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Work-Based Learning: Towards Embedded Processes and Inclusive Approach

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Abstract

Context: The context for this paper is strongly underpinned by the significance of the integration of education and the world of work, which has been recognised as a key issue for policy, practice and research across Europe and beyond.
Approach: The four interrelated symposium papers focus on the complexities of work-based learning and explore its different configurations. The potential of a social ecological approach for exploring the relationships between work and learning will be considered. The papers will further draw on perspectives from three European countries: Germany, Latvia and the UK.
Findings: Through these three cross-national case studies, the context of the workplace has been considered as a crucial indicator of different dimensions of work-related learning. The papers identify some influential interdependent and embedded processes involved, such as the consolidation of theory and practice, digitalisation, personalised workplace learning patterns and crossing boundaries between different sectors, approaches and learning routes such as work-based and Higher Education. In these processes, the central place of agency of the learning individual, needs to be taken into account, and the social ecological approach provides a useful framework to capture the interdependent, relational and contextually embedded developments involved.
Conclusion: Through these three case studies, this paper aims to facilitate cross-national discussion of the complex nature and changing demands of contemporary work-based learning, particularly highlighting the significance of its inclusive perspective and embedded approaches.

Keywords

work-based higher education, digital change, employer engagement, learning ecologies at work

1 Introduction

Natasha Kersh and Andrea Laczik

The symposium papers explore the complexities of work-based learning and consider its different configurations particularly drawing on perspectives from three European countries: Germany, Latvia and the UK. The consideration of the complex interrelationships between work and learning brings attention to the interdependent and embedded processes involved, such as the consolidation of theory and practice, digitalisation, personalised workplace learning patterns and crossing boundaries between different sectors, approaches and learning routes such as work-based and Higher education. The significance of the integration of education and the world of work has been recognised as a key issue for policy, practice and research across Europe and beyond. A number of studies bring attention to the existing mismatch between graduates' career aspirations or job readiness and employer expectations, as due to the lack of practical experience, young adults are finding it challenging to break into the sectors they were aiming at (Helyer & Lee, 2014). Bringing together subject-based and work-based knowledge in ways that meet the requirements and expectations of the learner, the employer and the provider, is considered to be one of the most significant challenges in the area of VET and work-based learning. The issue of how students/learners combine and integrate the various types of knowledge developed in college or the workplace is increasingly attracting more attention from researchers, employers and policy makers. (Guile, 2010; Bakker et al., 2011; Edwards, 2011). Research indicates (Evans et al., 2006; Guile, 2010) that reinforcing the connection between theory and practice and developing closer links between the college and the industry, supports learners in moving between college/university and work in a range of ways, specifically through participating in workplaces cultures that can facilitate learning and appreciating the way in which theory is embedded in practice. This paper considers the issues of the theory–practice consolidation as a key dimension of learning at work, specifically in relation to opportunities to contextualise and associate the experience of work to theoretical content and vice versa.
The four interrelated papers provide perspectives on the complexities of these processes as well as associated factors and challenges, and offer country-specific illustrations. Firstly we set out the context of the current challenges and new trends in the area of work based learning, particularly demonstrating the potential of a social ecological approach for exploring the relationships between work and learning through the dynamics of different scales of activity: societal, organisational and personal. Two cases from the UK illustrate a work-based learning approach to undergraduate study, which provide opportunities for the embedded practical experience, enabling higher education (HE) students to integrate their theoretical learning in the context 'real-life workplace settings'. Another example of work-based higher education is explored in the longitudinal case study from Latvia, particularly through employing the evidence-practice of work-based smart human learning facilitation design. The impact of digital change on work-based training has been explored through the German case, which brings attention to the ways digital technologies expand and change the boundaries of work-based learning. Through these three case studies, this paper aims to facilitate cross-national discussion of the complex nature and changing demands of contemporary work-based learning, particularly highlighting the significance of its inclusive perspective and embedded approaches.

2 Learning Ecologies at Work

Karen Evans

Work-based learning (WBL) is, at root, about relationships between the fundamental human, social processes of working and learning. The process of defining and scoping the field of work-based learning brings oppositions, tensions and exclusions to the fore. In offering expanded definitions of WBL, bridging embedded workplace learning perspectives and those that frame WBL as a class of programmes, this paper renews the argument for an inclusive approach that expands and rethinks the field. Theories and perspectives cluster in ways that are of significance to an inclusive understanding of interconnectedness of work-based learning, modes of practice and organisational dynamics. Dominant clusters have focused respectively on cognition/expertise (e.g., Eraut, 2011); on the textures of practice (e.g., Gherardi, 2015) and on organisational learning and change processes in collaborative networks (e.g., Elkjaer & Wahlgren, 2005; Toiviainen & Vetoshkina, 2018) with critical theories bringing insights that problematise and challenge some of the dominant assumptions in both (Sawchuk, 2011).
This introductory paper argues for a more dialogic approach in which robust lines of inquiry in different domains are opened more fully to an exploration of overlaps, gaps and points of connection. The international contributions in the symposium exemplify points of connection, as work-based learning is re-imagined in smart pedagogies for social capability (Maslo, Latvia); is reflexively reconfigured by digitalisation (Ertl, Germany) and deepened through higher vocational learning (Laczik, Emms, Kersh & Huegler). Furthermore, it is suggested here (more fully in Evans, 2020) that there is as yet unrealised potential in a dynamic social ecological approach that allows the relationships between work and learning to be explored through the dynamics of different scales of activity: societal, organisational and personal. While the agency of the learning individual is significant for work-based learning, a social ecological approach avoids the pitfalls of individualistic interpretations by capturing the interdependent, relational and contextually embedded processes involved.

3 Alternative Approaches to Higher Education in the UK: From Simulated to Real-world Workplace Learning

Andrea Laczik, Katharine Emms, Natasha Kersh

The UK HE landscape is strongly characterised by a theoretical approach to learning which can often be disconnected from the workplace. Two case studies that investigate alternative HE provisions have been considered which, to different extents, offer a work-based learning approach to undergraduate study. The first considers the Edge Hotel School (EHS) as a case example of practically-based higher education. Students on the programme gain foundation or honours degrees from the University of Essex whilst working alongside industry professionals to operate a 4-star country house commercial hotel. This model of HE combines theoretical and practical knowledge and skills in contextually-relevant curricula and identify aspects of innovation relevant to the wider landscapes of hospitality education and practically-based higher education more generally.
The EHS model highlights issues such as the significance of the preparation of young people for the world of work (Tuomi-Grohn & Engestrom, 2003; Guile, 2010), facilitating the links between academic studies and practical experience and situating practice-based education in the higher education landscape. Cardiff University's National Software Academy (NSA) offers an example of both simulated and real-world workplace learning within a traditional university through its undergraduate degree in applied software engineering. The NSA was established in partnership between Cardiff University, local government and employers in order to address

local skills shortages and regenerate the south Wales economy, in which it is situated. Key aspects are the use of client-facing projects students work on in small teams to find solutions to tasks set by employers; the replication of a work-place environment in the NSA resembling an office space without lecture rooms; and the high level of employer engagement from co-designing of the curriculum content to guest lectures and relevant work placements. Similarly, in the context of the EHS case study, our interviews with both the school staff and employers have demonstrated that the practically-based model has been perceived as a quality 'brand' filling a gap in hospitality education, fostering the practically-based elements of the programme. An important example of embedded industry-engagement is the consultancy project undertaken in the final year, where a real-life problem provided by industry partners is tackled by students in small groups. Employers collaborating with the EHS on this project noted that it provided invaluable opportunities for the students to apply academic knowledge to real-life issues of key relevance to the industry. These two UK HE case studies collected data from semi-structured interviews with a range of stakeholders, including teaching and senior-leader staff, focus groups with students, and interviews with employers and other key informants, in order to understand the design and delivery of the courses in particular relation to employer engagement and real-world learning. It is argued that as an inclusive perspective, work-based learning approaches can be regarded across a scale with varying degrees of theory and practice (Evans et al., 2006). The two models described here offer distinct approaches, the EHS could be considered as offering a high level of real workplace engagement, whilst the NSA delivers its courses in a simulated workplace setting and with a distinct employer engagement.

4 Strengthening the Smartness in Work-based Higher Education Practice: A Case Study on Patterns of Complex Transformations

Irina Maslo

Going through four complicated transformations: knowledge hierarchy, social activities, community organization and modern system science, the work-based vocational education develops based on pedagogy as an inter- and trans-disciplinary system science (Uskov et al., 2016), and by changing educational spaces and nature of learning (Brooks at al., 2012) 'in' and 'for' smartness (Gil-Garcia et al., 2016) of inclusive multidimensional ecological systems of societies (Zuzevičiūtė et al., 2014; Jeladze et al., 2017). Therefore, the consolidation of theory and practice, the relationship between the university and the workplace in practically-based education are challenging aspects to accomplish the complex transformations highlighted above. The objective of this example from Latvia is to discuss the evidence on the embedding of multidimensional smart merging learning transformations in work-based higher education practice. The research was conducted in 2015-2019 as the part of the longitudinal case study 2007 - 2019 of Master degree programme "Educational Treatment of Diversity " at the University of Latvia, selected as one of the 15 best European practice cases for preparing the teachers for diversity in initial education (European Commission, 2017).

The patterns of complex transformations in work-based HE were explored using learning analytics and student feed-back/self-evaluation. A research framework of smart education (Zhu et al., 2016) was chosen. By using temporal learning analytics (Chen et al., 2018, p.7) and their potential for future computer-assisted qualitative analyses, class-based differentiated instructed smart merging learning collaborative activities have been observed over time and students' statements in forums and self-evaluation rubrics tested on evidence of students' individual-based personalized work-based learning and mass-based generative learning pattern (Zhu et al., 2016). The evident patterns of transformation show that, the work-based HE practice merges science (subject contents), pedagogy (class-based personalised instructed work-based smart collaborative activities) and digital technologies (organization of higher education studies in

smart work-based e-learning communities) in holistic smart pedagogical design. Secondly, strengthening the collective capacity of HE organization at students' self-determined physical, virtual and spatial life as well as workspaces ensure the success in achievement of smart merging learning outcomes - transformational smartness of themselves as collaborative person specifying them in diverse social, cultural and economic contexts of multidimensional inclusive ecological environments. Thirdly, it integrates existing and emerging digital educational technologies to meet the demand on flexibility for personalisation of smart merging generative learning and demonstrates the breadth and depth of transformational changes.

5 Reform or Revolution? The Impact of Digital Change on Vocational Education and Training in Germany

Hubert Ertl

In Germany, vocational education and training (VET) plays an important role in preparing the ground for young people's entry to the labour market. In particular, the dual system of apprenticeship training, combining on-the-job learning at training companies and school-based learning at vocational colleges, has been a remarkably big and stable educational sector in Germany. This contribution raises the question whether this system is still fulfilling its traditional role of facilitating school to work transitions in times of fast and far-reaching changes in the world of work caused by the effects of digitalisation. Research shows that digitalisation results in the need for a more highly skilled workforce (Zika at al., 2017, 2018). While digital instruments and digitalised work processes change occupational tasks in most sectors, the magnitude and impact of change is highly variable across sectors. It is, therefore, necessary to differentiate according to specific areas. What is much less clear, is how relevant skills can be developed and what contributions different educational sectors (school education, VET, higher education) can make to the skills mix in digitalised economies. This contribution draws on research conducted by the Federal Institute for Vocational Education and Training (BIBB) into the three connected aspects.

The first is the macro-economic change that is happening as a result of digitalisation and how this change is affecting the types, numbers, and levels of jobs that will be needed in the future labour market. The basis of this part of the work are big data sets, compiled across all economic sectors, used to model the impact of political and other kinds of interventions on the future labour market. The second aspect comprises the effects digital work environments have on different types of occupations, and the training programmes and processes associated with these occupations in the German system. In this context, detailed quantitative and qualitative analysis was conducted in eleven occupations, creating a reach and differentiated picture of the impact of digitalisations on vocational training in these occupations. The third aspect focuses on the pedagogic implications digital change has on training processes and the competencies required by training staff. This work is based on surveys of in-company-training staff and a number of workshops in which need for supporting training staff was drawn out in a systematic way. By drawing these perspectives together, indications for necessary changes to the training system emerge. These include a more important role of further training (based on initial training in the dual system) and a need for developing and supporting specific media-didactic competences of in-company trainers.

6 Conclusion

The complex interdependencies between work and learning have been underpinned through the consideration of the three national contexts. In the context of Germany, the rapid changes resulting from the increasing use of digital work processes have far-reaching implications for work-based learning arrangements. This entails the introduction of digital learning tools and

requires the application of a variety of pedagogical approaches. It is also important to consider that the role of in-company training staff in supporting work-based learning processes will increase and that they, in turn, will need to be supported in order to be able to fulfil their roles. In Latvia the case study has indicated the ways in which smart-merging-learning as active, deep, constructive and meaningful learning goes beyond simple traditional teaching in the e-environment in the digital age. The case has suggested that these developments cause fundamental changes in our world-views, transiting from the uncontested acceptance and critical reflection of available information to causing profound changes in our souls, feelings, life and work perspectives, beliefs and behaviour. It enhances transformational changes of selves, workplaces and societies as communities of smart-human learning culture and socio-ecological practice. Simulated workplace environments, practices and projects that offer an alternative approach to HE have been considered through two UK cases studies – the EHS and NSA. With input from employers to help co-create and support these provisions, students' learning can be supported through the linking of theory and practice, which in turn supports students' employability.
Through these cross-national case studies, the context of the workplace has been identified as a significant indicator of different configurations of work-related learning, including aspects such as digitization, combination of theory and practice and employer engagement. In these processes, the central place of agency of the learning individual needs to be taken into account, and the social ecological approach provides a useful framework to capture the interdependent, relational and contextually embedded developments involved.

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