

Bologna Efforts to Promote Skills and Competences in Higher Education and the Greek Context

Sofia Asonitou and Harris Tromaridis

Abstract The words “skills” and “competences” have appeared intensely in the academic life of the European Higher Education Institutions (HEIs) as in other parts of the world in the past decades. The present study reviews the endorsement of skills and competences under the EU and the Bologna Agreement and attends their evolution through the steering documents that aim to achieve the integration of European Higher Education (HE) systems as well as the enhancement of European graduates’ employability.

Keywords Higher education · Skills · Competences · Bologna process · Steering documents

Introduction

As technology has progressed in recent decades, society and working conditions have been transformed. Manufacturing has given more space to service industries and white-collar workers outnumber blue-collar workers (Bell 1974; Hammer 1996; Herbert and Rothwell 2005). Above all, power is no longer derived from property and position but from knowledge, particularly theoretical knowledge. Globalisation has intensified the international competition and the pace that work processes are changing (Keep 2000). Skilled jobs require “perceptual and conceptual skills” that need to be renewed if workers wish to remain employed. Knowledge and learning are the means to continuous upskilling and consequently the “learning force” is already greater than the “workforce” (Trist 1974; Frank and Meyer 2007). Employability is defined as the ability to gain initial meaningful employment or to maintain employment and to be able to move around within the labour market

S. Asonitou (✉) · H. Tromaridis
Faculty of Management & Economics, Department of Business Administration,
Technological Educational Institute of Athens, Agiou Spyridonos Street,
Aigaleo 12243, Athens, Greece
e-mail: sasonitou@teiath.gr

(Working Group on Employability 2009). Education is playing a crucial role as the means of attaining the required knowledge, skills and competences that will ensure people have more opportunities to become employed (ILO 2008). Employment prospects depend on additional factors than the possession of the required skills and competences. These factors are mainly the general state of the economy on the one hand and job candidates' individual characteristics (European Commission/EACEA/Eurydice 2014).

Increased attention to the development of certain skills may help to reduce drop-out rates in first-year students. Research reveals that drop-out rates are the highest at the end of the first academic year. First-year students are particularly vulnerable to dropping out of HE, since their expectations might be very different from what they actually expected from their studies or they may have a feeling of helplessness and failure at the start of HE studies. Hence, paying attention to newly admitted students' experiences and skills development is of particular importance (EHEA 2015).

Establishment of European Higher Education Area (EHEA), modernisation of education, mobility and integration of learning systems and quality assurance systems are among the means to promote the employability of European citizens and the international competitiveness of European HE. Bologna Process and EU work in parallel to introduce the concepts that lead to successful implementation and attend thoroughly the evolution of this endeavour through specific tools and steering documents like the ECTS, the European Qualifications Framework, the Diploma Supplement, Quality Assurance, the three-cycle system and the evaluation of learning outcomes.

EU and the Bologna Process

Higher Education (HE) has been in constant reform the past decades due to factors affecting the economic and social environment. In the U.S., the employers have initiated the reforms in higher education in order to keep pace with the changes in the economic environment and the development of graduate's skills and competences. In Europe the changes in Higher Education Institutions (HEIs) were initiated by the Bologna Agreement (1999) and the European Union. Their efforts resulted to the introduction of new concepts for HEIs such as the learning outcomes, the ECTS, the European Qualifications Framework (EQF) which have been gradually introduced into the Greek HE System in the past decade. All these new concepts aim, among other, to reform education away from its rule-driven textbook by incorporating skills and competences into the curriculum. European countries have been heavily influenced by the Bologna Declaration of 1999, which was based on the Sorbonne Declaration of the previous year (1998). In fact, it was the Bologna Agreement that sparked the large-scale educational reforms in Europe, as it states that universities should accept the challenge to construct the European Higher Education Area (EHEA 2015). By 2010, 47 countries were involved in the Bologna

Process. By 2015 nine Bologna conferences were held (including the Sorbonne Declaration) and corresponding communiqués have been issued to describe the achievements and the targets of participating nations for the future.

At the European level, two types of cooperation exist that work towards the development of Higher Education (HE) to achieve high employment and growth rates: the European Commission and the Bologna Process. The support of European governments and universities has been sought in order to meet the targets of the next decade. In 2010, the Lisbon strategy evolved into the EU Commission's 'Europe 2020' strategy. The scope of this report was to overcome some of the failings of the previous initiatives and reshape the objectives in the light of the economic crisis (Beerkens and Vossensteyn 2011). The Bologna Declaration of 1999 followed a series of meetings, working groups, seminars, conferences and reports within the European area in order to investigate and explore a range of objectives and promote the integration of the educational systems. The focus of these seminars and working groups included issues of comparability, quality assurance, accreditation, the credit transfer system, learning outcomes and the development of European students' skills and competences.

European Credit Transfer and Accumulation System (ECTS)

European Commission and the Bologna Working groups, over the past 15 years, have issued many reports in order to disseminate their objectives, recommendations, or the results of studies of employability and the skills regime of European countries and in relation to non-European nations (EC 2003; Vukasovic 2004; EU 2006, 2008; Tuning 2010). In several Bologna seminars (Bologna 2002, 2003), the credit system was discussed in depth. The Bologna seminar in Edinburgh on learning outcomes endorsed the proposition that learning outcomes are the basic building blocks of the Bologna package of educational reforms and that this methodological approach is *at the heart of the paradigm shift from teacher to student-centred learning* (Bologna 2008a). During the Bologna seminar on ECTS and student workload participants from European universities, student bodies, national ministries and international organisations, agreed that ECTS credits are based on learning outcomes and the appropriate workload that will allow students to achieve the expected learning outcomes (Bologna 2008b). The seminar emphasised the need for a cultural shift at all levels, concerted action by the authorities and stakeholders, the involvement of students in the verification of the workload and the regular monitoring of the whole process within the framework of an internal and external quality review.

Progress indicators so far indicate that regarding the first-cycle learning most countries use a combination of 180 ECTS and 240 ECTS. There is a slight trend of more countries to move away from a workload of 180 ECTS (European

Commission/EACEA/Eurydice 2012). Nevertheless, the 180 ECTS workload model is still the most widespread, with 58 % of programmes following it in comparison to the 37 % share of the 240 ECTS workload model. In the second cycle the 120 ECTS model is by far the most widespread used by 43 HE systems. On average, 65 % of all second cycle programmes follow the 120 ECTS model. 13 % of all second cycle programmes follow the 90 ECTS model (European Commission/EACEA/Eurydice 2015).

Learning Outcomes

The ECTS guide defines learning outcomes as: “A dynamic combination of cognitive and metacognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, ethical values and attitudes”. Two approaches exist: learning outcomes may be either threshold statements (showing the minimum requirements to obtain a pass), or reference points describing the typical (expected) level of successful learners’ achievement. In any case, statements on learning outcomes must clarify which definition is being used. The EU report (2007a) on NQF/EQF explicitly states that the Learning Outcomes approach is a fundamental part of a paradigm shift in the relationship between HE and the outside world. It emphasises that it is an approach that provides the basis of a dialogue between HE and employers, and also provides a tool, and a language, for accountability to the wider society. The implementation of the NQF and use of learning outcomes should not be presented as *‘yet another reform to be tackled’*. Providing academics with substantial information about the need for an NQF and a learning outcomes-based approach is needed to encourage commitment. The information should also include examples of good practice in other countries/sectors/HEIs, such as the Tuning project (Tuning 2010). This implies the need for the more structured dissemination/availability of information. In order to promote this, efforts on the part of the commission and the national competent bodies may be appropriate. For instance, the Bologna experts can play an important role in this (EU 2007b, p. 27). The Tuning project in Europe addressed the issue of skills and competences through research projects for subject specific areas such as business, chemistry, mathematics, history and geology. Over time Tuning has developed into a Process, an approach to (re-)designing, developing, implementing, evaluating and enhancing quality first, second and third cycle degree courses. 38 of all HE programmes use ECTS (majority). In the rest nine systems, ECTS use ranges between 75–99 % of programmes. These findings reveal that important improvement over the 30 and 7 countries respectively found in the corresponding groups in the previous report. From this point of view, ECTS implementation can therefore be considered close to final achievement.

Linking ECTS to Learning Outcomes

The ECTS is closely related to the learning outcomes and the associated workload which are intimately linked to the assessment and assessment criteria (European Commission/EACEA/Eurydice 2015). These issues are integral to the correct application of a credit system (ECTS 2015). Although quantitative data show that there is progress in applying ECTS for accumulation and transfer, the implementation of linking credits with learning outcomes is still lagging behind. Greece is among the countries that ECTS credits are allocated to all components of all HE programmes, enabling credit transfer and accumulation. ECTS credits are demonstrably linked with learning outcomes both through law and steering documents. Data shows that 22 higher educational systems have linked all parts of programmes to learning outcomes while another 19 estimate that 50–99 % of their institutions have done so (European Commission/EACEA/Eurydice 2015). The shift to a student-centred approach based on learning outcomes requires a consistent and transparent way to allocate ECTS credits on learning outcomes. There are occasions that HE systems assign ECTS to learning outcomes on the basis of teacher-students contact hours or on a combination of student workload and teacher–student contact hours. This is a mechanical calculation of ECTS and it is not compatible with the spirit of competence-based education. There is a group of seven systems that use this type of credits allocation.

The proper way is that credits are allocated on the basis of learning outcomes achieved and on student workload. Typically 36 HE systems follow this pattern. In Albania and Liechtenstein, credits are allocated on the basis of student workload only while in the U.K. achieving the student learning outcomes is the only criterion for credit allocation (European Commission/EACEA/Eurydice 2015).

European nations in order to support the implementation of learning outcomes have stipulated their establishment through legislation (32 HE systems) or through guidelines or recommendations (14 HE systems). Only in Albania and Hungary there is no central support of learning outcomes at all. Greece is among the countries that have issued the proper laws to encourage learning outcomes (Asonitou 2014). This shows that the importance of learning outcomes in programme development has grown within Bologna nations. European HE systems have already put in place quality assurance procedures for monitoring the use of learning outcomes and assessment of student achievements. In most countries there are external quality assurance agencies for programme accreditation/approval according to EU recommendations.

European Qualifications Framework (EQF)

The European Qualifications Framework (EQF) is an overarching framework that makes transparent the relationship between European national (and/or sectoral) educational frameworks of qualifications and the qualifications they contain. It is an articulation mechanism between national frameworks. Currently, two European Qualifications Frameworks exist. One focuses only on HE and was initiated as part of the Bologna Process, while the other focuses on the whole span of education and was initiated by the European Commission. The first is called a Framework for Qualifications for the European Higher Education Area (QF-EHEA), while the second extends across all areas, including HE, and is called the European Qualifications Frameworks for Lifelong Learning (EQF-LLL 2015; Tuning 2010). At least 16 countries have made substantial progress in the implementation of NQFs since the 2012 Implementation report. However, 10 countries still have not started implementation at programme and institution level, and some of them show no progress since 2012. Belgium, Denmark, Estonia, France, Germany, Ireland, Italy, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Spain, Sweden, and the United Kingdom (Scotland) have fulfilled all the steps in implementation of qualifications frameworks and have the self-certification report that can be consulted on a public website. Austria, Croatia, Greece, Iceland, Lithuania and Portugal miss only the step of providing information on qualifications frameworks on a public website.

The Greek Context

Greece is one of the European countries which signed the Bologna Agreement in 1999. Consequently, education reform was initiated by the Government, which has been attempting, since that time, to introduce the necessary changes in order to harmonise the Greek education system with the Bologna requirements. The government has made substantive efforts to bring about change since 2003 and it continues to issue relevant laws and presidential decrees (FEK 2015). In July 2005, the Law on Quality Assurance in HE was passed, transferring credit points and Diploma supplements (L. 3374/2005). Greece has also completed the process for the National Qualification Framework (Zaheilas 2012; EOPPEP 2015). The process of harmonisation with the Bologna Requirements started in the previous decade in Greece, for which a series of laws have been introduced. Law 3191/FEK 258/A/2003 on the National Connection System of Vocational Education and Training with Employment and Law 3369/FEK 171/A/2005 on Lifelong Learning and Law 3549/FEK69/2007 prepared the frame for the introduction of laws on Quality Assurance and ECTS. Next important law is 3374/FEK189A/2005 which relates the Quality Assurance of HE, the establishment of ECTS and the diploma supplement. The Ministerial Decision in FEK 1466/2007 complemented this law,

which states that the European system of transfer and accumulation of credits is based *on the workload* that a student must complete in order to achieve the course objectives, according to the *learning outcomes, skills and competences required for successful course completion*. Law 4009/FEK195A/2011 is a very important Frame Law that abolished most of the previous laws and aimed to bring a new perspective to HE through reforming the institutions' management and the years of study, introducing skills and competences in HE courses, and laying down criteria for academic teachers' promotion and other important issues.

Other Tools Within EU Framework

Among the tools of EU devoted to the enhancement of mobility within European frontiers and skills specification is ESCO and DISCO initiatives. The objectives of ESCO (European Skills Competences and Occupations) is to enhance online and skill-based job matching, to promote skills and competences in the employment services and to describe qualifications in terms of knowledge, skills and competences. ESCO identifies and categorises skills/competences, qualifications and occupations relevant for the EU labour market and education and training, in 22 European languages. It provides occupational profiles showing which competences and qualifications are relevant for an occupation (ESCO 2015). DISCO is the European Dictionary of Skills and Competences. It is an online thesaurus that currently covers more than 104,000 skills and competence terms and approximately 36,000 example phrases. DISCO is available in eleven European languages and offers a peer-reviewed terminology for the classification, description and translation of skills and competences. It is compatible with European tools such as Europass, ESCO, EQF, and ECVET (European Credit system for Vocational Education and Training), and supports the international comparability of skills and competences in applications such as personal CVs and e-portfolios, job advertisements and matching, and qualification and learning outcome descriptions (DISCO 2015).

Conclusions

Recommendations of EU and Bologna communiqués are incorporated into national HE systems and their implementation is monitored through several indicators. Evidently, the national HE policies are becoming increasingly subject to European-level decisions. Although the concepts of skills and competences have been introduced in the HE systems of the participating countries in the Bologna Agreement through the notions of ECTS and learning outcomes, the pace of adoption varies among nations. The structural adoption of learning outcomes as core element towards student-centred education is easier to achieve than the actual incorporation of skills into everyday teaching and assessment. Due to rapid changes

in the economic environment, graduates often realise that they do not have the skills and competences they need for their professional take-off or for maintaining their job. Therefore policy-makers, academic staff and students should work together, to attain the goals of enriching skills and competences with the ultimate objective to increase employability of graduates as well as the continued development and sustainability of HE systems. Special attention should be given to the link of credits to learning outcomes in contrast to surface and mechanical calculations of ECTS for pure legitimising purposes.

References

- Asonitou, S. (2014). *Embedding generic employability skills in Greek Accounting Education Studies: Development and impediments*. University Dissertation, Unpublished Ph.D., Sheffield Hallam University, Sheffield, U.K.
- Beerckens-Soo, M., & Vossensteyn, J. J. (2011). The effect of the ERASMUS programme on European Higher Education: The visible hand of Europe. In J. Enders, H. F. de Boer, & D. F. Westerheijden (Eds.), *Reform of higher education in Europe* (pp. 45–62). Rotterdam, The Netherlands: Sense Publishers.
- Bell, D. (1974). *The coming of post-industrial society*. New York: Basic Books.
- Bologna. (2002). *Conclusions of the EUA conference on credit transfer and accumulation*, Zurich, October 2002, <http://www.unige.ch/eua>.
- Bologna. (2003). *Conclusions of the Bologna Seminar on Recognition Issues and Credit Systems in the Context of Lifelong Learning*. Prague, June 2003. <http://www.bologna.berlin2003.de>.
- Bologna. (2008a). *Learning outcomes based higher education: The Scottish experience*. <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/BolognaSeminars/Edinburgh2008.htm>.
- Bologna. (2008b). *Bologna seminar on “ECTS based on learning outcomes, and student workload”*. <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/BolognaSeminars/Moscow2008.htm>.
- Bologna Agreement. (1999). Retrieved September 10, 2015, from http://ec.europa.eu/education/policy/higher-education/bologna-process_en.htm.
- DISCO. (2015). *Dictionary of skills and competences*. Retrieved September 10, 2015, from http://disco-tools.eu/disco2_portal/.
- EC. (2003). *Bologna four years after: Steps toward sustainable reform of higher education in Europe*. Trends 2003 Progress towards the European Higher Education Area, Bologna Handbook, Making Bologna Work, EUA.
- ECTS. (2015). *User guide*. http://ec.europa.eu/education/library/publications/2015/ects-users-guide_en.pdf.
- EHEA. (2015). European Higher Education Area. <http://www.ehea.info/>.
- EOPPEP. (2015). National organisation for the certification of qualifications and vocational guidance. <http://www.nqf.gov.gr/>.
- EQF-LLL. (2015). European qualifications frameworks for lifelong learning. Retrieved August 10, 2015, from http://www.eqf-lll.eu/en/eqf_en.
- ESCO. (2015). European skills, competences and occupations. Retrieved September 10, 2015, from <https://ec.europa.eu/esco/home>.
- EU. (2006). *Key competences for lifelong learning*, Recommendation 2006/962/EC of the European Parliament and of the Council of 18 December 2006, Official Journal of the European Union. Retrieved September 11, 2014, from http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm.

- EU. (2007a). *Modernisation of higher education*, Summary report of the Peer Learning Activity on Implementing EQF/NQF in Higher Education, Sofia, 8–10 October 2007.
- EU. (2007b). *Opportunities, access and solidarity: towards a new social vision for 21st century Europe*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions, Brussels, COM (2007) 726.
- EU. (2008). *New Skills for New Jobs*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions, Brussels, COM (2008) 868 final {SEC (2008) 3058}.
- European Commission/EACEA/Eurydice. (2014). *Modernisation of Higher Education in Europe: Access, Retention and Employability 2014*. Eurydice Report. Luxembourg: Publications Office of the European Union.
- European Commission/EACEA/Eurydice. (2015). *The European higher education area in 2015: Bologna process implementation report*. Luxembourg: Publications Office of the European Union.
- European Commission/EACEA/Eurydice, Eurostat and Eurostudent. (2012). *The European higher education area in 2012: Bologna process implementation report*. Luxembourg: Publications Office of the European Union.
- FEK (2015) National documents repository. <http://www.et.gr/index.php/>.
- Frank, J. D., & Meyer, W. J. (2007). University expansion and the knowledge society. *Theory and Society*, 36(4), 287–311.
- Hammer, M. (1996). *Beyond reengineering*. London: Harper Collins Business.
- Herbert, I., & Rothwell, A. (2005). *Managing your own placement, a skills-based approach*. Palgrave: Macmillan.
- ILO. (2008). *Skills for improved productivity, employment growth and development*. International Labour Conference, 97th Session, Geneva, Switzerland.
- Keep, E. (2000). *Creating a knowledge-driven economy definitions, challenges and opportunities, SKOPE Policy Paper 2*. Coventry: University of Warwick.
- Trist, E. L. (1974). The structural presence of post-industrial society. In N. Cross, D. Elliott, & R. Roy (Eds.), *Man-made futures*. London: Hutchinson.
- Tuning. (2010). *A guide to formulating degree programme profiles including programme competences and programme learning outcomes*, European Commission, Education and Culture, Bilbao: Groningen and The Hague, 2010.
- Vukasovic, M. (2004) Employability in the context of the Bologna process. *Seminar organised jointly by EUA, ESIB and the Ministry of Education, Science and Sport of the Republic of Slovenia*, 22–23 October 2004, Bled, Slovenia.
- Working Group on Employability. (2009). Report to ministers, Bologna conference, Leuven/Louvain-la Neuve 28–29 April 2009. Retrieved September 19, 2014, from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/2009_employability_WG_report.pdf.
- Zaheilas, L. (2012). *The impact of the national qualification framework on the educational and training systems and their improvement with the labour market*, University Dissertation, Ph.D. [In Greek].