The Duality of Global Online Labour Platforms as Restrictive-expansive Sites of Workplace Learning and Skill Development

Margaryan, Anoush

Document Version
Final published version

Published in:
International Journal of Training and Development

DOI:
10.1111/ijtd.12326

Publication date:
2024

License
CC BY-NC

Citation for published version (APA):
Margaryan, A. (2024). The Duality of Global Online Labour Platforms as Restrictive-expansive Sites of Workplace Learning and Skill Development. *International Journal of Training and Development*, *28*(3), 315-334. https://doi.org/10.1111/ijtd.12326

DOI: 10.1111/ijtd.12326

RESEARCH ARTICLE

INTERNATIONAL JOURNAL OF Training and Development

The duality of global online labour platforms as restrictive-expansive sites of workplace learning and skill development

Anoush Margaryan

Department of Digitalization, Copenhagen Business School, Frederiksberg, Denmark

Correspondence
Anoush Margaryan, Department of Digitalization, Copenhagen Business School, Frederiksberg, Denmark.
Email: ama.digi@cbs.dk

Funding information
Alexander von Humboldt-Stiftung; Cedefop

Abstract

The paper analyses global online labour platforms (OLPs) through the lens of the Expansive-Restrictive Learning Environments framework. The framework articulates a set of structural factors that enable or constrain workplace learning and development. The paper draws on multistakeholder, mixed-method empirical data to illustrate how OLPs are emerging as learning environments, where new and reconfigured skills, learning practices, and new forms of learning support emerge in response to the radically distributed and fragmented nature of this work. Against portrayals of OLPs as places of deskilling work devoid of learning opportunities, the paper contributes a more nuanced understanding of the duality of OLPs as simultaneously restrictive and expansive. Three dualities of OLPs emerge from the study: (i) their espoused vision restricts organisational support for workforce development, yet stimulates self-directed learning; (ii) their enacted workplace curriculum is patchy and opaque, yet offers novel structural features supporting learning and development; (iii) workplace learning practices in OLPs are autonomous, yet not atomised. The paper

illustrates how structure and individual agency interact in OLPs to create and configure learning opportunities for workers and informs practitioners about the current learning and development features and practices in OLPs.

INTRODUCTION

Online labour platforms (OLPs) intermediate the global demand and supply of skills matching clients and workers across the world to carry out tasks for pay. OLPs enable *location-independent* work, where both the allocation and the delivery of service occur entirely online (Lehdonvirta et al., 2019). OLPs are distinct from *location-dependent* platforms, such as for taxi hailing (Uber) or food delivery (Deliveroo), where the allocation of work is coordinated online, but the delivery of service occurs offline. OLPs comprise (i) microwork, where workers undertake microunits of lower-skilled tasks, such as image tagging and (ii) macrowork, where tasks are more complex and higher-skilled, such as graphic design and software development (Margaryan, 2019a). This paper is focused on the latter OLP type: location-independent, higher-skill macrowork.

The global uptake of OLPs has been on the rise (Kässi et al., 2021). Unlike employees and freelancers in organisationally embedded jobs, OLP workers do not have access to formal human resource development (HRD) provisions such as onboarding, training, or mentoring. The absence of HRD provisions is considered detrimental to workplace learning and skill development (Chalofsky et al., 2014; Fuller & Unwin, 2004). Recent commentaries have suggested that, as a result, OLP work might lead to deskilling and a lack of professional development opportunities (e.g., Degryse, 2016; Eurofound, 2018). Yet a few recent empirical studies found that, the lack of HRD provision notwithstanding, OLP workers engage in self-directed learning to develop their skills. For example, OLP workers have been shown to set learning goals to improve their work; seek feedback and share their learning with peers; demonstrate self-regulatory learning orientation; and develop marketing, negotiating, networking, customer relations and communication skills through platform work (Barnes et al., 2015; Margaryan, 2019a, 2019b). These early studies, although limited in sample size, method and scope, indicate that OLP workplaces, their structural constraints notwithstanding, may be shaping up as learning environments. This raises a key question: to what extent can OLPs be characterised as learning sites, in particular which of their features are restrictive or expansive for learning?

To address this question, I draw on a multistakeholder, mixed-method empirical data set to analyse macrowork OLPs through the lens of the Expansive-Restrictive Learning Environments (ERLE) framework devised by Fuller and Unwin (2004). The framework articulates a set of structural factors that enable or constrain workplace learning. Using survey and interview data from workers, platform owners and clients, trade unions and policymakers analysed integratively through the ERLE lens, the paper illustrates how OLPs are shaping up as sites of learning, where new skills, learning practices and forms of learning support emerge in response to the radically distributed and fragmented nature of this work.

The paper contributes to the literature by describing and analysing emerging learning and development practices in a novel form of work that has been understudied within the field. Recent literature has problematised the current and future role of the HR profession in platform-based, algorithmically managed work such as OLPs (e.g., Duggan et al., 2020; Kost et al., 2020; Meijerink & Keegan, 2019; van den Groenendaal et al., 2023). Scholars have highlighted the importance of HR specialists understanding the needs and expectations of the OLP workforce and proactively shaping processes and practices within this emergent work form (e.g., van den Groenendaal et al., 2023). This is important, not least because the increasing uptake of OLPs by larger companies to outsource tasks may soon more directly affect the HR function also in organisationally embedded contexts as suggested by recent empirical studies, for example, Corporaal and Lehdonvirta (2017). This paper engages with and contributes to this nascent strand of HR literature extending the conversation to elucidate specifically the training and development (T&D) practices shaping up in OLPs, in terms of both the structural conditions and the individual learning practices.

Next, I briefly outline a typical macrowork OLP setup and discuss how this work is distinct from organisationally embedded employment, including organisationally embedded contingent work. I then present the conceptual framework and a summary of the methodology underpinning my analysis. Using the lens of the ERLE framework, I present an integrative account of the findings and synthesise these by outlining three key dualities of OLPs that arise from the analyses. I conclude by outlining some implications for future research and practice.

CONTEXT

Macrowork OLPs allow clients and workers from anywhere in the world to register with a publicly visible profile to outsource and bid for tasks. A typical worker profile includes contact details, location, hourly rate, a work portfolio, list of skills, skill test scores or certificates, work experience history and client testimonials and ratings (Kässi & Lehdonvirta, 2022). Clients are typically sole entrepreneurs and start-ups, although larger companies are increasingly outsourcing work through OLPs (Corporaal & Lehdonvirta, 2017; de Groen et al., 2021). Macrowork OLP tasks span the following categories: creative and multimedia design; software development; sales and marketing; professional services (such as accounting or legal services); writing and translation; and administrative support (Kässi & Lehdonvirta, 2018). On task completion, the client and the worker evaluate each other providing a score and free-text feedback on specified criteria; the feedback and the score are then displayed on each party's profile.

OLPs are distinct from organisationally embedded work in at least four ways, broadly aligned with the scope of the key HR practices: selection and recruitment; interdependences and delegation; and training and development as summarised in Wood and Budhwar (2022). First, OLPs are labour market intermediaries rather than employers, and workers are independent contractors hired on-task basis, without a guarantee of repeated engagement. Second, unlike in organisationally embedded work, in OLPs tasks are by design autonomous and fragmented. The interdependencies inherent in organisationally embedded jobs are deliberately designed out of OLP workflows: a worker interacts directly with the client, without management oversight, and there are no teams. The platforms use algorithms to intermediate the match between skills requested and offered, but do not interfere in the task content or the worker–client relationship. In contrast to knowledge work in organisationally embedded jobs,

in OLPs no collective bargaining or codetermination exist. However, OLP workers have high individual autonomy in how and when they carry out the work, within the terms agreed with the client.

Third, unlike organisationally embedded work, OLP work is highly competitive: there is almost no shortage of skill supply because they enable recruitment from a planetary pool of workers (Kässi & Lehdonvirta, 2018). Finally, OLPs do not offer a formal HR function, yet classical HR features exist in OLPs, although these are often coded into platform interfaces and workflows by platform designers who are software developers rather than HR professionals (e.g., Duggan et al., 2020; Meijerink & Keegan, 2019). Examples of HR features include job design (by platform designers who produce the interfaces and workflows governing the work); recruitment, contracting and work assignment (jointly overseen by the platform and the client through a hybrid, human-algorithmic process); performance monitoring and appraisal (through client feedback and testimonials and through platform features, such as ratings and ranking algorithms); and skill validation (through digital badges and platform-issued certificates). Taken together, these structural features, common to all major macrowork OLPs, form the architecture of these cloud workplaces, within which learning and skill development unfold.

THEORY: THE EXPANSIVE-RESTRICTIVE LEARNING ENVIRONMENTS FRAMEWORK

To elucidate how OLPs are shaping up as learning environments, I use Fuller and Unwin's (2004) ERLE framework, which articulates several structural dimensions that can foster or impede workplace learning. The ERLE framework is guided by the theory of situated learning that views learning as a relational, generative and collective process in authentic contexts (Lave & Wenger, 1991). The empirical evidence for the ERLE framework stems from muti-method case studies conducted across various industrial sectors (Fuller & Unwin, 2004, 2007); the framework has been applied in diverse domains such as healthcare (Gustavsson & Ekberg, 2014), vineries (Bryson et al., 2006), and academia (Boyd et al., 2015).

Next, I outline the key concepts and theoretical assumptions underpinning the ERLE framework (Table 1). Fuller and Unwin's (2004) original version of the ERLE framework comprises 20 individual, ungrouped dimensions. To facilitate the presentation and discussion of the framework and the findings, I have grouped the dimensions into four categories—which I judged to be thematically related[1]—maintaining the authors' original terminology: vision of workplace learning; workplace curriculum; learning opportunities; and boundary crossing (mapped out in Table 1 and italicised in the presentation that follows).

[1]The four categories in Table 1 cover 15 out of the 20 original dimensions. Five of the 20 original dimensions proposed by Fuller and Unwin are not covered in this study, because they are not applicable in OLP work. The five omitted dimensions are: *managers as facilitators of workforce development* (there are no managers in OLP work as described in the Context); *participative memory within the primary community of practice* (OLP work is individual, there is no 'primary' community of practice that would be consistent with Fuller and Unwin's conceptualisation); *distribution of skills* and *value ascribed to core/technical skills* (these dimensions are not analytically useful in evaluating OLP work which by definition comprises higher-skill tasks that require specialist, core/technical skills, which are core value in this work); *importance of organisational innovation* (analytically not useful in this context, because OLP work is individual, autonomous, task-based, and nonorganisational, as explained in the context).

TABLE 1 The Expansive-Restrictive Learning Environments (ERLE) framework (adapted from Fuller & Unwin, 2004).

Categories of dimensions	Expansive dimensions	Restrictive dimensions
Vision of workplace learning	• Learning as progression for career • Recognition of workers as learners • Dedicated time off-work for learning and reflection • Alignment of individual development and the development of organisational capabilities	• Learning for current job/task • Lack of recognition of workers as learners • Virtually all learning on-the-job; no time-off for learning • Tailoring individual capability to organisational need
Workplace curriculum	• Workplace curriculum is transparently articulated, documented, and accessible to all • Access to a range of formal qualifications	• Limited transparency of and patchy access to workplace curriculum • Little or no access to formal qualifications
Learning opportunities	• Chances to learn new skills and progress to new jobs/tasks • Knowledge and skills of the whole workforce developed and valued	• Barriers to learning new skills and progressing to new jobs/tasks • Knowledge and skills of only key workers developed
Boundary crossing	• Gradual transition to full participation • Teamwork valued • Participation in multiple communities of practice in and outside the workplace • Horizontal/multi-dimensional view of expertise • Opportunities to develop across boundaries • Cross-boundary communication encouraged • Broad access to tasks and knowledge	• Fast transition to full participation expected • Rigid specialist roles • Limited participation in communities of practice • Uni-dimensional/top-down view of expertise • Limited opportunities for boundary crossing • Bounded communication • Restricted access to tasks and knowledge

Vision of workplace learning

A key dimension is whether organisations view *workplace learning as progression for long-term career* or a mechanism to address short-term performance. Unlike in educational institutions, where learning is an ultimate goal, in the workplace, learning serves as both a means to an end (the production of goods and services for profitable sale) and a by-product of work (as conceptualised by Eraut*, 2004 and Kitching, 2007, among others). In the workplace, although learning is important to professional development and well-being, the availability and uptake of learning opportunities is grounded in the material reality of work. The resultant short-term view may cause tension between learning and performance goals and an expectation for rapid transition into job roles, with detrimental effects on learning (Boud & Solomon, 2003). The ERLE framework posits that workplaces that foster longer-term development, support and *recognise workers as learner*s and allow workers to take *dedicated time off-work for learning and reflection* are expansive, whereas those that focus solely on short-term learning for a task and

fail to provide time for off-the-job learning are restrictive (Fuller et al., 2007). Furthermore, the ERLE framework promotes the view that learning-conducive workplaces emphasise the *alignment of individual and organisational development* matching jobs and workers according to their developmental goals, rather than only seeking to tailor individual capability to organisational imperatives (Boxall, 2013).

Workplace curriculum

This denotes the organisational knowledge sources, processes, policies, and pathways that enable a novice/newcomer to become an effective participant in the workplace. The notions of espoused, enacted and experienced workplace curriculum denote learning opportunities formally or informally provided by the organisation and those perceived/practiced by the workers (Billett, 2006). The ERLE framework suggests that workplaces, where the *curriculum is transparent, well-documented, and accessible to all*, are expansive for learning, whereas workplaces, where pathways to learning are opaque and where access to these is patchy and demarcated, are restrictive. The ERLE framework further emphasises organisational support in accessing formal qualifications, which have traditionally played an important role in signalling employees' skills to employers (Spence, 1974). ERLE posits that workplaces, which afford *access to a range of formal qualifications*—for example, by providing funding or time off work for education or professional certification, are more expansive than those where workers have little or no access to formal, off-the-job learning (Fuller & Unwin, 2004).

Learning opportunities

Within ERLE, workplaces that provide *chances to learn new skills*, for example through access to more challenging tasks and roles, are seen as expansive; in contrast, workplaces, where barriers exist to workers broadening their skills, are viewed as restrictive (Fuller et al., 2007). Furthermore, in expansive workplaces, tasks are developmentally sequenced from less to more complex and demanding to progressively guide the workers towards functioning to their full potential (Billett, 2006). Additionally, the ERLE framework posits that expansive workplaces seek to *develop knowledge and skill of the whole workforce* rather than only of key workers (Finegold et al., 2005).

Boundary crossing

The ERLE framework highlights the availability of *boundary crossing* for knowledge sharing across functional, disciplinary, and organisational borders as hallmarks of an expansive learning environment (Ludvigsen et al., 2011). A key related notion is *participation in communities of practice*: the idea of 'learning as participation' is central to situated learning theory underpinning the ERLE framework. Across their careers, workers engage in a *gradual journey from peripheral to mainstream participation in a professional practice* and its constituent communities (Wenger, 1998). Multiple trajectories of participation include from novice to expert, from newcomer to an established member, or between communities within and outside the workplace. In communities, learning through direct interactions, such as mentoring and

collaboration, or indirectly, through observation and imitation, are central features in a professional's working life (Engeström et al., 1995). The ERLE framework posits that expansive workplaces *value teamwork* and enable workers' *participation in multiple communities of practice in and outside the organisation*, with the opportunity to engage/disengage flexibly. By so doing, expansive workplaces afford greater learning than those where a more static and inflexible participation is expected, for example, where interactions are confined to immediate teams.

Finally, the ERLE framework emphasises that an organisation's conception of expertise may foster or impede learning opportunities in the workplace. ERLE contrasts the more restrictive conception of expertise as primarily vertical/top down, whereby knowledge resides in experts who may or may not share it with others, with a more expansive, *horizontal and multidimensional view of expertise* (Engeström et al., 1995). The latter is evidenced by, for example, the availability of opportunities to engage in *multidirectional knowledge sharing and collaboration*. The ERLE framework posits that expansive workplaces encourage *cross-boundary communication* and foster *broad access to tasks and knowledge*, while restrictive settings bound communication and access to knowledge and learning. The expansive, multidimensional perspectives recognise that learning and development also occur through horizontal, relational-dialogical processes of sustained immersion in a community of practice (enculturation), exposure to diverse contexts, and bottom-up knowledge sharing (Edwards, 2010).

METHODOLOGY

The paper draws on a mixed-method, exploratory, sequential, interactive design, where the qualitative and quantitative data are equally important and analysed integratively (Creswell & Clark, 2011). The qualitative datasets comprise (i) semistructured interviews $n = 77$ workers from six countries (the United Kingdom, Finland, Germany, Italy, Spain, and Romania) working on four global OLPs (Upwork, Twago, PeoplePerHour, and Fiverr); (ii) semistructured interviews with stakeholders $n = 23$; and (iii) documents on direct and indirect HRD provisions in the platforms. The quantitative data set is from a survey of $n = 1001$ workers from the four OLPs and the six countries.

The methodology is outlined below. A fuller description of the data collection and analysis procedures and instruments, sampling and recruitment strategy, and research ethics is detailed in Supporting Information File.

Phase 1. Interviews

Worker interviews

Respondents were recruited by either directly posting an interview 'job' on the platform and hiring eligible workers who applied; inviting eligible workers to apply to the posted 'job' through the platform's invitation-to-apply function; or messaging them via LinkedIn. In addition, officials from two platforms (Twago and Fiverr) emailed interview invitations to their registered workers. The eligibility criteria were: (a) being at least 18 years old; (b) residing in one of the target countries; and (c) having completed at least one platform task. Worker interviews lasted 60–90 min, were conducted remotely by video/audio link, recorded, and

transcribed. The interview protocol is available in the Supporting Information. The demographic details of the interviewed workers are summarised in Table 2.

Stakeholder interviews

Platform representatives and clients were recruited by contacting the CEOs and public relations officials of the four platforms. Stakeholders were recruited from our own policy networks, the policy literature, related conferences, and by snowballing. A total of 23 stakeholders from the United States, the United Kingdom, Germany, France, Belgium, Spain, Italy, Finland, Sweden,

TABLE 2 Characteristics of the worker interview ($n = 77$) and survey ($n = 1001$) samples.

Characteristic	% of interviewed workers (%)	% of surveyed workers (%)
Gender		
Women	49	47
Men	51	53
Age (topmost populous age groupings)		
18–24	20.5	18–30: 39%
25–34	57.5	31–40: 35%
35–44	12	41–50: 16%
Primary platform		
Fiverr	23	30
People per hour	30	27
Twago	18	1
Upwork	28.5	42
Highest level of education		
No school qualifications	4	3
High school	13.5	11
Vocational/Trade qualifications	5	6
Undergraduate	49	34
Graduate & Postgraduate	28	30
Employment status		
Full-time next to platform work	17	19
Part-time next to platform work	7	10
Self-employed	62	66
Students	6	13
Homemaker/Carer	1	2
Retired	–	0.5
Unemployed	6	3.5

Netherlands, and Ireland were interviewed, including: platform representatives and clients ($n = 6$), policy experts ($n = 6$), trade unions and supranational labour organisations ($n = 5$), professional associations ($n = 1$), government agencies ($n = 5$). The stakeholder interviews were conducted by phone/video link, lasted 60–90 min, were recorded and transcribed.

Phase 2. Document and website review

To better understand the mechanisms and practices through which platforms facilitate learning and skill development, we analysed the materials publicly available on the four OLP website and manually inspected their features. The data comprise downloaded documents and screenshots; these were used to contextualise the interview and survey data during the analysis.

Phase 3. Worker survey

A validated questionnaire (Margaryan et al., 2022) was used. The survey participants were compensated 9.50 USD/8.50 EUR/7.50 GBP. Three sampling methods were used: platform-assisted probability sampling, equal quota sampling, and snowball sampling detailed in the Supporting Information. The key demographics of the surveyed workers are summarised in Table 2.

Data analyses and synthesis

In the first phase of analysis, the interview and survey data sets were coded and analysed individually, drawing on thematic analysis approach widely utilised in mixed-method research (e.g., Tashakori & Teddie, 2010). The interview transcripts were coded in Nvivo using a mixture of predefined and emergent codes. The predefined codes were based around the following key themes to help explore the general presence and prevalence of learning opportunities in the OLPs the skills workers report developing; learning activities and strategies workers use to develop the skills; platforms' and stakeholders' approaches to promoting skill development and recognition. The initial coding of the interview data was done by a researcher, subsequently the coded transcripts were read through by 1–3 other researchers who collaborated closely to review, discuss, deliberate, and fine-tune the coding until they achieved a consensus regarding the labelling of each code and theme. The survey data were analysed descriptively, focusing on identification of frequencies, to scope and systematise the prevalence of skill types workers develop through their platform work and the workplace learning activities and learning strategies they use to develop those skills. A *descriptive* analysis of the quantitative data is both necessary and sufficient for the purpose of this study (describing the expansive and restrictive features of OLPs), as it helps evidence the *prevalence* of skills workers develop and of individual and social learning activities and strategies they use to develop those skills in OLPs.

The second phase of the analysis was to cross-check the initial key themes/findings between the quantitative and qualitative datasets (e.g., Ryan & Bernard, 2003). These were supplemented by documents and screenshots describing platform functionalities and provisions, and, where necessary, additional desk research. Finally, the key themes and findings from the quantitative and qualitative analyses were synthesised into an integrative

account, applying the lens of the ERLE framework, namely codes labelled after the key ERLE dimensions in Table 1.

A limitation of these data is that they are self-reported and cross-sectional. However, the biases associated with self-reported data are partially addressed by the mixed-method, integrative approach, which helps triangulate the different types of data from different actors, stakeholders and platforms (Tashakori & Teddie, 2010). Although the data are cross-sectional, they are appropriate to the purpose of this research. The main criticism of cross-sectional designs is that they do not elucidate causality (Spector, 2019). However, in this study, establishing causality is not the purpose. Rather, the purpose is to identify and describe the expansive and restrictive features of OLPs as workplace learning environments, by analysing the platforms' structures and the main actors' and stakeholders' perspectives, experiences and learning behaviours, for which cross-sectional data are helpful.

FINDINGS

Vision of workplace learning

The findings show that OLPs view learning and development as workers' responsibility and have no workforce development strategy. The interviews revealed several reasons for this. First, platforms lacked a business case for a direct involvement in workforce development:

> *As a platform, it's not our goal to develop freelancers to learn new skills. It's our goal to find freelancers with the right skills. The clients are looking for somebody who has already done it before. Because there are enough people who can do the job... That's really different from people who are employed and they have a contract with the company and the company says: 'Well, we have got some challenging job for you, you never did it but we think you can learn it*. (Platform Executive, Platform 1)

Clients corroborated this view:

> *If somebody needs to be trained or hasn't the right competences, we [would be] looking further for a candidate who has the right competences. ⟨Client company⟩ invests a lot in training for the permanent workers. For contingent workers, investing in training is less, because we expect somebody when he's hired, that he has the right competences and experience*. (Platform Client, Platform 1)

Another reason for the lack of workforce development strategy is the platforms' perceptions of the legal constraints on direct involvement in learning, namely the risk of being reclassified as employers in countries where the provision of training is considered a hallmark of an employment relationship:

> *Facilitating [a] training relationship with the freelancer gets us into secondary questions about labour classification and individual contracts between the freelancer and their client*. (Platform Executive, Platform 2)

Clients echoed this concern:

> *It's due to our law here in ⟨EU country⟩. The freelancers are seen as independent workers. And the term 'independent' is what it says: they are expected to develop themselves*. (Platform Client, Platform 1)

Similarly, if for different reasons, the workers appeared to perceive a limited role for platforms and clients in supporting learning. In workers' perspective, OLPs and clients were not experts in the skills workers were providing, therefore not in a position to offer training. Workers suggested that OLPs' support should be limited to platform-specific guidance, for example how to establish an attractive profile. For skills in their specialism areas, workers preferred guidance from experts, such as successful platform workers. Simultaneously, workers expressed a concern that such platform-specific guidance could stimulate an influx of workers with newly acquired self-marketing skills, but limited core skills, causing reduction in the amount of work available.

Workplace curriculum

Yet despite the espoused non-involvement in workers' professional development, OLPs provide indirect learning support, constituting an enacted workplace curriculum. We uncovered seven mechanisms through which platforms indirectly supported learning: (i) publishing data on in-demand skills; (ii) referring workers to external learning providers; (iii) facilitating open worker profiles; (iv) facilitating peer-to-peer knowledge sharing; (v) providing training marketplaces; (vi) steering clients to give feedback to workers; and (vii) providing skill validation and certification.

First, OLPs regularly publish information on sought-after skills. An example is Upwork's quarterly lists of top requested skills and skills with the fastest-growing demand for (e.g., https://www.upwork.com/press/releases/upwork-unveils-top-10-most-in-demand-skills-for-technology-marketing-and-customer-service-independent-talent-in-2022). We found that workers regularly use such lists to self-monitor the market for in-demand skills and to break into sought-after areas. Second, some OLPs supplement their lists of in-demand skills with recommendations of online courses from providers such as Coursera or Udemy. Other OLPs establish formal partnerships with external learning providers, referring workers to these providers for a commission fee. For example, PeoplePerHour has a partnership with an online learning provider Skillshare, whereby the platform curates a list of Skillshare courses categorised by skill area. PeoplePerHour recommends these courses to the workers, and Skillshare offers workers who take up the courses a discounted fee. Workers who complete the course receive a certificate from Skillshare which they can display on their PeoplePerHour profile.

Third, we found that workers use the open profile feature for skill development. For example, interviewees described how they regularly searched the profiles to identify peers with high earnings and client feedback ratings. Workers examined the profiles of these successful peers to ascertain the skills they possessed and how they self-marketed these, then emulated the successful practices, by revising their profiles or identifying additional skills to develop.

Fourth, we found that OLPs facilitate more direct forms of peer-to-peer knowledge sharing, online and offline. These include platform-specific online support environments, such as Upwork's Community https://community.upwork.com/. These are typically comprised of discussion fora on

topics ranging from advice on how to bid successfully for jobs to troubleshooting, conflict resolution and facilitation of shared interest groups. Also, some platforms offer spaces for online peer-coaching on a variety of topics related to platform work (e.g., https://www.upwork.com/community/events). Other OLPs offer opportunities for in-person knowledge sharing. For example, Fiverr provides funding for room hire, refreshments, and resources for worker-organised social meetups (https://events.fiverr.com/communityleadership). The platform representatives promoted these fora as opportunities for workers to self-organise to learn from each other:

> *We do offer a Resource Centre, and that bit runs the gambit of different resources. We have links to places like Udemy or Coursera and some online learning institutions that are providing training for skilled professionals and those that are looking to build their skills in certain areas. But those are all decisions to be made by the individual freelancer in what they want to do*. (Platform Executive, Platform 3)

However, the workers appeared sceptical of the platform-provided spaces preferring online communities unaffiliated with the platforms, because they perceived the workers on the same platform as direct competitors who: *most of the times won't help you to learn new skills* (Worker 1).

The fifth form of indirect learning support in OLPs is the provision of training marketplaces. For example, Fiverr provided a dedicated learning platform where workers could offer courses to teach peers for a fee (https://learn.fiverr.com/). The platform representatives described this as a mutually beneficial arrangement for the workers and the platform. The workers were trained by expert peers familiar with the platform context, got a boost in their ranking, and received a badge to display on their profile. Successful workers training peers received additional income. The platform took commission from these transactions, while indirectly supporting workforce development without compromising their legal status.

The sixth form of indirect support for learning is client feedback. On most OLPs, the workflows are designed to elicit client feedback on workers' performance indirectly supporting learning. Most workers (92% of our survey respondents) reported having regularly received feedback from their clients. However, the feedback was often summative and evaluative, intended to signal the quality of the worker to future clients, rather than formative and developmental.

The final mechanism of indirect learning support we uncovered is the OLPs' facilitation of skill matching, validation, and certification. For example, most platforms enable workers to tag, label, and categorise their skills on their profile. Some platforms allow workers to feature externally obtained qualifications, such as degree diplomas or professional certificates, on their profile. Some platforms run their own online tests to certify skills—a practice called microcertification—in specific areas such as English comprehension and communication, Excel, or programming languages, awarding workers digital badges that can be displayed on their profile to evidence completion of these tests. However, our interviews revealed that the perceived value and usefulness of microcertificates were low, because, in selecting and recruiting workers, clients preferred to rely on profiles, the quality of the proposal, portfolio of previous work, ratings, feedback, and testimonials from other clients, rather than on platform-provided skill certificates or formal qualifications. These were seen by workers, platforms, and clients alike as peripheral to OLP work:

> *They [clients] care more about portfolios. They care about what you know how to do. They ask you, "Do you have some examples of previous work that you did?" They never ask about degrees*. (Worker 2)

Learning opportunities

Next to platform-provided mechanisms, workers engage in self-directed learning, developing skills through a range of learning activities and strategies. First, through the interviews we identified 212 distinct skills including core, transversal, and platform-specific skills workers reported developing in their OLP work. We grouped these into a 10-component typology (Table 3), which we subsequently validated through the survey (the structure, consistency, and reliability of the skill typology are reported in Margaryan et al., 2022).

Second, our survey identified a wide range of learning activities used by workers to develop skills. Namely, our prevalence analyses show that OLP workers learned primarily experientially, through learning by 'doing' (96%), trial-and-error (85%), performing new tasks (86%), reflecting on how to improve their performance (94%), receiving feedback from clients (92%), reading up professional literature (72%), following new development in their field (77%), observing and replicating others' strategies (74%), asking others for advice (60%), reflecting on what they need to learn to complete the task (83%), and on how what they are learning is related to what they already know (88%). On finishing a task, workers consider if there were better ways to do it (92%) and what they have learned from it (90%). Workers think about how their learning from OLP tasks impacts their overall work (90%) and how it fits into the bigger picture of their professional development (90%). Beyond focusing on their own learning, workers reported reflecting on how what they have learned could be of interest to their peers (78%); some shared 'lessons learned' with peers (32%).

Whilst these findings evidence significant amount of on-the-job learning reported by OLP workers, considerably fewer workers reported learning by attending training courses (35%), taking free online courses such as MOOCs (48%), or using paid online tutorials (26%).

TABLE 3 Typology of skills in OLP work (based on survey responses $n = 1001$).

Skill type	"I developed this skill at least weekly through my OLP work in the past 3 months"
Core/technical skills (e.g., programming, marketing)	56%
Transversal skills	
Communication	74%
Organisation (e.g., time management)	70%
Personal dispositions (e.g., independence, resilience, confidence)	71%
Learning to learn	55%
Analytical skills	45%
Computer literacy	36%
Foreign languages (to attract international clients)	36%
Platform-specific skills	
Obtaining work on platform (e.g., self-marketing, pricing, setting up a profile; devising a winning proposal)	65%
Setting up as a freelancer (e.g., taxes, business permits)	59%

Interviews revealed that formal training providers were seen by workers as being unaware of the nature of OLP work and the requisite skill demands.

Boundary crossing

We found that despite the autonomous and highly specialised nature of OLP work and the structural lack of interdependence, platform workers nevertheless engaged in self-organised boundary crossing, namely: (i) self-initiated collaboration and social interactions; (ii) participation in online discussion for a unaffiliated with platforms; and (iii) membership of online and offline communities.

First, workers reported engaging in self-organised collaboration and knowledge sharing: 38% of surveyed workers communicated digitally with other platform workers every week and 17% communicated with other workers in person weekly. Second, workers reported regularly seeking peer support in online discussion fora: about 60% of survey respondents communicated with other platform workers in online fora, of which 20% did so daily/weekly. These included both platform-affiliated discussion fora and external spaces such as Reddit and Facebook. A worker explained:

> *There's a Slack group, about five hundred people worldwide. There's one called Email Geeks. And again, people can... instant message... sharing what works, what's not working. ...There've been a few communities outside of <platform> that have sprung up*. (Worker 3)

Third, although only a small number (7%) of the surveyed workers were members of trade unions, they reported around 100 different professional associations and trade groupings worldwide they were a member of. The interviews with trade union representatives and professional associations revealed that none offered training specifically for OLP workers, although some provided limited support, such as curated resources for members who were considering a freelance career.

SYNTHESIS AND DISCUSSION: THE DUALITIES OF OLPS

Taken together, the results show that, despite the structural constraints, OLP workplaces are developing as sites of learning. In interpreting the results, a key, high-level finding is that OLPs are shaping up as dual, that is simultaneously restrictive and expansive, learning environments. Table 4 summarises the findings on each group of dimensions illustrating how OLP work manifests simultaneously restrictive and expansive features.

From these results, at least three main ways in which OLPs are simultaneously restrictive and expansive for learning can be synthesised; I term these 'dualities' (similar to Meijerink & Bondaruk, 2023). The three key dualities emerging from this study are, first, that the OLPs' espoused vision restricts organisational support for learning, yet stimulates self-directed learning. Second, that the enacted workplace curriculum in OLPs is patchy and opaque, yet offers novel structural features that indirectly support learning. And third, that learning in OLP workplaces is autonomous, yet not atomised.

TABLE 4 Summary of restrictive and expansive OLP features based on the findings.

Categories of dimensions	Restrictive dimensions/features	Expansive dimensions/features
Vision of workplace learning (WPL)	• No vision of WPL and no workforce development strategy; learning is viewed as workers' responsibility • Lack of organisational recognition of workers as learners; workers are expected to be experts • No paid time-off work for learning; learning is on-the-job	• Emphasis on individual responsibility for learning fosters self-direction and self-organisation in learning • OLP work encourages the development of closely work-integrated, 'just-in-time' forms of situated learning grounded in authentic professional practice
Workplace curriculum	• Workplace curriculum is rarely articulated or documented; no developmental sequencing of learning activities • No platform-supported access to formal qualifications; diminished significance of formal qualifications in OLPs, due to their lower signalling power relative to portfolio and client testimonials	• Availability of indirect learning support by platforms; access to novel structural features of a workplace curriculum through interface and workflow design • Novel structural platform features enable workers to articulate, match, categorise and evidence skills through platform-specific signalling mechanisms tailored to OLP work
Learning opportunities	No direct, platform-provided training	• Opportunities to use and develop skills to break into new task types, through personal imitative and self-direction • OLP tasks stimulate workers to develop core, transversal and platform specific skills through a range of self-directed learning activities and strategies
Boundary crossing	• The autonomous nature of OLP tasks eliminates the requirement for cross-boundary communication and teamwork • OLPs are highly specialised: interdependencies are deliberately designed out of workflow • Expertise taken for granted • No explicit/platform-or client-driven mechanisms in place to support enculturation directly; fast transition to full participation is expected	Workers respond to the autonomy of OLP work by undertaking self-initiated and collectively organised boundary crossing activities and collaboration

Espoused vision restricts organisational support for learning, yet stimulates self-directed learning

The first duality relates to the vision of workplace learning the platforms *espouse*, namely an arm's length approach to workforce development. From OLPs' and clients' perspectives,

workers should be experts; there is little espoused tolerance for on-the-job learning. In terms of HR processes, recruitment and matching rather than development are a priority in OLPs. In contrast to organisationally embedded jobs, where the supply of skills is relatively restricted, in these global workplaces the near boundless availability of skills on demand and at a relatively low cost, coupled with restrictive legislation, appear to reduce the incentives for OLPs and clients to directly facilitate T&D. There is no provision of time or funding for formalised, qualification-awarding learning events. Viewed through the ERLE lens, the lack of paid time-off work for more formalised learning would characterise a workplace as restrictive. Yet in OLPs, the very notion of 'paid time-off work for learning' is problematic, for at least two reasons. Pragmatically, because workers are typically paid an hourly or fixed rate for a clearly defined task, and clients expect the billable hours to be spent on task execution rather than learning. Conceptually, the notion of 'paid time off-work for learning' diminishes the importance of on-the-job learning implying that what is learned in the context of daily work is less valuable (Billett, 2006).

According to the ERLE framework and the broader literature, the OLPs' arm's length approach to workforce development should be detrimental to professional development. Yet the restrictions notwithstanding, platform workers appear to undertake a wide range of self-directed learning activities developing core, transversal, and platform-specific skills, individually and collectively. OLP work appears to afford closely work-integrated, 'just-in-time' forms of situated learning grounded in professional practice. The literature is critical of the overreliance on on-the-job learning viewing it as a hallmark of a restrictive environment. However, in OLPs, formal learning appears to play a diminished role, whilst just-in-time learning takes priority. The time investment required, cost, and relevance of formal learning appear to be important considerations for OLP workers steering them towards learning grounded in their practice.

Furthermore, OLPs' espoused emphasis on individual responsibility for learning appears to afford individual and collective learning activity, fostering workers' self-regulatory, self-organisational capabilities, and offering an expansive environment for self-directed professional development (Billett, 2010; London & Smither, 1999). Despite the absence of organisationally provided T&D, platform workers nevertheless exercise their own agency, forethought, and self-reflexivity to address their learning needs. OLPs therefore appear to provide the affordances and market incentives for workers to build their skills. The findings suggest that the limitations in structural scaffolding of learning do not automatically prevent—and may indeed stimulate—personal initiative and manifestation of personal agency in OLPs.

Enacted workplace curriculum is patchy and opaque, yet offers novel structural features that support learning

The second duality is that, in OLPs, the workplace curriculum, although patchy and rarely articulated or documented, nevertheless appears to offer novel and expansive opportunities for skill development. Namely, the transparency of in-demand skills, open worker profiles, provision of training marketplaces and spaces for peer-to-peer knowledge sharing, client feedback, and validation of skills offer access to elements of a workplace curriculum 'by design'. These established and novel HR and T&D features are built into the OLP interfaces and workflows facilitating important forms of professional learning.

None of these features, however, support access to formal qualifications, which in conventional labour markets are a key signal of skill. Yet our results evidence the emergence of alternative forms

of signalling of quality in OLPs, such as portfolio, client testimonials, and ratings, corroborating findings from previous empirical research (Lehdonvirta et al., 2019). As these alternative forms of skill validation become the norm in OLPs, the signalling power of educational qualifications that have traditionally been important in facilitating access to good jobs and high wages in the conventional economy appears to diminish here. These findings do not imply that formal education is no longer important in securing jobs on OLPs. Indeed, most workers in our sample are skilled professionals with higher degrees (Table 2), and it is plausible that the baseline of skills reported here were obtained through their educational experiences. What the study does suggest, however, is that in contrast to conventional labour markets, in OLPs the possession of formal qualifications is no longer a differentiating factor in recruitment decisions.

Learning in platform work is autonomous, yet not atomised

This study shows that the autonomous nature of tasks in OLPs eliminates the need for sociality and interdependence during task execution. By design, teamwork, communities of practice, and other forms of knowledge sharing and boundary crossing are neither required nor explicitly valued in OLPs. The OLP logic reflects neither a unidimensional nor a multidimensional view of expertise development; rather, OLPs take expertise for granted.

Despite these constraints, OLPs nevertheless provide mechanisms and spaces for community building and peer-to-peer knowledge sharing that lend some support to horizontal and relational-dialogical processes of learning and enculturation into platform work. These include online discussion fora to help workers get up to speed with administrative, financial, and logistical aspects of platform work or face-to-face events for knowledge sharing and socialisation. However, due to the highly competitive nature of OLP work, these platform-specific communities tend to be sceptically viewed by workers, who instead prefer to share knowledge with peers away from platform-affiliated spaces. In so doing, workers respond to the structural autonomy of the OLP work by initiating self-organised boundary crossing and horizontal expertise development activities. Workers transcend the restrictive features of the workplace by drawing on their own external networks to seek and share knowledge and to shape their learning with others. The multiplicity of worker-initiated boundary crossing rather than an overreliance on platform-provided spaces is in itself expansive, because the ability to selectively engage and disengage with communities is an important skill (Wenger, 1998). Building on their own initiative, OLP workers create a more expansive learning environment for themselves, rather than depending on others—platforms, clients, policymakers—to provide these opportunities for them. This behaviour is consistent with the agentic explanations of workplace learning (Goller & Paloniemi, 2017) and with previous empirical studies that have shown the importance of learners' agency in their ability to use restrictive and expansive features in an environment to their advantage (Boyd et al., 2015; Gustavsson & Ekberg, 2014).

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

This study reveals that online labour platforms are shaping up as simultaneously expansive and restrictive workplace learning environments, where some of the conventional forms of training and development are no longer observed, yet new and reconfigured forms of structural scaffolding for learning and skill development emerge. Importantly, this study shows that diverse, agentic forms of

self-directed and self-organised learning behaviour emerge to compensate for some of the structural limitations of these global cloud workplaces. This paper challenges the perception of OLPs as deskilling work environments, where professional development opportunities are absent. Instead, the paper advances a more nuanced understanding of the duality of platform work as simultaneously restrictive and expansive for workplace learning.

Importantly, the study lends empirical support to integrating the notion of individual agency into debates on platform labour. It shows that rather than being *'tools of machines and algorithms'* (Degryse, 2016), OLP workers are active, agentic actors who are shaping their own learning in intentional, forethoughtful, self-reactive, self-reflective, and social-collective ways. In OLPs, structure is not deterministic; instead, structure and agency appear to interact to create and configure learning opportunities for workers. The study suggests that a lack of readily available learning provision in an environment might catalyse learning; at the same time, availability of learning provisions does not guarantee that the workers will take these up (Bryson et al., 2006). The extent to which workers' uptake of learning opportunities afforded by OLPs may lead to concrete professional outcomes, such as higher compensation, is not investigated in this study, but could be a fruitful avenue of future research. Relatedly, an important direction for future research could be the exploration of the ways in which the ongoing expansion of algorithmic mediation of work and the rapid emergence of new AI technologies such as generative AI might impact work and learning within OLPs.

The empirical evidence on the workforce development and learning practices unfolding in these emergent workplaces presented in this paper informs the ongoing debates about the role of the HR/T&D function in the platform economy. Several implications for practice arise from this study. First, although OLPs operate outside organisational settings and formal HR functions, HR and T&D processes are nevertheless present in these cloud workplaces. They are coded into platform interface and workflows and distributed between the key actors—platform designers, clients, and workers—rather than centralised. Specifically, in OLPs, workers, rather than being recipients of T&D, are closely involved in initiating, organising, and shaping their own actual learning practices, whilst the functions of HR professionals are overtaken by the platform designers who code the intended practices into the workflow, interface, and task design. Second, the paper illustrates the duality of platforms, who resist the establishment of an employment relationship with workers and the provision of training as its hallmark, but simultaneously indirectly provide learning opportunities to workers. Meijerink and Bondaruk (2023) have observed such duality with regard to HRM activities more broadly, and the contribution of this paper consists in providing evidence for similar dualities in terms of HRD/T&D more specifically.

Finally, the paper informs HR practitioners in organisations wishing to outsource work through OLPs about the current learning and development features and practices in OLPs. I concur with other scholars (e.g., Kost et al., 2020) who suggested that HR/T&D practitioners could cooperate with platforms, unions, and policymakers to help further develop and improve work and learning practices in OLPs. In doing so, a move away from a direct provision of learning to supporting and shaping the design of an environment that is expansive for learning is warranted. For example, T&D practitioners and policymakers could help OLPs create and foster supportive environmental conditions (e.g., workflows, interfaces, and tools) for workers to develop the requisite mindsets and skills to strategically self-direct their learning and to proactively establish mutually beneficial boundary crossing relationships with other people to learn with and from.

ACKNOWLEDGEMENTS

The data underpinning the paper were collected through the CrowdLearn project (Skills formation and skills matching in online platform work: Practices and policies for promoting

crowdworkers' continuous learning, 2018–2019) funded by the European Centre for the Development of Vocational Training (Cedefop). I gratefully acknowledge the input of my CrowdLearn project collaborators: Vili Lehdonvirta, Laura Larke, Huw Davies, Julian Albert, Sian Brooke, Susanne Klausing, Konstantinos Pouliakas and Jiri Branka. The project built on insights and instruments from an earlier exploratory study, funded by Alexander von Humboldt Foundation, through an individual Senior Fellowship awarded to the author and hosted at the Department of Work Sociology, Goethe University Frankfurt. Finally, I thank the two anonymous reviewers and the Editor, Prof. Dr. Matthias Pilz, for helpful comments.

CONFLICT OF INTEREST STATEMENT

The author declares no conflict of interest.

ORCID

Anoush Margaryan http://orcid.org/0000-0002-1740-8104

REFERENCES

Barnes, S.-A., Green, A., & de Hoyos, M. (2015). Crowdsourcing and work. *New Technology, Work and Employment*, *30*(1), 16–31.

Billett, S. (2006). Constituting the workplace curriculum. *Journal of Curriculum Studies*, *38*(1), 31–48.

Billett, S. (2010). The perils of confusing lifelong learning with lifelong education. *International Journal of Lifelong Education*, *29*(4), 401–413.

Boud, D., & Solomon, N. (2003). "I don't think I am a learner": Acts of naming learners at work. *Journal of Workplace Learning*, *15*(7/8), 326–331.

Boxall, P. (2013). Mutuality in the management of human resources. *Human Resource Management Journal*, *23*(1), 3–17.

Boyd, P., Smith, C., & Ilhan Beyaztas, D. (2015). Evaluating academic workplaces. *International Journal for Academic Development*, *20*(1), 18–32.

Bryson, J., Pajo, K., Ward, R., & Mallon, M. (2006). Learning at work. *Journal of Workplace Learning*, *18*(5), 279–297.

Chalofsky, N., Rocco, T., & Morris, M. (2014). *Handbook of human resource development*. Wiley.

Corporaal, G. F., & Lehdonvirta, V. (2017). *Platform sourcing*. Oxford Internet Institute. https://www.oii.ox.ac.uk/publications/platform-sourcing.pdf

Creswell, J., & Clark, V. (2011). *Designing and conducting mixed methods research*. Sage.

Degryse, C. (2016). *Digitalisation of the economy and its impact on labour markets*. European Trade Union Institute.

Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy. *Human Resource Management Journal*, *30*, 114–132.

Edwards, A. (2010). *Being an expert professional practitioner*. Springer.

Engeström, Y., Engeström, R., & Kärkkäinen, M. (1995). Polycontextuality and boundary crossing in expert cognition. *Learning and Instruction*, *5*(4), 319–336.

Eraut*, M. (2004). Informal learning in the workplace. *Studies in Continuing Education*, *26*(2), 247–273.

Eurofound. (2018). *Platform work*. Working paper WPEF18004. Eurofound.

Finegold, D., Levenson, A., & Buren, M. (2005). Access to training and its impact on temporary workers. *Human Resource Management Journal*, *15*(2), 66–85.

Fuller, A., & Unwin, L. (2004). Expansive learning environments. In A. Fuller, A. Munro & H. Rainbird (Eds), *Workplace learning in context* (pp. 126–144). London: Routledge.

Fuller, A., Unwin, L., Felstead, A., Jewson, N., & Kakavelakis, K. (2007). Creating and using knowledge. *British Educational Research Journal*, *33*(5), 743–759.

Goller, M. & Paloniemi, S. (Eds.) (2017). *Agency at work*. Springer.

de Groen, W., Kilhofer, Z., Westhoff, L., Postica, D., & Shamsfakhr, F. (2021). *Digital labour platforms in the EU*. European Commission.

van den Groenendaal, S., Freese, C., Poell, R., & Kooij, D. (2023). Inclusive human resource management in freelancers' employment relationships. *Human Resource Management Journal*, *33*(1), 224–240.
Gustavsson, M., & Ekberg, K. (2014). Learning to promote health at an emergency care department. *Studies in Continuing Education*, *37*(1), 18–29.
Kässi, O., & Lehdonvirta, V. (2018). Online labour index. *Technological Forecasting & Social Change*, *137*, 241–248.
Kässi, O., & Lehdonvirta, V. (2022). Do microcredentials help new workers enter the market? *The Journal of Human Resources*. Advance online publication. https://jhr.uwpress.org/content/early/2022/03/01/jhr.0519-10226R3
Kässi, O., Lehdonvirta, V., & Stephany, F. (2021). How many online workers are there in the world? A data-driven assessment [version 4; peer review: 4 approved]. *Open Research Europe*, *1*, 53. https://doi.org/10.12688/openreseurope.13639.4
Kitching, J. (2007). Regulating employment relations through workplace learning. *Human Resource Management Journal*, *17*(1), 42–57.
Kost, D., Fieseler, C., & Wong, S. I. (2020). Boundaryless careers in the gig economy. *Human Resource Management Journal*, *30*, 100–113.
Lave, J., & Wenger, E. (1991). *Situated learning*. Cambridge University Press.
Lehdonvirta, V., Kässi, O., Hjorth, I., Barnard, H., & Graham, M. (2019). The global platform economy. *Journal of Management*, *45*(2), 567–599.
London, M., & Smither, J. W. (1999). Empowered self-development and continuous learning. *Human Resource Management*, *38*(1), 3–15.
Ludvigsen, S., Lund, A., Rasmussen, I. & Saeljoe, R. (Eds.) (2011). *Learning across sites*. Routledge.
Margaryan, A. (2019a). Workplace learning in crowdwork. *Journal of Workplace Learning*, *31*(4), 250–273.
Margaryan, A. (2019b). Comparing crowdworkers' and conventional knowledge workers' self-regulated learning strategies in the workplace. *Human Computation*, *6*(1), 83–97.
Margaryan, A., Albert, J., & Charlton-Czaplicki, T. (2022). Workplace learning in Crowdwork Questionnaire (WLCQ): Measuring self-regulated learning and skill development in online platform work. *International Journal of Training and Development*, *26*(3), 495–515.
Meijerink, J., & Bondaruk, T. (2023). The duality of algorithmic management. *Human Resource Management Review*, *33*(1), 100876.
Meijerink, J., & Keegan, A. (2019). Conceptualizing human resource management in the gig economy: Toward a platform ecosystem perspective. *Journal of Managerial Psychology*, *34*(4), 214–232.
Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, *15*(1), 85–109.
Spector, P. E. (2019). Do not cross me. *Journal of Business and Psychology*, *34*, 125–137.
Spence, M. (1974). Competitive and optimal responses to signals. *Journal of Economic Theory*, *7*, 296–332.
Tashakori, A., & Teddie, C. (2010). *Handbook of mixed methods in social and behavioral research*. Sage.
Wenger, E. (1998). *Communities of practice*. Cambridge University Press.
Wood, G., & Budhwar, P. (2022). What makes world leading research in HRM? *Human Resource Management Journal*, *32*(4), 723–728.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Margaryan, A. (2024). The duality of global online labour platforms as restrictive-expansive sites of workplace learning and skill development. *International Journal of Training and Development*, *28*, 315–334. https://doi.org/10.1111/ijtd.12326