Employability in Programme Development: Establishing a labour market to higher education feedback loop drawing on local labour market intelligence

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The role of higher education institution employability practice in graduate labour market outcomes: weak evidence, labour market imperfections, moral panic and the neglected equity perspective

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Abstract

In this paper we conducted a systematic literature review of employability practice in higher education, with the aim of identifying a theory of change underlying the work of employability practitioner and evidence for their effectiveness. We find that whilst an extensive literature engages with the concept of employability, there is very little in terms of robust programme evaluation evidence. We identify two main strands of the employability literature, examining the employability impacts of work-based learning (WBL) and curricular or pedagogical enhancement undertaken to improve learning, respectively. Methodologically, these papers mainly offer descriptive accounts of practitioners' work augmented with stakeholders' testimonies. Occasionally evaluations are based on ex-post surveys. We argue that existing theoretical and empirical evidence suggests there is a plausible route for labour market imperfections to drive skills mismatch and this is an area where employability practices in HEIs could play a beneficial role for economy and society. However, a range of evidence suggests labour market outcomes of graduates are good, certainly compared to other groups, and therefore the "moral panic" associated with popular discourse on graduate labour market outcomes is misguided. Conversely, graduate labour market outcomes are highly unequal, and possibly increasingly so. Emerging evidence suggests tacit knowledge of labour markets is an important driver of this. This tacit knowledge gap could plausibly be addressed through conventional employability practice. We argue that given the social salience of gender, social origin and ethnic gaps in graduate employment outcomes, robust evaluations of the ameliorating effects of employability practice are overdue.

Content

1. Introduction

The global economic crises and the social problems associated with unemployment, and in particular with youth unemployment, have reinvigorated public debates around the contribution of higher education to employability, productivity and economic growth in developed countries. As highlighted by the European Commission (2017, p. 1) the "employability of graduates is of concern in many EU member states. In some parts of the EU, a significant share of tertiary graduates is unemployed or working in jobs for which they are overqualified." Higher Education (HE) has expanded gradually since the Second World War (Lee & Lee, 2016) and in 2017, one third of the EU-28 population aged 25 and over had completed tertiary education (Eurostat, 2018, p. 8). However, many graduates are not able to access the employment and earnings benefits historically associated with earning a degree (Hermannsson, 2016). This is evident from a range of statistical indicators, e.g.: the widening dispersion of graduate earnings (Walker & Zhu 2008) with weaker earnings associated with less prestigious institutions and courses (Britton et al, 2016); and graduates working in non-graduate jobs, so called overeducation (McGuiness et al, 2018).

For some graduates, time and money invested in education do not translate into the expected economic and social benefit, and these disappointing results negatively affect graduate satisfaction surveys. This is a common problem throughout Europe as evidence gathered ahead of the New Skills Agenda for Europe (EC, 2016) showed that 71% of students or recent graduates and 61% of higher education employees disagreed with the statement that 'there is a good match between the supply of higher education graduates and the knowledge and skills the economy needs'. Moreover, 55% of respondents disagreed with the statement that 'people designing higher education courses are sufficiently aware of likely skills needs in the labour market'. Similarly, students and recent graduates want to be better informed about their choices with only 29% of students or recent graduates agreed with the statement that 'students are supported well to make informed choices about what to study'.

The issue of graduate labour market outcomes translates into increasing pressure for Higher Education Institutions (HEIs) to adapt curricula timeously to reflect changes in fields of knowledge and introduce elements of employability and Work-Based Learning (WBL) to foster skills and align them with market needs. In response, many HEIs have undertaken more strategic approaches to employability and invested more in dedicated skills development teams/units. One significant obstacle for improving graduate attributes and employability outcomes is that academic and administrative staff working on programme and course development are not labour market experts and therefore may be unable to identify and utilise available information on skills demand. This information gap has been recognised by the European Commission (2017, p. 2), which proposed to "stimulate further development and exploitation of different forms of graduate tracking mechanisms". Additionally, the mechanics of WBL learning or teaching in different situational contexts often presents a challenge for HEI on many levels. It involves developing the traditional academic model and systems, including fostering contact between academia and the workplace and providing adequate training and support for academic staff to enhance plurimodal learning.

Over the last decades, employability support units in higher education have flourished prompted by the pressure to enhance graduate employment skills, a measure which has also been highlighted in several EU documents, including the 2016 Skills Agenda. Bologna declaration is one of the most relevant employability initiatives in the EU legislation in the HE sector promoting lifelong-learning and competence-based education.

This focus on graduate employability coupled with the stark higher education expansion mentioned above, is masking other key elements: a) various academic programmes in fact are combining academic with vocational learning; b) vocational programmes in the tertiary education sector are not adequately visible in international education statistics; c) the relatively recent status change of traditional vocationally

based institutions into HEIs (e.g., post 1992 universities in UK or universities of applied sciences in Austria and Germany).

Against this background, this paper sets out to identify where the research frontier sits on employability practice, intended as activities to improve employment outcomes of individual graduates and distribution of outcomes between privileged and disadvantaged groups of graduates. This paper examines three research questions: a) What are the key challenges for enhancing employability programmes and graduate outcomes? b) What is the stated or implied theory of change underpinning employability practice in HEIs? c) What methods are used to evaluate employability practice and how robust are they?

2. Youth employment and employability programs in the higher education system

In the literature on labour market participation, young people are often considered as outsiders, as a group characterized by disadvantaged conditions and less opportunities with respect to other groups of insiders like for instance middle-aged males with a permanent working position (Lindbeck & Snower, 2001; Emmenegger et al., 2012). Many factors conspire in the difficulties experienced by young adults' in accessing employment. The on-going flexibilization of the labour market brings about the spread of temporary and non-standard work arrangements. This increases the risk of being trapped in low-income and precarious dead-end jobs, with negative long-term effects on individual working biographies and future pensions (Cuzzocrea, 2014). Studies show that the trend of tertiarization (growth in the service sector) and the expansion of high productivity economic sectors imply a stronger disadvantage for low-educated people possessing low or obsolete skills, who mostly end up as unemployed or employed in the low value-added service sector (Acemoglu and Restrepo, 2019; Bonoli, 2012).

Younger generations are on average better educated than older cohorts, although, when caught in the school-to-work transition phase, they often lack the job experience requested by employers. Therefore, stable employments in permanent and well-paid jobs are quite hard to reach for young labour market entrants. Ryan (2008) refers to this paradoxical disadvantage as a double skill bias, pointing out that both low skills and the lack of job-related and soft skills, that can be fully developed through work experience, can hinder labour market participation. Such a general trend is mediated by varying configurations of the interface among the education system and the labour market that influence young individuals' opportunities and constraints (Blossfeld et al., 2014, Roberts, 2009; Rubenson & Desjardins, 2009; Scandurra et al., 2021). In this context, the debate on policy making often shifted to the role of educational institutions and programmes in preparing young people for labour market entrance, addressing the necessity of both increasing qualifications and job-related experience. In this sense, WBL and internship programs can play a crucial role as they can break the perverse circle of low youth hiring due to a substantial lack of work experience and lack of experience due to limited hiring among the youth workers (Hervas et al., 2012).

Higher education institutions are assumed to upgrade their role from being providers of knowledge that increases the human capital endowment of their students, to become providers of work-ready skills, as well as train and prepare graduates to have a successful school-to-work transition experience. This last aspect seems to be crucial under increasingly dynamic, competitive, and unequal labour markets. Higher education institutions (HEIs) are asked to collaborate and engage more directly with external stakeholders, to identify the skill shortages and to provide work-ready graduates endowed with the required set of skills. Ensuring a proper insertion in the labour market has become one of the key objectives of the many different institutions involved. This emphasis often varies depending on economic outlook, and extent of independence of HEIs from government funding, and emphasis put on employability outcomes from higher education.

Several definitions of employability can be found in the literature to date, as in contributions by Hillage & Pollard (1998), Brown, Hesketh, & Wiliams (2003), Allison, Harvey, & Nixon (2002) or Yorke (2006). To summarize, employability can be considered as a set of (individual) characteristics that make graduates suitable for employment, and that is assumed to guarantee professional success, irrespective of the field or path chosen and relative to the economic context.

This process involves different stakeholders. The first are graduates themselves, who need to possess and develop the required set of knowledge, skills, attitudes, attributes and understandings that allow them (i) to find and retain sustainable employment; (ii) obtain a new one when needed; and (iii) to bring their know-how and skills to the employers to ensure their proper and effective functioning. The second actors are the Higher Education Institutions (HEIs), which are in charge of providing students with the adequate knowledge and skills that, on the one hand, facilitate their school-to-work transitions and, on the other, are required in the labour market. The third are the employers (i.e., the firms who hire young graduates) that are assumed to coordinate with the HEI to indicate which skills and abilities are mostly required. Whilst, on the one hand, they should be able to provide their employees with the appropriate training that allows them to keep-up with technological change and with a constantly evolving labour market (preventing the phenomenon of skill-obsolescence), on the other hand, firms should be also modifying their organizational structure in a way that maximizes the efficiency of their workers by taking full advantage of their existing skills. Finally, the fourth stakeholder is the government (or, in general, the political institutions), which are assumed to establish the proper framework of policies that allow the different actors involved to act efficiently (Reid, 2016; Watkins, Higginson, & Clarke, 2018).

The origin and set-up of employability programs are rooted in the Anglo-Saxon higher education system where there is now a clear division and hierarchy between institutions and students needs to get a loan for studying (Blake & Worsdale, 2018). In the background, the idea that in relatively unregulated labour markets (for instance UK, United States) 1) low educated face increasing disadvantage, 2) mobility among jobs and movement in and out of unemployment are relatively common for recent school leavers. Studies suggest that the net effect of instability for recent school leavers is to reduce their subsequent employment and earnings (Stern, 1999). Creating coherent pathways that lead from school to more stable employment therefore would provide lasting benefits, helping students to acquire working experience that will help them enter the desired career field. The quality of work experience matters with respect to the benefits. Moreover, in a knowledge and learning economy (Lundvall, 2016) that obliges workers to become more flexible and adaptable to technological and production shifts, work-based learning (WBL) becomes a strategy to prepare people for a more learning-intensive work and a way to retrain efficiently the workforce.

On the one hand, traditional vocational education has been criticized for not providing a sufficient theoretical foundation for graduates to continue learning and adapting throughout their working lives (Stern, 1999). On the other hand, pure academic education, is described as not attractive for many students. Work-based learning combines the two and it is assumed to improve students' academic performance and develop work-related capabilities at the same time. Under certain circumstances, linking students' work-based component with their classroom studies therefore may contribute to educational achievement, while still allowing students to gain valuable work experience.

Various forms of policy initiatives have been therefore promoted by EU and OECD countries to foster WBL as a crucial component of the skills agenda. From the corpus analysed, this is illustrated through courses combining class and work-based learning (with various tools and modes) by HEIs and faculties, as a way to adapt and improve the curricula offered to students. However, not all countries or higher education institutions design and implement employability programmes in the same way and a clear division between regulation (state oriented) vs. more lax training standards (free market ethos) can be envisaged.

This is very much related with varieties of capitalism settings affecting the formation of skills (Hall and Soskice, 2001; Estevez-Abe et al., 2001).

3. Systematic literature review: Methods and descriptive findings

The purpose of the literature review is to systematize available evidence on the design of different employability programmes in higher education sector, as well as their interactions with the educational and local economic context. The literature review provides a systematization of the programmes conceived to foster employability. Specifically, we will detail the available evidence on the effectiveness of employability programmes and the enablers factors that make employability work. Moreover, we will assess the research design and evidence of the existing literature in the field and examine the theory of change behind employability programs.

Overall, the systematic review of literature is defined as research that examines rigorous and transparent evidence produced by secondary sources for solving a problem previously conceptualized. Oakley (2012: vii) states that the purpose of a systematic review is to "arrive at a more comprehensive and trustworthy picture of the topic than is possible from individual pieces of research". For this purpose, James et al. (2013: 5) argue that "good reviews, conducted in a systematic and transparent way are a valuable tool for aiding policy making, since they provide a 'short cut' to the pool of research knowledge in a given area".

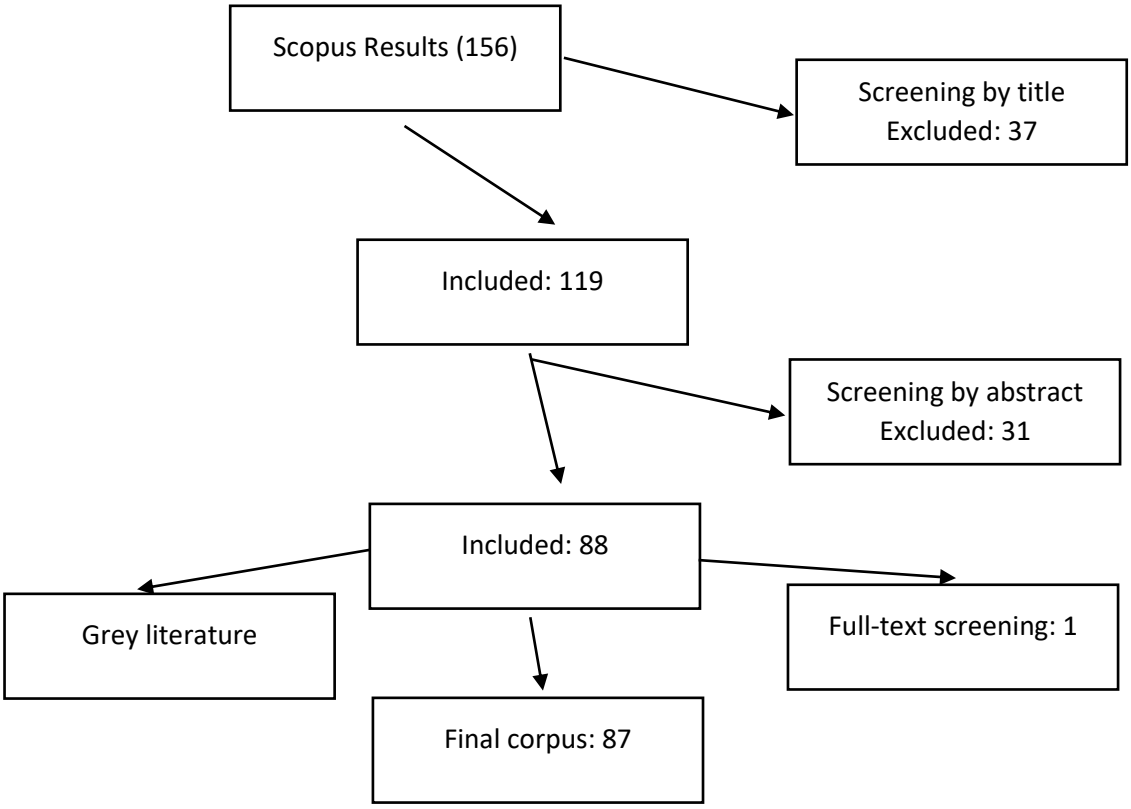
Table 1. Search by list of keywords

Search terms	Number of hits
A - (EPD)	7,102
A (EPD)+B (competence)	4,686
A (EPD)+B (competence) + C (outcome)	730
A (EPD)+B (competence) + C (outcome) + D (not LLL)	644
A (EPD)+B (competence) + C (outcome) + D (not LLL) + F (HE)	156

Source: Authors' own elaboration

The review selected 155 scientific papers from SCOPUS and JCR using the search terms and combinations detailed in annex in A1. These were based on six combinations of keywords previously agreed by the project consortium and consulted stakeholders. We proceeded to review 87 of these following a screening process. The literature for the review was initially conducted in two ways: i) a search in Scopus; and ii) literature recommendations solicited from a project advisory board made up of expert practitioners and researchers. Some of the references cited by the authors of these studies were also reviewed. This approach to the sources of the literature, combined with the selection criteria and the use of quality control resulted in a total of 87 academic articles, studies, reports, and peer-reviewed books. Figure 2 shows the process of searching and selecting bibliographic references. The complete list of the academic studies used in this literature review is provided in A3. The data extracted was organized in an extraction form (see A2) which enabled us to systematize the evidence and contextual information about the corpus. Additionally, we proceeded to rank the quality of the studies surveyed using criteria devised by Gorard et al. (see A4). We find that the corpus is dominated by case studies of higher education institutions in the US and the UK with a few exceptions, mainly from East-Asia and Australia.

Figure 2. Overview of the screening process



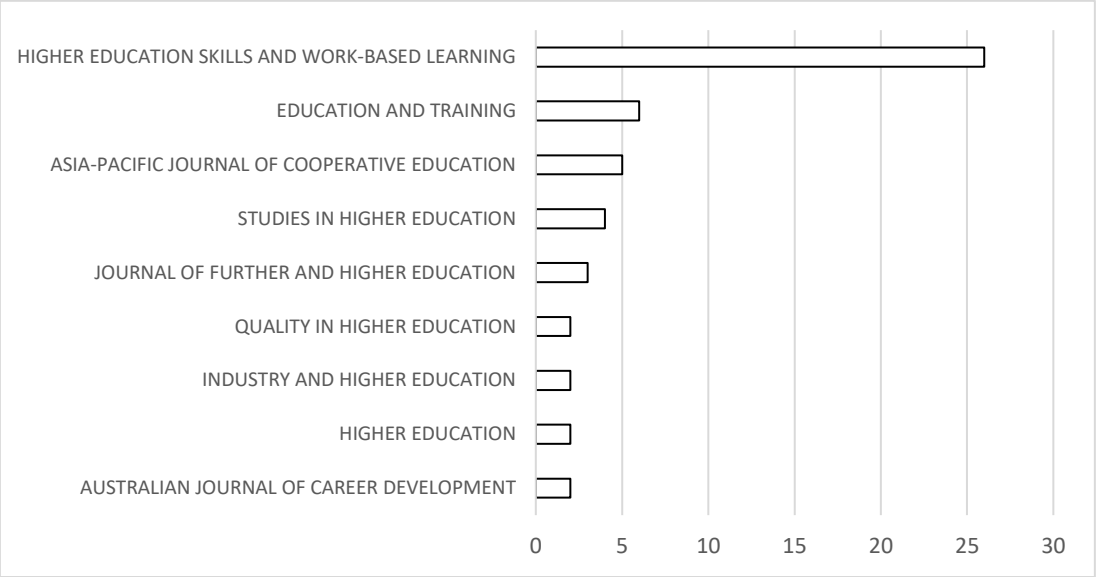
Source: Authors' own elaboration

All the papers in the corpus were read from start to finish by the research team. The lead author issued batches of papers to each team member, who then proceeded to read and summarise. An extraction form (see Appendix A2) was developed to facilitate consistency between different readers. These were uploaded to an online depository and were visible to the entire research team. For moderation, the research team met at regular intervals to present and discuss findings in extraction forms.

Most of the corpus (60 studies out of 87) is made up of very similar articles on small case studies evaluating work-based learning programs at a quasi-atomistic scale (a specific course in a specific degree program, a specific faculty, or a specific higher education institution). They share a quite simple research design, usually qualitative with limited amount of interviews to students (sometimes connected with a survey), HEI personnel and, more rarely, employers involved in placement and internship (5). Studies tend to be from Anglo-Saxon institutions, mostly England, Scotland, US and Australia related with some exceptions including, for instance, studies from Malaysia, Iran or India. They are often from Emerald journals (e.g., 26 papers of our corpus appeared in the Higher Education, Skills and Work-Based Learning). Several publications are simply descriptive, and a number merely opinions. Only a minority adopt an explanatory approach (Tomic and Zilic, 2020; Lim and Lee, 2019), and only 21 out of 87 use quantitative analysis (almost exclusively based on surveys).

Figure 4 shows the descriptive statistics of the research design of the papers reviewed. The quality of the research as gauged by Gorard's (2004) criteria is quite low and on average all the indicators are close to 2. This implies a research design that is unsuitable for generalising, findings based on a small number of cases, with moderate numbers of missing data that are likely to impact on the findings. The standard deviation of the research quality indicators of is also high, suggesting a heterogeneous corpus in terms of research design.

Figure 3. Papers by journal



Source: Authors' own elaboration

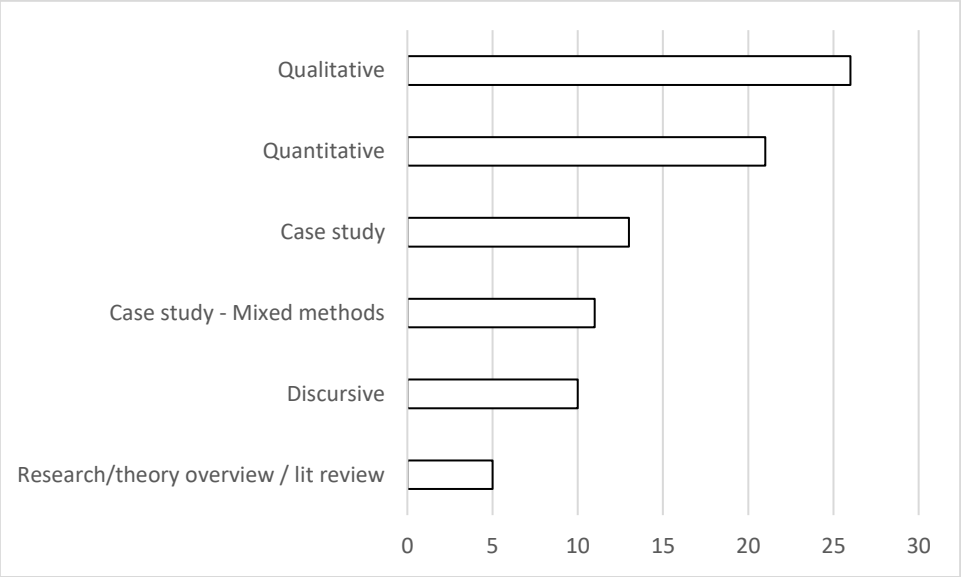
Table 1. Data quality indicator following Gorard et al. 2019 (see A4).

	Design	Scale	Completeness of data	Data quality
Mean	2.29	1.93	2.11	1.91
SD	1.49	1.35	1.60	1.54

Source: Authors' own elaboration

We analysed our data in the following steps. Firstly, we applied a deductive approach, after having conceived a 'logic model', which argues that change can be determined from the inputs of an intervention through to intermediary and then final outcomes through social mechanisms (Pawson, 2001). In line with deductive approach, we then undertook a more inductive perspective to examining the data of the extraction forms (Strauss, 1987). We attempted to ascertain the categories which emerged from the data and then: i) to examine the relationships between these categories; ii) to develop these into conceptual hierarchies with linkages within and between hierarchies; and finally, iii) to clarify how these might augment our understanding through the inclusion of contextual factors.

Figure 4. Research design



Source: Authors' own elaboration

4. Key themes in peer-reviewed academic research on employability

In this section, we summarize the findings of the literature review. It reveals that many different employability programmes take different form such as internship; work-based learning programmes and project-collaboration with firms. After having systematized the evidence and extracted the information through the literature review extraction form, ascertained the main categories and the relationships among them, thematically, we identify three main categories together with some subcategories to consider when engaging with employability programmes in higher education sector. In the first place, employability programmes need to be attractive for students and graduates; second, firms' need to envisage clear advantages and low costs for providing training possibilities; third, HEI need to be involved and tied up with local economic environment and ability to control and support training process.

4.1 Graduate labour market outcomes

HEI Employability programmes are deemed to provide faster transition to employment for graduates. However, most of the studies in the corpus do not assess empirically graduate labour market outcomes, as they rather focus on the characteristics of WBL training, looking at possible benefits for the students in terms of future opportunities on the labour market. The alleged chief advantage on the part of the student refers to the development of generic employability skills to the notion of a "work ready" graduate, with discipline specific knowledge and industry specific skills developed through experience in the workplace (Pegg and Caddell, 2016). This "work ready" element implies a reduction in uncertainty as far as future working perspectives are concerned, with respect to more general training programmes (degree studies) that do not provide equal possibilities to find a job in the short term. This aspect could make employability training more attractive for a part of the population that has a lower risk propensity and who sees this applied training trajectory as more appropriate with respect to their starting position.

4.1.1 Motivation for employability initiatives

There are two types of motivation for students to enrol in an employability programme, intrinsic and extrinsic. The first is connected to the pleasure, comfort, and the willingness to apply existing knowledge (Bangs, 2011), the former with external incentives and future rewards. A key extrinsic motivation is that work experience is likely to provide competitive advantage in gaining employment (Forsyth, Cowap, 2017), obtain higher initial job level and higher salary (Santiago, 2009). This reduces asymmetry of

information providing insight into a particular industry or type of employment (Harvey et al., 1998; Little and Harvey, 2006; Raven, 2018), so that students are more able to gain control and awareness in the development of their working careers. Moreover, students have the opportunity to increase their professional network, both in the firms where they realise the internships as well as in client companies (Hervas et al., 2012).

The intrinsic value of work-based learning for full-time students has been attributed to several factors. Fletcher-Brown et al., (2014), point to the importance of "live project learning" giving students exposure to the workplace resulting in personal, professional growth and self-confidence (Santiago, 2009). In a similar vein, (Thatcher, Alao, Brown, & Choudhary, 2014) report that work-based learning (WBL) facilitates learning through dialogue and service engagement. Such programmes combine the theoretical knowledge previously acquired with practical content and are deemed to be beneficial for the acquisition of transversal skills, such as communication and technical skills, teamwork and adaptation to change (Hervas et al., 2012; Soltani, Twigg, & Dickens, 2013; Walker, Reed, & Sutton-Tsang, 2018).

Based on a systematic literature review, Feldmann (2016) concludes that WBL strengthens student motivation and transferable skills because it exposes them to variable situations. This is further endorsed by Dogora et al. (2020) Hegerty and Johnston (2008) Woodley and Beattie (2011) and Yorke (2011) who all emphasised that learning is essentially a social and experiential process, and that for WBL to be effective, the pedological design should have the student in the centre, ensuring effective student experience, reflection and assessment. However, Kettis et al., (2013) emphasises the need to get away from the "magic ingredient of placement" approach, advocating more structure and training for academics in providing WBL support for students. Gomes et al., (2016) and Diver, (2020), go further, citing examples of actual student demotivation by poor or inappropriate placement experiences. Conversely, a temporary loss in confidence during WBL can be interpreted as a growing awareness of their own weakness and skill gaps, providing further motivation to learn more strategically in their remaining years at university (McKinnon and McCrae, 2012).

4.1.2 Wider Evidence of improved student learning

Work experience is also thought to supplement learning, enabling it to see how theory is applied in practice (Little and Harvey, 2006), and improve personal and transferable skills, such as communication, confidence, perseverance, and empowerment (Bullock et al., 2009; Helyer and Lee, 2014; Lim and Lee, 2019). Employability programmes enhance students critical thinking and "encourage them to reach their creative limits to look for new ideas, identify new approaches, and create new solutions" (Soltani, Twigg, & Dickens, 2013). Cross-exposure with workplace settings yields valuable experience and helps to improve problem-solving skills (Kasa et al., 2020). According to Beaven et al. (2009), employability should be seen as potential to gain and be successful in the specific field, therefore emphasis is placed on practical measures that HE institutions should take to support students in acquiring employability. This includes transferable skills, work-based learning through courses and placements and part-time working opportunities, specific skills/careers modules. Additional benefits of WBL in higher education are, the increase in student engagement, grade-attainment, and stakeholder satisfaction (Doss, Allett, Woods, Poursharif, & Knight, 2021) and improvement of graduates' career adaptability and optimism and a smoother and successful school-to-work transition experience (Kepir Sávoly & Tuzgol Dost, 2020).

Fostering employability needs student involvement and shared perception of quality of WBL component. A key element for this is the alignment between student personal goals, beliefs and values with his or her work role. (Feldman 2016). Several works connect benefit of WBL to self-confidence about doing a task and capability to do it shaping perseverance and effort (Thomson, 2010; Lester and Costley, 2010). However, as highlighted earlier, this feature cannot be deduced a priori from participation in a WBL settings (Feldman 2016; Kettis et al., 2013). Classroom-based learning do not have the same traits of work-

based, disruptive learning that help students to recognise how to transfer knowledge to the real-world scenarios (Chen and Adefila, 2019).

Traditional vocational education has been criticized for not providing a sufficient theoretical foundation for graduates to continue learning and adapting throughout their working lives, and pure academic education, is often described as too theoretical (Stern, 1999; Bertolini and Goglio, 2016). Ideally, Work-based learning may improve students' academic performance and develop work-related capabilities at the same time. Linking students' part-time employment with their classroom studies therefore may contribute to educational achievement, while still allowing students to gain valuable work experience (Wylie and Cummins, 2013).

4.1.3 Showing skills and ability to transfer knowledge to prospective employers

One main benefit of internships assessed by various studies is the improvement of transferable skills (e.g., Smith et al., 2007; Wilton, 2012). This enhances the ability to transfer knowledge acquired academically to diverging work contexts and to constantly adapt to these contexts with the aim of systematically renewing actions (Smith et al., 2007, Moscardo and Pearce 2007). Moreover, internships deepen the understanding of discipline-related content and prepare students to enter the vocational world and/or attend graduate school (Cedercreutz and Cates, 2010; Simons et al., 2012).

As a practical experience for applying academic concepts, internships deepen students' understanding of an organization or profession (Freudenberg et al., 2011, Hervas el al., 2012). As presented in Table 1, internships can foster not only the transfer of academic knowledge already acquired and the creation of new, work-related knowledge, but also provide students with an opportunity to improve their personal, professional and social skills, promoting career prospects (Freudenberg et al., 2011; Mc Kinnon and McCrae, 2012).

Internships also foster students' possibilities of making their own decisions and coping with complex real-life scenarios (e.g., Bowes and Harvey, 2000; Mandilaras, 2004). Students need to cope with uncertain situations and, for example, understand and apply disciplinary theory as well as make and execute priorities (Dall'Alba and Sandberg, 2006). Thus, internships support students in the process of professional socialization (Lindquist et al., 2006; Virtanen et al., 2008). Finally, internships favor the interplay between HEIs and firms and professions and allow them to collaborate in the training of future graduates. Importantly, this helps to introduce the knowledge and skills that daily work requires in the training of students (Hervas el al., 2012). Students often placed high value on learning opportunities offered by challenging and risk-oriented practical project learning: being 'thrown in at the deep end', budgeting, dealing with tutors and peers, deep engagement led to valuable skills (Beaven et al. 2009).

To sum up, these WBL settings are an opportunity to foster skills and competences that improve students' cross-situational capacity to act in the vocational world, hence, their skills and competences that lead to an enhanced employability. However, it is still unclear why skills and competences in some WBL settings are enhanced more than in others, The literature is relatively scarce, usually written from the academic perspective and lacks any systematic empirical framework for analysis, for example, the literature overview demonstrates a fundamental research gap. Only four of the 87 publications have examined the views of three stakeholders, employers, students and HEI providers on the outcomes of specific WBL programmes (Hegerty and Johnston, 2009; Fletcher-Brown et al., 2015; Ishergoma and Vaaland, 2016; Reinhard, 2016). Most of the studies presented look at the learners' perspective alone, or along with that of the HEI provider.

4.1.4 Social stratification and social reproduction

Curriculum development in subjects with graduate professions, such as engineering, medicine and law, has always been kept relevant and appropriate by the meticulously defined requirements of the of the

professional bodies. There is evidence too that professional bodies are working much more in partnership with HEIs to embed standards and curriculum composition within the degree structure to enable a smoother route to professional accreditation (Knox and Stone, 2019; Pepper and McGrath, 2019; Borah et al. 2019, and Armitage-Chan and Jackson, 2017). However, it is a popularly held view that other, "non-vocational" graduates are typically considered as not being "job ready" and "deficient in vital elements including leadership, critical thinking, self-reflection, conflict management and decision-making".

Since the 1970s there has been a massive increase in HEI participation in Western and developing countries. This has obviously increased the diversity of the student population, many of whom now hail from previously underrepresented populations, indeed, HEIs are now actively encouraged to promote participation and applications from these individuals. Our literature search revealed that when looking at the success of WPL initiatives there may be other confounding elements at play here, namely the role of social and cultural capital in the success of graduates in the workplace. many of whom hail from lower socio-economic groups.

In addition to technical competences (although often considered inadequate), the educational system provides a broad set of other important skills: on one hand, it provides meta-competencies which strengthen (or create) the ability of the individual to deal with different employment experiences, and on the other, it provides soft skills, which are key characteristics in the process of selection, and social capital, by means of social relationships, internships, training. Bertolini and Goglio (2016) highlight that many employers often value other aspects beyond the educational qualifications and tend to prefer informal methods of selection. The use of informal social networks in the process of selection is a way to guarantee trust. However, when reliance on these methods of selection is high, actual competencies acquired in the educational system became less important. This brings about consequences in terms of social inequalities, due to the different levels of endowment of social capital individuals of different social classes have. Herbert et al., (2020) argue that it is very difficult for students with lower social capital to compete unless they can be inculcated at an early level through WBL. This should include exposure to work practices, feedback, and reflective self-learning. They argue that such approaches should be formalised in new credit bearing approaches which reward appropriate engagement and learning for individuals with less social/cultural capital.

Others highlight a noticeable student naivety about workplace learning. Smith et al., (2017) report on a programme that attempted to underpin students' networks so that they became familiar with a variety of professional identities. The researchers noticed that many students simply thought that internships simply happened or passed by them, but they could not do much to avail of these opportunities. Gbadamosi et al., (2019) and Fletcher-Brown et al., (2014) both noted the lack of student investment in networking with employers in placements.

The extant literature also indicates that sometimes students do not understand the importance of having work-ready skills for a successful school-to-work transition experience. This is critical because if it occurs, students are less likely to make an effort to acquire them (McManus & Rook, 2021). For learning to be effective, it is crucial that students are truly convinced of the attributes and skills that WBL programs are assumed to provide. This is particularly so in organizations where WBL programs are elective and not part of the core curricula of the different degrees. Indeed, if students do not see the importance of such programs, then they are highly likely to decide not to take part to them. This implies that they are likely to miss the opportunity to acquire the work-ready skills that would support them in the school-to-work transition experience, and that employers are looking for. In addition, to make students understand the importance of having these work-ready skills it may also be useful to increase their ability to identify their own skills, which is extremely important in the extent of improving their employability (McManus & Rook, 2021). Diver (2020) in turn highlights the need to ensure adequate practical and emotional preparation

of students for placement experiences.

Foss et al. (2008) propose that individuals who are equipped with information, resources and the freedom to experiment are more likely to be aware of changes, be creative, speak up about their observations and ideas, and learn and act in an entrepreneurial way. Since the practical partner has the greatest influence on the working conditions, it can be deduced that access to resources and information, participation in decision-making and aligned goals of the WBL setting improve students' employability. Thus, it can be assumed that the level of socio-structural empowerment given by the educator and practical partner influences the level of enhancement of skills and competences. One institution Birbeck University (London) an institution with students almost exclusively from a low social/cultural background addressed these issues head on with an institutional approach designed to improve skills, networks, confidence, intrinsic motivation and creativity of all students (Walsh and Powell, 2017).

Other specific examples of inequality of outcomes in the literature search found gender disparities, cultural barriers and racial issues; Analysing four main disciplines groups (engineering, liberal arts, math/science/it studies) in a private university in Manila, Santiago (2009) finds significant gender differences in graduate self-reported skills acquisition which also vary largely across disciplines. He finds a significant gap in women's starting salary; however, no direct effect is found by gender in skills acquisition. Other researchers have highlighted cultural barriers that exist for many from traditionally collectivist cultures, not inculcated with individual competitiveness necessary in the modern workplace. Working in Turkey, Durson et al., (2020) demonstrated some successful interventions in this area which improved individualistic skills needed and research from Gbadamosi et al., (2019) emphasized the importance of part time employment in changing self-efficacy attitudes of Cambodian students in the workplace.

It is worth mentioning too, in this time of rapid student internationalisation, that many international students have not always benefited well from WBL placements. Both Sonnenschein et al. (2019) and Sutherland et al. (2021) highlight racial barriers in hiring and engaging with international students from other ethnic cultures

Feldman (2016) point out that employability programmes favour the value of the concept of empowerment and future research should distinguish socio-structural and psychological empowerment in order to maximize the design of employability enhancing WBL settings.

4.2 Firms, context and labour market imperfections

From a business point of view, firm participation in employability programs depends largely on its cost-benefit assessment. This aspect is related to the intrinsic conditions of the company (size, productive sector, type of production or local environment) and generally it represents an important barrier in terms of the expansion of an employability program. One of the dilemmas of work-based training is that all companies can benefit from better-educated graduates, but this does not mean that each of the companies has sufficient financial incentives and human resources to decide to train students themselves. The size of the firm that largely determine the cost and availability of trainees. This is one of the main reasons why firms that are involved in employability programs are medium-large firms. In this sense the incentives set from the government and local institutions can help to incentivize firm to have higher education students. In contrast with TVET sector where there are schemes that share the training cost between government and firms, HEI do not have neither the resources neither the scale of operation to set such a scheme independently.

4.2.1 Screening - Reducing of asymmetry of information between employers and employees

Employability programmes serve as an employee selection mechanism which offers employers the possibility of collecting more accurate information about the capabilities of potential employees with

relatively little involvement of resources. Employability programmes such as internships and WBL programmes seem to be an effective system of showing the ability of students in the workplace (signalling), so employers can acquire knowledge about the potential performance of future workers. As Acemoglu and Pischke point out (1998, 1999) a key factor for participation in WBL training is the possibility of selecting and recruiting students. Moscardo and Pearce (2007) examining students work experiences in the Australian tourism sector supports conclusion that the dominant social representation is that the main benefit for employers' is risk reduction in recruitment. In this study employers identified risk reduction in future recruitment and innovative contributions for their firms from students. Also, Beaven et al. (2009) suggest that WBL can improve the recruitment process, as most employers tend to consider work-based learning, and especially work placement activities, as a valid way of gaining experience.

Moscardo and Pearce (2007) find that WBL model reduces perceived time commitment for employers and academics. This is a key element as previous literature indicates that to promote learning and development activities within the firm is extremely important, ultimately because it enhances the organizational commitment of the employees, and is associated with higher job satisfaction, higher attachment to the job position, higher participation probability, and finally, is positively correlated with the financial performance of the organization (Maurer, Weiss, & Barbeite, 2003). Reinhard et al. (2016) argue that a key feature for building a cooperative education system model in HE is relying on a pool of several firms which can bridge a relationship with academia and commit to both remunerate learners and provide them with the insurance status of employees.

4.2.2 Contextual economic condition

Several studies point towards the existence of a skill gap between skill formation in the education system and employers' needs, as main contextual trait of national labour markets (Saeville et al., 2019;) or of specific sectors within them (Kasa et al., 2020; Beaven et al., 2009). However, the skill gap takes different forms across countries. Along this line, Lim and Lee (2019) elaborate for instance on the characteristics of the mismatch between available jobs and jobseekers in South Korea, noting that the connection between growth rate and employment has weakened due to prolonged low economic growth. Young people's efforts to get into the primary labour market has led to a competitive employment preparation behaviour (Hong 2018). As the education level has improved due to a high rate of college entry, and lost its competitiveness in the labour market, young people are looking to other skills to distinguish themselves through additional qualifications, internship, and career counselling. Conversely, Italy has a high proportion of young people with low levels of education and the lowest rate of tertiary education attainment, a high rate of youth unemployment and NEET (Bertolini and Goglio, 2016). In regard to bridging those gaps in skills and qualifications, it is identified that one of the most effective environments for employed individuals to learn is in the workplace (Lester and Costley, 2010). In an integrated approach to degree programmes the workplace becomes a source of academically valid learning, rather than simply a site for gaining experience and applying what has already been learned" (Lester et al., 2016, p. 10).

Whilst some of the literature highlights the importance of government intervention in curriculum development and WBL programs for economic development in developing countries (Dogora et al, 2020; Haron et al., 2019; Ishengoma and Vaaland, 2016; Mobarack, 2019; Chen and Adefila, 2019), from the corpus analysed, fostering WBL mostly brought to the setting of courses combining class and work-based learning (with various tools and modes) by HEIs and faculties, as a way to adapt and improve the curricula offered to students (Smith et al., 2019; Beaven et al., 2009; Drake et al., 2009, Thomson, 2010).

For instance, as noted by Saeville et al. (2019), in the UK the Leitch Review emphasised the importance of raising the attainment of the workforce by providing vocational education beyond level 5 (HM Treasury, 2006; Lambert, 2016). This call to action has been repeated in further policies aimed at addressing the skills gap in the labour market (DBIS, 2013, 2016). More recently, the Department for Business, Innovation and Skills (DBIS, 2016) emphasised the benefits of working in collaboration with industry employers to

develop a new generation of apprenticeships with a tailored curriculum focused on employer needs and skill shortages.

It is worth noting however, Australia has introduced a National strategy for Work Integrated Learning (WIL) (2015), as it is seen as a key component in career readiness. WIL can be paid or unpaid, but it is a formal component of a student's degree program. Here there is a shared responsibility between employers, HE providers and students for developing career -ready graduates. HE providers are responsible for mediating the relationships between employers and students. (Jackson, 2018). This has led to a shortage of WIL placements, which ironically place students with low social capital at a disadvantage.

4.3 HEI and characteristics of the programmes

Usually, the practice of work-based learning includes a non-systematic and wide range of activities, going from brief visits to worksites, or job-shadowing to observe the process of work, to school-based enterprise, work-placements and internships, apprenticeships (Stern, 1999). Higher education institutions are essentially the initiator and the key institutions in setting and governing employability programmes. The involvement and ties with local environment and economy varies largely by type and historical mission of higher education institutions.

4.3.1 Involvement with local HEI

A variety of programmes and actions have been undertaken, with strong differences in engagement, quality and outcomes. Several publications have highlighted that in order to create and maintain good WBL experiences for their students that there is a need for the HEIs to take a systemic strategic approach, based on long term relationships with employers and with appropriate resources devoted to the HEIs at a strategic and delivery level to enable sustainable positive learning experiences and outcomes (Basit, 2005; Dogora et al., 2020; Fletcher-Brown et al., 2014; Linehan and Sheridan, 2009 and Tudor and Mendez, 2014, White, 2012). This implies the necessity and willingness to invest in long and co-adaptive process between universities and firms (Drake et al., 2009). For instance, in degree apprenticeships institutions create closer links with industry, and this ensures that HE provision meets employers' needs and economy's demands (Saeville et al., 2019). A very detailed and comprehensive comparative framework approach for improving industry-based learning is outlined in Reinhard et al. (2016) which compare three applied sciences HEIs in Germany, South Africa and Namibia. They suggest that relying on a variety of commercial and industry firms of private and state ownership make the decision making in curriculum development more flexible to labor market needs and this match contribute to making the program more attractive for students.

HEIs also partner with employers to provide WBL for full time employees. By definition this is employer led, and the learners have a range of different requirements. A critical factor in engaging the employees seems to be some opportunities of career progression, which is why it is crucial that employers are involved in the design and delivery of training to meet the needs of the business through curriculum, rather than subscribing to generic course provision (Drake et al., 2009).

On occasions, students simply need recognition of prior learning; yet many also need hands-on training where they can learn components of the curriculum at high speed. Below et al., (2018); Linehan and Sheridan, (2009) and Livesley, Waters and Tarbuck, (2019) highlight that for such WBL to be effective it should be highly bespoke, with strong partnerships and workplace culture in place to provide support and individual learning paths for each student. Beaven et al. (2009) notice that participating employers tend to endorse the approach of embedding work-based learning in the curriculum of specialist qualifications. White (2012) reflects on the responsibility of the HEI for Quality Assurance in the learning, and to this end the need for developing strong partnerships with employers. HEIs need to guide and steer on organizational strategies such as application and selection processes.

Work experience that is supervised and/or mentored by HEI educators is a widespread approach from the situated learning perspective to enhance employability, especially in the UK education system (Auburn, 2007). Mentoring attenuates uncertainty and strengthens self- confidence (Crisp and Cruz, 2009, p.527). Therefore, it seems to be beneficial to provide students with an academic mentor or supportive supervisor, because HEIs cannot ensure that students have a mentor in the organization offering the internship. Australia's WIL strategy has caused shortages in internships as well as putting pressure on HEIs to oversee such experiences. This has prompted at least one paradigm- shifting response whereby Victoria University Law school has introduced a compulsory on-line module which uses a constructivist curriculum approach to encourage scaffolded learning, reflection, and peer interaction to help students get the best learning and understanding out of Workplace learning experiences (Woodley and Beattie (2011).

Others point out that collaboration between industry and academia is mostly exclusively seen in research but not in teaching (Borah et al. 2020). Perkmann et al.'s (2013) statement that "the impact of academics' engagement with industry on teaching is not clear and the question has not been addressed in the literature" (p.428). The likely reason for this research gap is that developed economies have been the preferred geographical context for examining I-A collaborations (Muriithi et al., 2018; Perkmann et al., 2013). The growing importance of high-impact research and academic-led entrepreneurship in developed countries might have led scholars to primarily investigate research and entrepreneurship-focused I-A collaborations. The discussions on the effect of industrial collaborations on teaching have been restricted to merely an 'unintended consequence' (Behrens and Gray, 2001) of research and entrepreneurship-focused collaborations (as in Stephan, 2001; Lin and Bozeman, 2006), rather than any acknowledgement that a teaching-focused I-A collaboration may also exist in its own right and be studied as such.

Taken together all these elements have different implications. First and foremost, a closer cooperation between the different actors involved, particularly HEI and firms, can help to match on the one hand the needs of students, and, on the other, the requirements of employers, aspect that can help to address the skill shortages present in the labour market. This would also create a more dynamic learning environment that could help to develop students' employability and work-ready skills, such as teamwork, communication, leadership, critical thinking and problem solving, which is often difficult (and perhaps more costly) in the "canonical" educative process.

4.3.2 Quality of the training, equilibrium between specific and general skills

The tension between specific and general competences and the adaptation of the content of the curriculum in the employability programs is one of the key aspects for the high standard quality programs. On this point, we refer to the question of what skills they must develop for graduates for prospective jobs. The underlying idea is that there is an optimal combination of general and specific competencies that is required by firms (Pouratashi and Zamani, 2018; Chen and Adefila, 2019; Forsyth and Cowap, 2017).
On the one hand indeed, the existing literature highlights the importance of acquiring specific (or vocational) competencies, as they can considerably reduce the extent of job-education mismatches (Heijke, Meng, & Ris, 2003; Verhaest & Baert, 2018). Pegg and Caddell (2016) bring up the notion of a "work ready" graduate, with discipline specific knowledge and industry specific skills developed through experience in the workplace. In addition, those graduates who are endowed with specific competencies are characterized by lower unemployment rates, and higher starting salaries (Verhaest & Baert, 2018). On the other hand, however, the long-term consequences for workers with a vocationally oriented background might be detrimental. Indeed, being highly related to a specific field and job position, vocational skills are more likely than generic one to become obsolete. Moreover, more vocationally educated individuals have a higher risk of long-term unemployment if they are not able to find a matching job right after graduation (Verhaest & Baert, 2018).

These general or transversal competences are part of the self-management capacity of work or the ability to work as a team and to retrain if needed. They include, for instance, the capacity of writing a job application, adaptation, career management, resilience and stress management skills, team-working, autonomous initiative (Thomson, 2010; McKinnon and McCrae, 2012; Smith et al., 2019; Wylie and Cummins, 2013). It is considered that jobs in the new forms of production organization require a greater weight of these general and not so much the specific competences. Bertolini and Goglio (2016) observe that this tendency is further increased by the process of flexibilization of the labor market, in which employers want immediately spendable workers but often do not want to bear the costs of investing in training for young workers. To this extent, previous studies indicate that to possess general competences is extremely important, as it may positively affect the probability of finding a suitable job position, even outside the own area of expertise, and escaping unemployment (Lim and Lee, 2019). This implies that the use of general competencies is not limited to the own domain and, therefore, favors the acquisition of new skills. In addition, workers with more generic type of education appear to be more likely to participate in training once in the labour market (Heijke, Meng, & Ris, 2003). Finally, generic degrees, being more focused on a wider type of knowledge and to basic skills, may facilitate the process of learning in a changing context and seem to lower the costs of occupational mobility (Verhaest & Baert, 2018).

5. Discussion and conclusions

1. This paper sets out to identify firstly where the research frontier sits on employability practice intended as activities to improve general employment outcomes of graduates and secondly to consider how such activities impact the distribution of outcomes between different socioeconomic groups. Using a systemic literature research on employability published in peer reviewed academic journals, several themes emerged. WBL initiatives when well designed, with the student at the centre appeared to enhance student employability, through deeper situated learning, improved student motivation and exposure to potential employers
2. HEIs are not all the same. There are wide differences in WBL activities by type of university and the degree subject
3. Most WBL initiatives are HEI-led, and driven by local economic context, literature points to the need for a strategic top-down approach within universities
4. Students are not all the same. There is much evidence that WBL needs to be well designed to assist those from a lower Sociological background overcome often unseen barriers
5. There is need for much broader empirical research on WBL interventions to highlight where improvements can be made to assist all students have equal opportunities for appropriate employment

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Appendix

A1 Search terms

LIST A	EPD terms	"graduate career guidance" OR "graduate career planning" OR "graduate employability skills programme" OR "graduate employability skills program" OR "academic employability skills development" OR "employability skills programme" OR "employability skills program" OR "employability skills training" OR "work-based training" OR "work-based learning" OR "work based training" OR "work based learning" OR "on-the-job training" OR "young graduate programme" OR "young graduate program" OR "Employability programme" OR "Employability program" OR "Employability initiative" OR "Workplace learning" OR "Workplace readiness" OR "Skills programme" OR "Skills program" OR "Work-related learning" OR "Embedded employability" OR "Credit-bearing employability" OR "embedding employability"
LIST B	competence terms	"Capability" OR "Competence*" OR "Competence-based" OR "Competency indicator" OR "Core skills" OR "Employability skills" OR "employability" OR "Expertise" OR "Integration of knowledge" OR "Integration of skills" OR "Key competencies" OR "key competences" OR "Key skills" OR "Learners" OR "Learning power" OR "Proficiency" OR "Transversal skills" OR "Vocational" OR "skills" OR "practical" OR "hard skills" OR "soft skills" OR "occupational skills" OR "craft skills" OR "adaptive skills" OR "transferable skills" OR "Talent" OR "Graduate attributes" OR "Graduate skills" OR "Employability skills" OR "Workplace skills" OR "Labour market skills" OR "Embedded skills" OR "up-skill" OR "up-skilling" OR "skills matching" OR "graduate attributes" OR "Noncognitive skills" OR "Cognitive skills"
LIST C	program outcomes	"employment" OR "labour market situation" OR "labor market situation" OR "labour market integration" OR "youth labour market" OR "youth labor market" OR "wage*" OR "salary" OR "earning" OR "labour market insertion" OR "job* recruitment" OR "school to work transition" OR "school-to-work-transition" OR "work placement" OR "hiring" OR "engagement" OR "labour force" OR "Global labour market" OR "Graduate labour market" OR "Graduate job market" OR "Graduate success" OR "Graduate outcomes" OR "graduate to work transition" OR "graduate labour market" OR "graduate careers"
LIST D (not)	LLL cycle terms	"lifelong learning", OR "CPD" OR "continued professional development" OR "professional development", OR "continuing education" OR "continuing education" OR "adult education" OR "ongoing learning"
LIST E	education level terms	"higher education" OR "college" OR "university" OR "university education" OR "post-compulsory education" OR "vocational universities" OR "technical colleges" OR "higher technical" OR "university of applied sciences"

A2 Extraction form

Title	
Authors	
Date	
Title of programme	
Reviewer	
Contextual information, to include for example:	
- Labour market conditions and requirements	
- The level of relationship between unions and business	
- Is there a demand from the private sector	
- Underlying logic of policy (strategy to create jobs etc.)	
- How did the TEI/government seek to make the content relevant	N/A
- How employer partner participants were invited	N/A
- Institutional and legal framework: legal status for employer, employee	N/A

Characteristics of programme design:	
- Length of the HE programme	
-Length of the EPD programme in months	
- Share of EPD in relation to the total time of the graduate programme (%)	
- Level of education	
- External quality assurance of the work-based component	No
- Condition to take part in/continue with the process	No
- Relative importance of enrolment in EPD in general	
- Type of qualification graduate programme leads to	
- Scale of operation	
- Role of external actors	
- Financial characteristics	
- What area of studies/economic sectors	
- Sequential or simultaneous components	
- Other (specify)	
Outputs	
Showing your skills to employers. Showcase	
Matching with the right people in your sector	
Want to continue to further HE or postgraduate master	
Developing your own work portfolio	
Explicit knowledge and tacit knowledge manual craft skills: a. Transversal/specific skills (hard, soft skills) b. Core skills (numeracy, literacy, problem solving, ICT skills) c. Work adapted skills d. Expertise e. Practical knowledge	
Socialisation, motivation, work ethic	
Self-confidence and self-efficacy	
Outcomes	
Position in the labour market: a. Time to the first significant job b. Significance of job c. Situation in the labour market (inactivity, unemployed, permanent, temporary) d. Part-time full-time e. Control of the process f. Hierarchical position g. Salary	
Other possible positive outcomes	
Reducing structural unemployment	
Skills mismatch: a. Horizontal mismatch b. Vertical mismatch c. Capacity of anticipation and forecast of future skills	
Employer outcomes a. Productivity b. Improved labour recruitment process c. Reduced cost of training and professional development	
Hypothesis	
Interaction hypothesis (design – outputs). More interaction employers, peers workplace, mentor, teachers) – skills – self-confidence	
Signalling hypothesis (outputs – outcomes): you get the credential – employers assume you have acquired (specific skills, soft skills, self-confidence)	
Vocational valorisation: self-confidence for study and learning.	

Model	
Different skills - market reward	
More practical – more motivation for certain type of students	

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A4 Quality evaluation grid

Design	Scale	Completeness of data	Data quality	Rating
Strong design for research question	Large number of cases per comparison group	Minimal missing data, no evidence of impact on findings	Standardised, independent, pre-specified, accurate	4
Good design for research question	Medium number of cases per comparison group	Some missing data, possible impact on findings	Standardised, independent, not pre-specified, some errors	3
Weak design for research question	Small number of cases per comparison group	Moderate missing data, likely impact on findings	Not standardised, independent, or pre-specified, some errors	2
Very weak design for research question	Very small number of cases per comparison group	High level of missing data, clear impact on findings	Weak measures, high level of error, too many outcomes	1
No consideration of design	A trivial scale of study, or number is unclear	Huge amount of missing data, or not reported	Very weak measures, or accuracy not addressed	0

Source: Gorard et al. 2019