission, 2010a: 3).

From the perspective of the European Commission, what enables innovation are human resources, open and excellent research systems, finance, and support. In line with this, human resources development is articulated with the "importance of research and research training and the promotion of interdisciplinarity in maintaining and improving the quality of higher education and in enhancing the competitiveness of European higher education more generally" (Berlin communiqué, 2003: 7). This is expected to have major consequences, for example, on the variety of doctoral programmes and on the enhancement of provision of the third cycle to promote "the status, career prospects and funding for early stage researchers" as "essential preconditions for meeting Europe's objectives of strengthening research capacity and improving the quality and competitiveness of European higher education" (London communiqué, 2009: 4-5).

With regard to the ERA, the main idea underlying its establishment "was to promote 'seamlessness' between institutional divides, universities and markets, research institutions and business, as well as a division of labour in the fragmented European research landscape" (Gornitzka, 2010: 539), reflecting the prevalence of the relationship between research and innovation over education.

As innovation went high on the EU agenda, the use of key performance indicators (KPI) can be seen as an incentive-based instrument, influencing, in Lascoumes and Galès' terms (2007), the nature of research policies in higher education. Innovation aims to create in Europe world-class performers in science, meaning attractive careers for researchers, high standard training, open access to research results and cross-border

mobility. Indicators of measurement of innovation performance are related to doctoral education and the number of new doctoral graduates, to international scientific co-publications and to R&D expenditure in the public and business sector. These indicators are based on employment, services and products in knowledge intensive activities illustrating how this emphasis on the expected economic effects has major consequences on higher education.

1.3. Articulating education and innovation - knowledge dissemination

The articulation between education and innovation is visible in the knowledge dissemination approach driven by the curricular reform envisaged by the European Commission. In 2007 the EC document From Bergen to London: The contribution of the European Commission to the Bologna Process made clear the need for modernisation to develop skills and an innovative European workforce (European Commission, 2007). In these terms the curricular reform should enable competence based learning, flexible learning paths, and mobility. Innovation assumes a nodal position in the knowledge triangle, impinging on the nature of the teaching and learning processes, and fixing the meaning of knowledge dissemination; pointed out as quintessential to the pursuit of an 'innovative' workforce. In other words, knowledge dissemination is expected to provide new graduates "with the proper skills regarding the management, protection and exploitation of knowledge and intellectual property" (European Commission, 2005: 15). Actually, the ministers in London urged "institutions to further develop partnerships and cooperation with employers in the ongoing process of curriculum innovation based on learning outcomes" (London communiqué, 2007: 6). As already underlined with regard to doctoral education, this also translates into the centrality of issues "such as transparent access arrangements, supervision and assessment procedures, the development of transferable skills and ways of enhancing employability" (London communiqué, 2007: 5). Partnerships between higher education and employers point to curricular innovation, and knowledge dissemination articulates education and innovation. Based on the assumption that education in higher education is to be tightly related with the economic fabric, employability is conceived of as the potential to participate in the knowledge economy and thus prospects the adequate competences and skills (e.g., Leuven communiqué, 2009).

Discursively, the emphasis on skills for innovation reflects a mandate addressed to education systems to develop the 'right mix of skills' (European Commission, 2010 and OECD Innovation Policy Platform). While the report by the Expert Group on New Skills for New Jobs (2010b), prepared for the European Commission, emphasises that education and training "must be underpinned by transversal competences, especially digital and entrepreneurial competences, in order to both encourage initiative rather than simple reproduction of received knowledge and to better adapt to learners and employers' needs" (European Commission, 2010b: 7), the Innovation Policy Platform (IPP), developed by the Organisation for Economic Co-operation and Development (OECD) and the World Bank, underlines the need "to rebalance the emphasis between content knowledge and other skills such as creativity, communication, teamwork (...)" (https://www. innovationpolicyplatform.org/content/skills-innovation). According to the OECD and the World Bank the acquisition of innovation skills is to be based on (i) disciplines that are expected to equip students with skills that matter for innovation: technical skills, skills in thinking and creativity, and behavioural and social skills; (ii) pedagogies that must be

active based on problem-based learning, cooperative learning, metacognitive learning, sometimes enhanced by information and communication technology and on interdisciplinary approaches focusing on design thinking to foster skills for innovation; (iii) new assessment instruments focusing on competences, rather than on knowledge per se, and (iv) international mobility of students, faculty, programmes and institutions introduced as a mean to foster skills for innovation in the globalised economy.

This also has major implications for the introduction of pedagogies that would favour the reorganisation of curriculum directed to the development of innovation skills. However, the introduction of innovative pedagogical perspectives on the basis of a student-centred approach might not be compatible with the 'academic time' (Neave, 2005). Neave argues that 'academic time' is required "to assimilate a corpus of

knowledge and was usually decided by the universities" (Neave, 2005: 18). In this sense, "political timing of the Bologna and Lisbon strategy ventures no longer coincides" (Veiga & Amaral, 2012: 282). Actually, "'Political time' floated from the technological imperatives of the knowledge society and its 'productivist' ethic" (Veiga & Amaral, 2012: 282).

Mobility, as an element of knowledge dissemination, particularly in doctoral education, is expected to equip graduates with innovation skills to cope with the risk features of knowledge societies and their labour markets. As underlined by the Yerevan communiqué, "greater mobility of students and staff fosters mutual understanding, while rapid development of knowledge and technology, which impacts on societies and economies, plays an increasingly important role in the transformation of higher education and research" (Yerevan communiqué, 2015: 1

Conclusion

In the analysis of the achievements within the EHEA the nodal points associated with the discourses on mobility and employability evidenced the weight of innovation in its articulation with education and research. The dominance of innovation is discursively fixing the meaning of research and education within the EHEA.

The relationality between concepts and the hegemony of innovation contribute to naturalize the mandate addressed to education and research in European higher education. In bringing forward this discursive hegemony, innovation as a political driver is enacting discourses, policies and practices with implications on policy objectives associated with employability and mobility in European higher education.

Under the dominance of innovation in the knowledge triangle, mobility risks turning into a means rather than an end of the EHEA political endeavour. Mobility appears as a mean to innovation, corroborating the idea that ends/means reversal is a characteristic of the Bologna process (Neave & Veiga, 2013).

The productivist political mandate hinders the fact that the economic fabric is not prepared to absorb highly qualified graduates as it is recognized by ESU: "over-qualification rates are influenced more by labour market structures and the lack of innovation in business and industry than by the growing number of students" (ESU, 2015). The articulation between education and innovation is to be enhanced within the EHEA by promoting the role of higher education in equipping "students with the knowledge, skills and competences that they need in the workplace and that employers require; and to ensure that people have more opportunities to maintain or renew those skills and attributes throughout their working lives" (Working Group on Employability 2009: 5). Notwithstanding, in November 2015, the European Commission still recognized in its Annual Growth Survey that

While the EU is a major producer of skills and knowledge, its education and training systems do not perform as well as they should internationally. About 20% of the working-age population has only very basic skills such as literacy or numeracy, and 39% of companies have difficulty finding staff with the required skills (European Commission, 2015: 8).

Additionally, the prevalence of the relationship between research and innovation over education was also visible in the ERA as compared with the EHEA. This is visible in the way the focus on innovation is shaping employability as a political goal and simultaneously as a mean to innovation, underling the importance of the 'right mix of skills' in economic development. It is of utmost importance to underline that the measurement of graduates' employability might hinder the major goal of educating the European citizen (Magalhães and Veiga 2013).

Higher education prepares students not only for employment, but for life as active citizens in democratic societies, as well as in their personal development and the development and maintenance of a broad, advanced knowledge base (ESU 2015: 85).

Emphasising this output approach, "several countries (...) have compiled ranking systems of higher education institutions, where graduates' employment is one of the criteria" and "higher education institution's place in the ranking even influences the level of state funding it receives" (European Commission/EACEA/Eurydice 2015: 206). This perspective is influencing the funding reforms and their output and performance based assumptions (Magalhães et al. 2013; Magalhães et al. 2012) such as incentives, including "specific financial support to students or performance-based funding to institutions, which could be linked to the employability of their graduates and therefore the assumed quality of their study programmes" (Sursock 2015: 57). At the national and institutional levels, financial incentives used as political instruments to promote university-business cooperation, for instance "funding/outcome agreements between funding authorities and higher education institutions are meant to ensure that career guidance services receive funding for improvement" (European Commission/EACEA/Eurydice 2015: 203). Following this report

A number of countries (e.g. Croatia, Denmark, the former Yugoslav Republic of Macedonia, Iceland and Norway) established specific innovation funds from which university-business cooperation projects are funded directly (...). In Sweden, the government also finances Innovation Offices at some universities. Ireland and Liechtenstein issue innovation vouchers to facilitate collaboration between enterprises and higher education institutions (European Commission/EACEA/Eurydice 2015: 201).

While mobility is directly influenced by the articulation between knowledge production and dissemination, political achievements in employability are to be interpreted on the basis of the priorities brought about mainly by the link between education and innovation (knowledge dissemination), as well as research and innovation (knowledge transfer), thus promoting skills and training. As a result, mobility shifted from an end within the EHEA political endeavour to a means to innovation (Neave & Veiga, 2013). Employability appears as a means to innovation based on the relationship between education and innovation with impact on knowledge dissemination.

The reconfiguration of the articulations between education, research and innovation brought forward the influence of the European agendas, broadening and shaping the focus of national and institutional reforms underlying the relevance of economic policy drivers. These drivers eventually contribute to hinder the educational and social potential of the political achievements of EHEA related to mobility and employability.

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