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ScienceDirect

Procedia - Social and Behavioral Sciences 228 (2016) 169 – 174

Procedia
Social and Behavioral Sciences

2nd International Conference on Higher Education Advances, HEAd'16, 21-23 June 2016,
València, Spain

Employability skills of higher education graduates: Little consensus on a much-discussed subject

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Abstract

The expansion of higher education (HE) has given rise to research on skills that smooth transition and benefit the careers of graduates. We examine literature that attempts to inform HE institutions and policy makers about the skills required in the labor market. A variety of methods have been implemented to collect data on employability skills. It has been acquired directly using hiring criteria but it has also been gleaned indirectly on the basis of employers' satisfaction with graduates' skills. The evidence shows little consensus on which skills actually foster employability. Wide agreement exists on the need for relational skills, namely interpersonal, communication and teamwork abilities, which are reported in almost all papers. Moreover, the literature suggests that some employers find graduates are poorly prepared for teamwork but they recognize the good level of IT skills. We are concerned about the lack of agreement on the necessary skills as well as the perception that graduates are poorly prepared. Conceptual issues and methodological solutions are likely to have generated results that contain some degree of ambiguity. Researchers and policy makers therefore remain uncertain about graduate skills that match workplace requirements and foster employability.

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Peer-review under responsibility of the organizing committee of HEAd'16

Keywords: Higher education; competence-model; demand-side perspective; employability skills.

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1. Introduction

The expansion of higher education (HE) and the Bologna Process reframed the political debate and placed the smooth transition from school-to-work and the employability of graduates at the forefront of education policy (Schomburg and Teichler, 2011). HE is called upon to prepare graduates for the world of work and universities are pressured to meet standards on that employability. The basic assumption of policy makers is that HE ought to play a decisive role in society and contribute to sustainable growth and job creation in Europe (COM, 2011). Therefore, HE institutions should be aware of the needs of the economy and subsequently adjust their programmes to ensure greater compatibility. Considerable research on these subjects has attempted to respond to policy requirements.

This paper explores literature on the skills required for graduates in the labor market. We examine the variety of methods used in research to collect data on employability skills and consequently inform policy makers and stakeholders of HE. However, the agreement on employability skills is negligible (Tymon, 2013), which raises questions about the empirical evidence achieved so far.

It is therefore relevant to ask why there is so little agreement about the required skills for graduates. The answer to this question necessarily leads us to a conceptual discussion and the methodological issues associated with skills. We suggest the definition of skill is far from straightforward and the variety of methodological solutions used to collect information on required skills have served to increase rather than decrease uncertainty on labor market demands for graduate skills.

The rest of the paper is structured as follows. The next section briefly discusses the problematic nature of the concept of competence/skill. Section 3 is devoted to methods implemented to detail employability skills as well as the particular set of skills most valued by employers. Some concluding remarks are presented in Section 4.

2. Competence and higher education reform

The concept of competence has acquired a prominent position in the HE reform in an attempt to improve graduates' integration into the labor market. Despite its relevance, there is a lack of consensus on the concept and measurement of competence (Le Diest and Winterton, 2005 for conceptual discussion). However, there is agreement on the following definition: competence presupposes the utilization of acquired knowledge and skills in the workplace to achieve a goal or to solve a problem (Reynaud, 2001); it has the merit of connecting education and job requirements (Boon and van der Klink, 2002).

Furthermore, competence is not directly observable; it is an output of evaluation (Eymard-Duvernay e Marchal, 1997). Research within the French economics of conventions tradition recognizes the role of judgment in the definition of competences. Accordingly, competence is an output of judgment by multiple actors; this judgment is supported by a variety of assessment methods. The competence-model often includes two main ingredients: a catalogue of skills previously defined by researchers or practitioners, and their subsequent evaluation. It is the judgment that transforms acquired knowledge and skills into competence. Not surprisingly, researchers often use *skill* instead of competence to address both acquired and required skills. Only enactment and judgment create competences. Consequently, we will use skills to refer to attributes that increase the employability of graduates.

The assumptions of economics of conventions have considerable implications for HE. According to Bailly (2008) the skills acquired during the time spent in the education system, i.e. the educational outputs, are no longer self-evident. Within the human capital model, education imparts useful skills that increase employees' productivity and consequently entail higher wages (Becker, 1964). Nowadays, these productive skills are no longer taken for granted.

The recent and persistent debate on the quality of HE emphasizes the judgment of the output using multiple approaches. Beliefs and evaluation by economic agents become crucial in economics of education and replace the substantialist approach (Bailly, 2008). The assessments are made by the stakeholders of higher education, namely graduates and employers. The output of these assessments is the information about the set of skills that makes a graduate more employable. The underlying assumption is that employers transform employability into employment (Harvey, 2001), so their requirements represent the most useful source of information on employability skills. Therefore, the close ties between HE and the world of work dominate political discourse and stimulate the scholarly discussion on how to ascertain employers' demands for graduate skills.

We suggest employers express their requirements in two different ways that can be labeled direct and indirect approaches. While the direct approach strives to collect information on skill preferences, hiring criteria, the indirect approach examines employers' satisfaction with HE outputs, especially employers' satisfaction with graduate skills.

Harvey and Green (1993) suggest different definitions of employers' satisfaction with HE but assume that it is difficult to separate the employers' perception of the graduates' quality from their satisfaction with it. We propose that employers' satisfaction with graduates' preparation can be used to ascertain the skills they value, and hence the skills that foster employability.

The next question is how do researchers collect information on skills that increase the employability of graduates? More specifically, how researchers did identify the skills required in the labor market and help HE institutions produce or develop these skills?

3. The required skills for graduates

As noted earlier, different methods have been used to define the set of skills that employers value most. Table 1 summarizes examples of research that gives an account of employability skills. We discriminate between the direct approach to employers and indirect ways to identify the demand for skills. Examples of the direct method can be found in research that explores skill preferences, job advertisements or through employers' or graduates' reports of skills demanded in the hiring process. Indirect methods focus on employers' satisfaction with graduates' skills. In this case, the underlying assumption is that employers will state the specific skills they need. The examples in Table 1 show that we are dealing with so many different methods. There are qualitative and quantitative methods; unsupervised or with long and short catalogues of skills; for broad or narrow fields of education. It seems thus unrealistic to expect broad agreement

Turning now to the employability skills reported in the literature, we note that broad agreement is found regarding few skills when using direct methods. These are relational skills namely communication, interpersonal skills and teamwork. For Tymon (2013) these are the skills that reached a broad consensus among internationally dispersed employers and are cited in most papers. Other skills lack agreement as can be seen in Table 1. Hesketh (2000), for instance, reports IT skills as less relevant, while Bennett (2000) found it in job advertisements as skills demanded by employers.

In addition to slight consensus, there is a range of different conceptual frameworks to define those skills. Relational skills are often labeled as generic or soft skills in contrast with vocationally-oriented, technical or hard skills. Furthermore, the literature offers a variety of labels for generic skills that is key skills (Washer, 2007); core skills (Bennett, Dunne & Carré, 1999); transferable skills (Bridges, 1993); and employability skills (Bridgstock, 2009). On the other hand, Olivier *et al.* (2014), synthesized the skills required by employers in five broad clusters, namely foundation skills that include written and oral communication, problem solving, and critical analysis; adaptive capacity, which concerns the ability to adapt to new situations and foreign workplace, learn with autonomy, develop new ideas and innovate; team working and interpersonal skills; IT skills; employability skills related to cope with pressure and stress, be flexible and adaptable, and meet deadlines; and technical and domain specific skills.

Table 1 details, in addition, some research focusing on the employers' satisfaction with graduates' skills. Hesketh (2000) suggests that employers gave negative feedback about graduates' teamwork skills. These skills are in great demand but employers are very dissatisfied with graduates' capabilities in this area; on the other hand, they are very satisfied with graduates' IT skills (Hesketh, 2000; Bennett, 2002).

In sum, we recognize the valuable contribution of research that attempts to detail the skills required by graduates in the labor market. However, the definition of employability skills is not an easy task. For example, there are no restrictions on the set of skills reported in job advertisements and so the possibilities are infinite.

Table 1. Examples of research on employability skills

Focus	Methods	Approach	Skills	Reference
Direct: information on required skills				
Skills preference at hiring process	Questionnaire sent to 893 employers; final sample: 372 in seven sectors Pre-defined list of nine skills	Seven sectors; prospective recruitment for managing positions Nine key skills in the survey	Relevant skills: Verbal communication Learning Written Communication Problem solving Less relevant skills: Numeracy IT	Hesketh (2000)
Job advertisements	Analysis of 1000 advertisements List of 14 skills reported in advertisements	Selected fields within management	Interpersonal skills: communication and teamwork Organisation IT	Bennett (2002)
Attributes demanded in hiring process	Experiment: individuals invited to participate in an online survey. Pre-defined list of six domains of skills	Seven occupational fields in nine European countries	Professional expertise Interpersonal skills	Humburg and van der Velden (2015)
Skills required by job candidates	Postal survey sent to 982 graduates; final sample: 200 graduates Pre-defined list of eight skills	Fields of Management and Economics in a specific HE institution	Personal qualities: enthusiasm, hard-working, dedication Personality Interpersonal skills: teamwork	Velasco (2012)
Indirect: includes employers' satisfaction with graduates' skills				
Employers' satisfaction with graduates' skills	Questionnaire sent to 893 employers; final sample: 372 in seven sectors Pre-defined list of nine skills	Seven sectors; prospective recruitment for managing positions Nine key skills in the survey	Satisfied with: IT Learning Verbal communication Numeracy Not satisfied with: Self-management Technical Teamwork	Hesketh (2000)
	Questionnaire sent to 500 employers; final sample: 170 employers List from advertisements	General	Satisfied with: Teamwork Analytical IT Presentation Not satisfied with: Foreign language Initiative Self-confidence Leadership	Bennett (2002)

However, caution should be taken with research using predefined catalogues of skills as employers and graduates rate only the skills in these catalogues. Consequently, catalogues may narrow the focus of employers and graduates and therefore criticism can be made of both unsupervised methods and this latter approach. Furthermore, we are concerned about the taxonomy of each skill, namely how each economic agent involved in assessment interprets the skill. Bennett (2002) gives examples of managers' confusion and disparate meanings of relevant skills.

Literature adds other methodological issues. Hesketh (2000) summarizes some concerns, more specifically the sample sizes; the focus on few types of industry without an attempt to collect broad data on employers' perspective on key or core skills; and the technical aspects associated with data analysis. The literature shows that researchers in economists of education and other social sciences have recognized that years of schooling, as introduced by human capital theory, represent a weak proxy of the skill. However, the current empirical research has given rise to miscellaneous and discrepant information that has ultimately heightened uncertainty.

4. Concluding remarks

The reported literature suggests there is no one best way to examine the set of skills that makes graduate more employable. Not only must a variety of methods be analyzed on the demand side, but there are different catalogues of skills and these may be long or short, and focused on broad or narrow fields of education. Furthermore, the employers' perceptions play a key role in the definition of the required skills for graduates. The underlying assumption of the research is that employers are undoubtedly aware of their needs. But is this a reliable assumption? Research shows clear signs of uncertainty and, indeed, little agreement.

It is interesting to question why wide agreement was only found for interpersonal skills, communication and team-work skills, which are relational skills. This can be explained by the fact that they are included in almost all catalogues and more importantly because they can be observed directly. Employers can therefore easily observe and assess relational skills.

We suggest that other hard-to-observe skills are also required. For example, analytical skills and the ability to identify and select information are important to facilitate communication and interaction, but they are difficult to observe. Although employers tend to refer to skills they can measure easily, they probably also expect graduates to use underlying skills. In fact, employers have always been concerned about the unobservable characteristics of job candidates. They often use third-party certification to ascertain whether a job seeker is suitable for the position and consequently use education as a screening device to distinguish the more able from the less able applicants without incurring additional costs (Borjas, 2010).

We realized that great efforts have been made to provide HE institutions and policy makers with reliable information on skill requirements but there is still no clear list of skills that graduates should use to *sell themselves* to prospect employers (Washer, 2007). Is it in fact possible to link HE and the labor market? And is this link desirable? Some reports indicate that employers are concerned about the lack of work-readiness (e.g. Pollard et al., 2015), while other research criticizes the political discourse that takes an instrumental and economic perspective to HE; these studies propose students' holistic development (e.g. Quinlan, 2011).

The discussion presented in this paper highlights the difficulty of implementing the strategy on graduate employability based on the supply of skills demanded in the labor market. The available research attempts to collect data that can improve the transition from education to employment and consequently reduce skill mismatch. However, modeling skills demanded in the labor market is a complex task, especially if researchers try to be exhaustive in detailing those requirements (Guillaume, Houé & Grabor, 2014). We documented that there are conceptual issues and methodological solutions that warrant attention.

Acknowledgments

This work is in a sense an outcome of research we started with Jean-Jacques Paul in 2006 at the University of Bourgogne, Dijon, France. We gratefully acknowledge his invaluable discussions on skills and related concepts in economics of education. Two anonymous referees and Abdul Suleman are also thankfully acknowledged by their helpful comments and suggestions.

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