HRM practices in app work: exploring training and feedback in the food delivery ecosystem

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Abstract

Purpose – This study aims to explore the human resource management (HRM) practices related to training and feedback in the app work industry, specifically in online food delivery service, and investigate the emotional and behavioral responses of gig workers.

Design/methodology/approach – This study adopts a qualitative approach by interviewing 19 gig workers from six food delivery firms operating in different countries.

Findings – The results show limited training and feedback opportunities are provided to app workers, although the complexity of training and delivery methods differ across platforms. To address this shortage, app workers developed response strategies relying on social interaction.

Research limitations/implications – This study adds to the research on HRM practices in the gig economy by portraying the way in which training and feedback unfold in the food delivery app ecosystem and by disclosing the gig workers' emotional and behavioral responses to it.

Practical implications – This study shows that the way training activities are currently designed may provide little value to the ecosystem and are likely to produce negative emotional responses in gig workers. Thus, platform providers may make use of these findings by introducing more transparent feedback and social learning opportunities.

Originality/value – To the best of the authors' knowledge, this study is among the first empirical studies on online delivery gig workers addressing specific HRM practices. It reveals significant insights for training and feedback, suggesting app economy characteristics strongly affect training and feedback practices for app workers.

Keywords Gig economy, App work, Human resource management, Training, Feedback

Paper type Research paper

Introduction

Technology improvements have made temporary labor and independent contracting more prevalent over the past few decades (Bonet, Cappelli, & Hamori, 2013). The gig economy is one of the new forms of employment enabled by technology that represents a radical

departure from traditional working relationships (Duggan, Sherman, Carbery, & McDonnell, 2020; Jabagi, Croteau, Audebrand, & Marsan, 2019).

The term "gig economy" describes the economic system in which intermediary platform firms connect requesters (i.e. consumers) with on-demand gig workers (Meijerink & Keegan, 2019). It is difficult to provide estimates of the number of workers involved in the gig economy, given its global spread, the possibility to register on multiple platforms simultaneously and the difficulty in disentangling gig workers' figures from other forms of nonstandard employment (Gandini, 2019). Nevertheless, the online gig economy accounts for a growing number of people that rely on digital platform work as their primary source of income (Wallenstein, de Chalendar, Reeves, & Bailey, 2019). In 2021, data on online marketplaces displayed 163 million freelancer profiles created around the world (Kässi, Lehdonvirta, & Stephany, 2021). Projections of a 20% yearly increase have been revised upwards in the post-pandemic era as a great number of people have opted out for more flexible employment relationships (Ozimek, 2020; Spurk & Straub, 2020).

Given the growing number of people working through platforms, scholarly debate has flourished in recent years, with studies mainly tackling algorithmic logic (Bellesia, Mattarelli, & Bertolotti, 2023; Gandini, Pais, & Beraldo, 2016; Kellogg, Valentine, & Christin, 2020), gig workers' motivation (Dunn, 2020; Harris & Wu, 2014; Jabagi et al., 2019) and the apparent paradox between gig workers autonomy and algorithmic control (Gandini, 2019; Jabagi et al., 2019; Kost, Fieseler, & Wong, 2020). Indeed, in the gig economy, algorithms not only match labor supply and demand but also automate management practices by monitoring, controlling and coordinating workers, influencing their performance and commitment, thus undertaking typical HR processes and making decisions that affect labor (Duggan et al., 2020; Rosenblat & Stark, 2016).

Gig work poses unique challenges to human resource management (HRM) theory and research (Kuhn, 2016; Kuhn, Meijerink, & Keegan, 2021; Meijerink & Keegan, 2019), as HRM is traditionally conceptualized as the managerial activities for maintaining employment relationships, whereas in gig economy a standard employment relationship may be absent (Meijerink & Keegan, 2019). Despite it, gig economy platforms have engaged in designing and implementing a variety of HRM practices, including workforce planning (Chen, Mislove, & Wilson, 2015), performance assessment (Rosenblat, Levy, Barocas, & Hwang, 2017), the dismissal of poor-performing gig workers (Rosenblat & Stark, 2016) and the design of reward structures (Bush & Balven, 2021).

According to recent studies, the study of HRM practices in this peculiar context has received little scholarly attention (Connelly, Fieseler, Černe, Giessner, & Wong, 2021). Some authors contend that HRM in gig work is mainly focused on control rather than maintaining the relationship (Duggan et al., 2020). However, given the increasing demand for gig workers and the growing competition between platforms (De Stefano, Bonet, & Camuffo, 2019), other scholars advocate the development of new systems to retain gig workers (Connelly et al., 2021). The possible shortage of giggers and the need to guarantee productivity may call for platforms' efforts to engage with and attract giggers (Boocock, Page-Tickell, & Yerby, 2020). Training and development have so far received little attention in the gig economy, despite the fact that businesses typically invest in employees' skills and knowledge to boost productivity and retain employees (Rosenblat et al., 2017). Moreover, the few extant empirical studies on gig work have focused on high-skilled, professional services provided through platforms (Bellesia et al., 2023; Dunn, 2020), neglecting the most dominant form of gig work, which involves low- to medium-skilled jobs (Fabo, Beblavý, Kilhoffer, & Lenaerts, 2017).

In line with recent calls for recognizing the implications of the gig economy for HRM practices (McDonnell, Burgess, Carbery, & Sherman, 2018), this research investigates the training and feedback practices in the low-skilled app work gig economy, specifically in food

delivery apps; and how app workers emotionally experience and behaviorally respond to training and feedback practices.

The paper is structured as follows. First, the research context is introduced, providing an overview of the classification of gig work and discussing the role of HRM in the gig economy. Second, we present the method and the study setting, highlighting the specificities of the food delivery industry. Next, we show the results from semi-structured interviews. Finally, we discuss our findings in light of extant theory and provide avenues for future research.

Theoretical background

Taxonomy of gig work

Gig work is a type of nonstandard work arrangement in which people sell labor services in the form of short-term flexible gigs or assets on a platform firm that acts as a digital intermediary between independent contractors, requesters and partner companies (Taylor, Marsh, Nicol, & Broadbent, 2017). Gig work is classified first based on the location in which the gigs are performed, either locally (physically) or globally (virtually) (Huws, Spencer, & Syrdal, 2018). In local-based gig work, tasks are initiated and managed through digital intermediaries, but performed locally by physically present workers (Rosenblat & Stark, 2016). Instead, global gig work tasks are both transacted and delivered through online platforms (Huws, Spencer, & Joyce, 2016). In both cases, the type of required task can vary from low-skilled (delivery or online microwork) to high-skilled (specialized services or online creative work and consulting) services (Jabagi et al., 2019).

A second taxonomy differentiates three forms of gig work depending on the type of exchange – being capital or labor service, the number of people working on the proposed task and the way work is allocated and controlled (Duggan et al., 2020). Capital platforms facilitate the selling or renting of assets by connecting customers with individual owners. Crowd-working refers to global gig work in which workers complete tasks remotely (De Stefano, 2016). Tasks are outsourced to a vast group of people (the crowd) via an online call on the platform (Boons, Stam, & Barkema, 2015), and any potential contributors can attempt to undertake the task, with the most suitable crowd workers selected (Berg, 2016). In app-based gig work, the digital platform, acting as an intermediary, assigns tasks to gig workers to be performed locally for organizations or customers who pay for the completion of these tasks, while the intermediary platform receives a percentage of pay (De Stefano, 2016). A first distinguishing characteristic of app work is that digital platform organizations intervene in setting minimum quality standards of service and in selecting and managing individuals, while in capital-platform work and crowd work, it is often the customer or requester who decides and selects whose services to pay for (Duggan et al., 2020). In app work arrangements, trilateral, and in the case of the food delivery industry, quadrilateral relationships exist between semi-autonomous entities (i.e. customers, restaurants, gig workers and platform firms) (Meijerink & Keegan, 2019), where the platform firm works as a centralized mechanism governing the dynamics between the four parties (Duggan et al., 2020).

Human resource management perspectives in app work

The development of gig-work apps and platforms has resulted in several unanswered questions regarding how technology influences the way work is structured and carried out (Colbert, Yee, & George, 2016; Stone & Deadrick, 2015). Applying current thinking on HRM for the effective management of workers in the gig economy is complicated by the fact that platform firms institute HRM activities, but at the same time they do not necessarily employ gig workers (Meijerink & Keegan, 2019). Differences in court trials and regional, national

and international (e.g. European) regulations (De Stefano, Durri, Stylogiannis, & Wouters, 2021) accentuate the difficulty of understanding gray employment relationships, in which the difference between "being an employer" or "behaving like one" and the boundaries between coordinating and management power are unclear (Dieuaide & Azaïs, 2020). Indeed, while some app providers decided to hire riders on temporary or permanent contracts (e.g. Foodora in Germany, Just It in Italy), other food delivery companies "sought to further colonize regulatory practice on self-employment status by "flexing" entry requirements to the labor process" to legitimize their status as supply chain intermediaries rather than employers (Mendonça, Kougiannou, & Clark, 2023, p. 67). This poses a critical question for platform firms on how to balance gig workers' autonomy while still influencing and controlling their behavior to best serve the needs of the requesters and assure profitability for the platform firm (Kuhn et al., 2021). This tension falls outside the traditional binary distinction between two HRM philosophies (Waldkirch, Bucher, Schou, & Grünwald, 2021): a control-based perspective aimed at maximizing performance through control and little autonomy on one side; and a high-performance perspective fostering self-managed and self-driven employees on the other side (Batt & Colvin, 2011; Guthrie, 2001). In trying to combine these two distant philosophies, researchers speculate that digital platforms use a unique and distinct perspective, namely, an ecosystem one (Meijerink & Keegan, 2019; Waldkirch et al., 2021). An ecosystem is defined as "a group of interacting, yet semi-autonomous entities that depend on each other's activities and therefore are somewhat hierarchically controlled" (Meijerink & Keegan, 2019, p. 13). This conceptualization of gig work implies that the exchanges among gig workers, requesters and platform firms are interdependent and multilateral, such that value is created only when all actors mutually contribute to the ecosystem (Adner, 2017). Thus, the role of HRM activities is to control and coordinate the efforts of all parties involved in the mutual exchange (Jackson, Schuler, & Jiang, 2014). To manage ecosystem value creation, scholars advocate that the HRM function may be undertaken by different actors that traditionally did not take up HRM responsibilities (Kuhn et al., 2021), such as requesters that may decide to compensate for the limited involvement of the platform firms in HRM (Meijerink & Keegan, 2019), and gig workers themselves implementing bottom-up HRM processes (Waldkirch et al., 2021). For instance, Meijerink, Keegan, & Bondarouk (2021) show that restaurant owners and employees engage in HRM activities such as training and providing incentives to induce desired gig worker behaviors, while Waldkirch et al. (2021) highlight that on platforms, training and development are often outsourced to workers who self-develop HRM practices without the support of platform managers.

Human resource management training and feedback practices in app work

A peculiar characteristic of app work is its low barrier to entry and exit. The main assumption permeating previous studies is that app work relationships are exclusively centered around economic gain, such that app workers exit the ecosystem when it is not economically convenient for them or when another ecosystem (a competitor app) allows them to gain a higher economic value (Wu, Zhang, Li, & Liu, 2019). On one side, this high turnover puts the platforms in a vulnerable position for their long-term survival (Jabagi et al., 2019); on the other side, it justifies a commonly defective investment in the training and development of app workers (Meijerink & Keegan, 2019). However, recently, scholars have challenged the exclusive economic gain assumption, drawing on empirical evidence showing that app workers are seeking a more codetermined work arrangement characterized by opportunities to develop new skills and networking opportunities (Graham, Hjorth, & Lehdonvirta, 2017; Petriglieri, Ashford, & Wrzesniewski, 2018). This questions

the sustainability of app work models lacking any development opportunities (Duggan et al., 2020), so that new training mechanisms occur to overcome this challenge. For instance, some app work platforms started to provide training for poor performers, although, to avoid employer–employee-like relationships, the training is performed by a third external party. In the USA, Uber delegates training activities to a labor union and provides training at a cost for drivers (Taft, 2018). Moreover, given the need to coordinate multiple actors in the ecosystem, platforms have engaged in training and developing requesters and, in the case of food delivery services, restaurants. In the case presented by Meijerink & Keegan (2019), Deliveroo and Uber Eats train restaurants to ensure that meals are ready on time. This creates value for the platforms by reducing the likelihood of customers' complaints, but also for the gig workers, as they have more time to deliver extra meals, creating an overall higher value for the ecosystem.

For a long time, also consumer feedback has played an essential role in HRM, not only as a way to evaluate workers (Fuller & Smith, 1991), but also in motivating learning, training and development (Ashford & Cummings, 1985; Kluger & DeNisi, 1996), as feedback is the main way to acquire information for the improvement of one's performance. In traditional organizations, performance feedback is frequently used to inform decisions about reward and developmental opportunities, relying on management or multi-source feedback evaluation (Murphy, 2020). In the context of the gig economy, the main performance measurement is based on consumers' feedback, such that by leaving online reviews that directly impact the gig-worker's work (e.g. eligibility), customers are empowered to act as middle managers (Rosenblat & Stark, 2016) and codetermine HRM processes. The performance ratings serve the ecosystem as an assurance that workers are creating value for requesters (Rosenblat et al., 2017). They are also used to lock gig workers in the ecosystem, given their non-transferability to other platforms (Lee, Kusbit, Metsky, & Dabbish, 2015).

Some main concerns characterize app feedback practices. One regards the asymmetry of information that may occur between the gig worker and the platform (Curchod, Patriotta, Cohen, & Neysen, 2020). Platform firms use algorithms to compute performance scores based on clients' feedback; however, the full mechanism is often "opaque and invisible to the workforce" (Bellesia et al., 2023, p. 2), thus mining the credibility of the system. Little and opaque feedback on how they may advance their work restrains gig workers' possibility to advance their competencies compared with their peers in more traditional employment setups (Graham et al., 2017). Moreover, we question the actual use of performance feedback as a base to identify training needs that are congruent with individual and organizational objectives (Aguinis, Gottfredson, & Joo, 2012), as some platforms, such as Uber, send "indirect" feedback on errant or desirable behaviors, such as tips to improve or notifications about clients' complaints (Rosenblat et al., 2017), which may, however, not be linked to the worker's performance and not followed by specific training interventions.

Gig workers' response to human resource management practices
A conspicuous number of studies on gig work focused primarily on a critical debate on control and surveillance and on the innovative HRM strategies that platforms developed to control their workers (Bellesia et al., 2023; Wu et al., 2019). However, little is known about how the gig workers themselves react to different platforms' HRM strategies (Wu et al., 2019). Recent studies indeed suggest that gig workers actively oppose or supplement the platform's solutions to fundamental organizational issues (Karanović, Berends, & Engel, 2021).

Some scholars have looked at gig workers' responses from a labor process perspective, showing that the model of app-based work, because of its contradictions, may lead to the

manifestation of antagonism toward platform management, which under certain conditions results in the emergence of active solidarity (Tassinari & Maccarrone, 2020). Facilitating conditions include the availability of "free spaces" (virtual or non-virtual ones) that allow groups to interact free from the social control of authorities and the existence of social relations (Tassinari & Maccarrone, 2020). Moreover, previous studies highlighted that not only do different managerial practices (such as threatening workers with deactivation if standards are not met or giving bonuses for exceptional performance) lead to a more negative or positive response by gig workers (Ravenelle, 2019), but also that the response to the same strategies carried out by the platform may vary across workers depending on the extent to which they depend on the platform for work (Wu et al., 2019), on their performance level and on whether they experienced setbacks in the form of decreased evaluation scores (Rahman, 2021). In this regard, Bellesia et al. (2023) take a step forward by linking gig workers' experiences to their behavioral responses, analyzing how workers perceive and use what they see in score algorithms for their own advantage. However, the aforementioned studies mainly focus on the response to algorithmic scores, leaving room for investigation into the response to other HRM practices.

Method

We addressed our research question through an exploratory qualitative study based on 19 semi-structured interviews with app workers in the food delivery industry, working across six different platforms. To achieve a deep understanding of food delivery app worker responses to HRM practices related to training and feedback, the sample was purposively selected so as to obtain from the participants "both retrospective and real-time accounts by those people experiencing the phenomenon of the theoretical interest" (Gioia, Corley, & Hamilton, 2013, p. 19). In addition, participants from different countries were included to enhance the study's results transferability and trustworthiness (Czernek-Marszałek & McCabe, 2022).

Context

The six platform firms included in the study are Deliveroo (29%), Wolt (24%), Glovo (19%), Cocai Express (19%), Uber Eats (10%) and My Menu (4%). Only one respondent worked for two platforms at the same time. A brief description of the platforms is provided below.

Deliveroo was launched in 2013 in London. Now it operates in more than 500 cities and has expanded beyond Europe to 13 countries in the eastern part of the world. To date, the venture has raised $153bn and declared 110,000 self-employed riders.

Wolt is a Finnish company founded in 2014. It operates in 23 countries, mostly European ones, and counts over 180 cities. Bloomberg reports that in 2021, Wolt raised $856m from investors. Figures for 2021 show 12 million customers registered on the platform and over 4,000 workers.

Glovo is a Spanish start-up founded in 2015 in Barcelona. Since 2020, it has expanded its operations in southern and eastern Europe, covering 29 countries. Key figures from the annual report show it earned €403.8m in net revenues; it has an active customer base of 10.2 million and counts 119,000 local shops and restaurants. The app platform has 1,710 employees and 58,000 riders.

Uber Eats was founded in 2009 in California, USA, and launched by Uber. The service operates in 6000 cities across 45 countries. In 2021 the revenues were $8.3bn. Uber Eats is among the most popular apps, with 83 million users and 900,000 restaurants partnered.

My Menu is an Italian food delivery company founded in 2013. This app food delivery firm has a competitive advantage from its collaborations with high-reputed restaurants,

targeting a specific market. The venture has a team of 20 employees, working in six cities in northern Italy. In 2018, the app platform firm registered revenue of €5m and counted for 500 restaurant partners and 600 gig-workers.

Cocai Express is the most recent start-up founded in Venice in 2020, intending to deliver food from restaurants to Venetian citizens. The project was further developed and took the shape of an app platform firm operating in food delivery. Given the short time of its existence, the app platform is still developing and trying to increase the number of orders managed.

Sample and data collection
Snowball sampling was used in integration with purposeful sampling criteria, aimed at finding "hidden populations" with required characteristics that are difficult for researchers to access (Heckathorn, 1997; Naderifar, Goli, & Ghaljaie, 2017). Starting from a group of students at the authors' home university, we reached out to food delivery app workers that have been working for at least one month in continuity in a European country. Data was

Gender	
Male	13
Female	5
Non-binary	1
Age	
18–24 years	18
25–34 years	1
Other occupations	
Student	16
Other part-time job	3
Other full-time job	5
Education	
High school	15
College degree	4
Months in app working	
Less than one year	10
From 1 to two years	5
More than two years	4
Working hours per week	
0–20 h	10
21–40 h	5
41–60 h	3
61–80 h	1
Gross monthly income	
€0–€500	10
€501–€1,000	6
Above €1,000	2
Work on multiple platforms	
Yes	1
No	18

Note: $N = 19$
Source: Authors' own work

Table 1.
Description of
participants

collected between February and June 2022. At first, respondents filled out an online survey to collect demographic information and other information related to their satisfaction with the job and its characteristics. The majority of the sample worked for one app (18 out of 19 respondents) for less than one year (10 out of 19 respondents). Most of them work for up to 20 h a week (10 out of 19 respondents). The pool of participants is mostly composed of male riders (13 out of 19 respondents) and is included in the age range of 18–24 years old. Descriptive information about the sample is reported in Table 1.

Each participant was then interviewed online, with their permission and signed informed consent. Conversations were recorded and transcribed *verbatim*. Each interview lasted approximately 50 min and was broken up into three blocks of questions regarding the description of their work on the platform, their perception of their working experience and their expectations and commitment to the platform.

Analysis
Transcripts were inductively analyzed using thematic analysis, using the six steps of Braun & Clarke (2006). Initially, the authors familiarized themselves with the data set by reading interviews' transcriptions individually and identifying relevant statements and patterns. Coding progressed in phases, from semantic description to interpretations (Braun & Clarke, 2006), moving from the identification of concepts through open coding, to second-order and third-order codes based on thematic analysis (Strauss & Corbin, 1990; Van Maanen, 1979). QSR NVivo qualitative data analysis software (version 12) was used to structure the raw data and code it. Initial codes were generated by carefully reading the answers and looking systematically for statements related to training and feedback practices. Using "in vivo" codes to stay close to our informants' language (Locke, 2001) helped to sort and place the data into similar groups. In the primary rounds of coding, interviews were coded through a forth-and-back process as researchers were making sense of the data. The initial first-order concepts (nodes in NVivo) reflected the selected keywords and quotations from the 19 diverse participants' experiences and perceptions. Both authors were involved in open coding and discussed discrepancies in coding until an agreement was reached (Hodkinson, 2008; Vaast & Walsham, 2013).

In the following coding rounds, by examining the first-order frequencies and ensuring keyword consistency and coherence within each code, the themes were developed and created. Some first-order codes appeared more often than others, depending on the number of platforms adopting the specific practice and the distribution of interviewees across the platforms. Based on the initial code structure, the authors deepened their analysis and focused on searching for patterns and variations in patterns that could offer insights into the research question. This step consisted of systematically transforming the raw data of open codes into meaningful content and aggregating open codes into categories with the same elements and commonality of content that allowed detection of consistent and overarching themes. During this phase, we triangulated the information emerging from the interviews, especially those referring to training and feedback platform practices, with the information coming from platform websites and job advertisement outlets, to verify the emerging insights from the interviews (Mason, 2002). We reviewed and cross-checked the identified categories during regular meetings, ensuring inter-code consistency (Auerbach & Silverstein, 2003) and respecting the principles of homogeneity, pertinence, objectivity, mutual exclusion, fidelity and productivity (Braun & Clarke, 2006). We then proceeded to aggregate the categories into third-level constructs and define and name them in relation to the research questions. An Excel file was later compiled with the respective first-order, second-order and third-order codes, example quotes and occurrences. The thematic analysis is represented in Table 2.

Third-order dimensions	Second-order themes	First-order concepts	Example quotes	Distribution of codes per interview
Platform training control vs development perspective	Training to standardize gig process	Standardized written documents and video sessions	"I had an online training about how to act in the process, for example, they taught us that we get codes for the orders, also that I must take the package to the address and call the customer and know precise information . . ." (Respondent 10, Wolt)	15
		Formative assessment	"When you first apply, there is a training video before you start working, it's like 15 min, and then you fill in the questionnaire and that's all" (Respondent 9, Wolt)	13
		Emails inducing specific behaviors	"I got some e-mails telling what to do, in which order, but I would not consider it proper training" (Respondent 11, Deliveroo)	10
	Training to foster understanding of the gig process	Interaction-based training	"When I started, I got was a meeting with the owner. It was useful because it helped me understand telling you to behave in many different situations. We also discussed an info sheet on how to behave in case of problems" (Respondent 17, Cocai Express)	6
		Mentoring opportunities	"Before starting I had four hours of training with a rider who has been working for several years and who taught me how to interact and how the job has to go [. . .] they kind of help you with the decision that not always is so simple" (Respondent 3, MyMenu)	4
Ecosystem feedback measurement vs management perspective	Performance measurement of the ecosystem	Customers' feedback on overall delivery	"I'm never being informed if somebody is satisfied or not satisfied by me" (Respondent 5, Wolt)	14
		Absence of direct feedback from managers	"No, no feedback at all. But like, if you do something illegal or something really bad, then they will fire you, for sure" (Respondent 10, Wolt)	9
		Automatic feedback from platform	"There is a dash-board that shows the number of completed deliveries per hour and your total for the day but is pretty much what we can know" (Respondent 16, Uber Eats)	8

(continued)

Table 2.
First-, second- and third-order codes during thematic analysis

Table 2.

Third-order dimensions	Second-order themes	First-order concepts	Example quotes	Distribution of codes per interview
	Performance management of the individual	Customers' direct feedback to riders	"Customers rate us after every order. [...] Negative customer's feedback affects our rating, obviously, and we riders do our best to not to receive bad rating and we try to do our job professionally. And to be honest, it also affects your mood" (Respondent 6, Glovo)	11
		Direct contact from managers	"They called me and told me I was doing good; I would have become an important resource for them when emergencies occur" (Respondent 1, Cocai Express).	2
Riders' emotional response	Emotional response to training	Riders feeling frustrated and disconnected because of lack of training	"Actually, this is quite an upsetting part, because the only thing that they offered was at the beginning, which was how to use the app, they just explained that and nothing more" (Respondent 6, Uber Eats)	7
		Riders feeling neutral about lack of training	"I just got basic training related to how to use the app, but I think tasks are quite basic, so you don't need more than this to perform the job" (Respondent 12, Deliveroo)	12
	Emotional response to feedback	Riders feeling disappointed and powerless because of (lack of) feedback	"I feel a bit of pressure, I think probably for the reason that I am alone and I don't know if I am doing right or wrong" (Respondent 12, Deliveroo)	16
		Riders feeling appreciated because of feedback	"Well yes of course, I was very pleased to hear this [positive feedback] and it also positively stimulated me to do a lot more and develop more trust" (Respondent 1, Cocai Express)	3
Riders' behavioral response	Behavioral response to training	Riders' social learning face-to-face	"At the beginning I was quite insecure [in performing the job]; however, talking with the various riders, you steal a little here, you steal a little there, you steal their experience, you learn slowly, then I do the same in my turn with the new riders, I can give them advice. Let's say we are a kind of big family, even if we don't know each other we gladly help each other" (Respondent 2, Deliveroo)	12

(continued)

Third-order dimensions	Second-order themes	First-order concepts	Example quotes	Distribution of codes per interview
		Riders' social learning online	"We have a very big Facebook group including only my company's couriers, and a very big public group, where you can exchange your experiences, and advice. For example, when I was a junior courier, I had so many questions, and they were very helpful with me and I'm doing the same now with the new ones" (Respondent 5, Wolt)	5
	Behavioral response to feedback	Riders' social comparison	"I don't receive feedback, the only thing is just to confront with other Deliveroo workers and see how they work" (Respondent 12, Deliveroo)	9
		Riders' episodic evaluation	"I notice some customers are nice to you and give you tips, some don't even speak, and sometimes I use it as a proxy to understand how happy they are with the service" (Respondent 13, Cocai Express)	4

Source: Authors' own work

Table 2.

| | | Training tools | | | | | Customers' feedback system | | Platforms' feedback system | |
	Face-to-face meetings	Mentoring	Video	Emails	Formative assessment	Written document	Overall delivery	Rider's performance	Automatic	Direct contact
Deliveroo			x	x	x		x	x	x	
Wolt			x	x	x		x			x
Glovo	x		x		x			x		x
Uber eats						x		x	x	
My Menu		x					x			x
Cocai Express	x	x					x			x

Source: Authors' own work

Table 3.
Platform's overview
of the training tools
and feedback system

Findings

Table 3 presents an overview of the training tools and customers and platform's feedback system for each platform.

We observe that all platforms provide onboarding training that equips riders with the basic information needed to carry out everyday operations efficiently (app use, safety regulations and process management). The necessary information is provided by guidelines and info sheets, while additional working materials, such as Excel files, help in managing gig workers' daily schedules. Emails are a standard method typically used to send online instructions during working hours. The main distinction between the platforms relates to whether training is delivered in person or virtually.

As regards the virtual training, it is provided via short video tutorials or app-written documents. Uber Eats is the only platform that appears to provide online training through written explanations on the app. Three of the six (Deliveroo, Glovo and Wolt) platforms adopt video tutorials, making it the most popular method to offer specific training content that shows riders how to carry out the work and how to use essential equipment (bicycle, scooter or automobile). In this context, for instance, through short videos, Deliveroo demonstrates how to ride a bike, while Glovo illustrates a typical rider's day. These online training sessions consist of a short 20-minute online video followed by a few test questions.

As regards the in-person training, it includes both face-to-face discussion meetings and mentoring. Cocai Express and My Menu show that they rely mainly on in-person training. The newly incepted platform of Cocai Express relies on both of these methods. My Menu trains the rider mainly through mentoring, whereas Glovo appears to blend virtual video training with face-to-face meetings. In addition, three platforms stand out for their distinctive training contents: Glovo, Wolt and Cocai Express. These offer general training that focuses on client communication and helps riders enhance the quality of their delivery service.

The other component of the working dynamics is customer and restaurant performance ratings. Workers' ranking performance in the app is monitored and influenced by factors such as the frequency of missing or canceling shifts, working pace, or task completion lateness. Concerning customer feedback, customers' ratings are disclosed online on the platform's website, usually using an evaluation scale from 1 to 5 (e.g. Deliveroo, Cocai Express, MyMenu and Wolt). This rating is associated with the platform's overall delivery service, inferring both the order's product quality and service punctuality. Furthermore, a brief review can accompany the rating, which is generally about the platform. Other than that, customers may directly rate riders who work for Uber Eats, Glovo and Deliveroo.

In the following section, we deepen the understanding of HRM training and feedback practices in the app work gig economy, and we analyze the riders' perspectives and strategies in response to platforms' practices. This comprehensive picture is organized into four themes that emerged from our coding.

Theme 1: training practices – control and development perspectives

When looking at HRM training practices, the data indicate that all food delivery platforms provided some training opportunities, although opportunities are often limited, both in terms of content and time range. This seems consistent with the idea that not much investment is made in low-skilled gig-working training, either because of the volatility of the job market or the unwillingness to perform employer-like retention strategies. However, the type and content of training vary across platforms.

Differences emerge in the adoption of a control rather than development perspective on training. More global apps (e.g. Wolt and Deliveroo) rely on standardized online videos, surveys

and informative emails or messages. Content is limited to providing basic information on the app use, the main process to follow when performing the gig, and information on COVID-19 safety rules. For instance, Respondent 10, who works for Wolt, explains:

> I had an online training about how to act in the process, for example, they taught us that we get codes for the orders, also that I have to take the package to the address and call the customer and know precise information, moreover, because of pandemic they taught us hygienic rules.

Addressing working conditions during the COVID-19 pandemic, sessions on health security were provided to train the workers on keeping their distance and properly using the necessary health-preventive materials like disinfectant and gloves to respect hygienic standards. Thus, in global apps, training is a standardized and replicable activity easily accessible to all riders but does not entail any interaction or on-the-job experience. Online videos are followed by questionnaires that provide an automated opportunity for formative assessment and are used as reinforcement of the main behavioral standards. Platforms such as Deliveroo adopted an extensive use of emails and prompt messages as a way to impose a standard of behavior. Although it may be functional for the implementation of safety behaviors to promote accountability and predictable behaviors, prompt messages related to the gig task implementation exemplify a controlling mechanism the platform tries to impose on the rider's behavior.

Instead, more local apps that operate in smaller territories (e.g. My Menu, Cocai Express), besides the use of introductory videos that explain the main procedures to perform the gig, tend to rely on more interaction-based training based on face-to-face meetings with managers or mentors. In-person meetings with managers consist of live sessions in which workers discuss with the manager on provided training videos. For instance, *Respondent 7* explains:

> I had safety training first, and about covid regulations, and also general training to help you to improve the quality of delivering the product. [. . .] We went to the office, and we also had some videos and discussions. For an hour. It was one hour each. [. . .] It was around 4 or 5 (training activities in total) (Respondent 7, Glovo).

Rather than only providing information about standardized processes, discussion sessions allowed riders to engage in a more complete understanding of what quality delivery should look like, giving them the opportunity to ask questions and solve their doubts about work expectations. In terms of training content, in local apps, platforms training has addressed also more specific aspects of workers' activities, such as planning and communicating their daily availability to work (e.g. Cocai Express, *Respondent 1*; My Menu, *Respondent 3*), and using digital tools (shared files) to improve the planning of activities. On these platforms, indeed, access to working opportunities is not upon request (whenever the gig worker opens the app, it is possible for him/her to work), but based on weekly planning. Two platforms, Cocai Express (*Respondent 13*) and My Menu (*Respondent 3*), decided to couple the novices with a mentor, who is a more experienced rider, for basic training related to how the job is performed and for learning how the interaction with customers should be carried out. In the platform landscape, this represents a unique case where personalized one-to-one training based on interaction is performed. This personalized form of training, which involves receiving guidance on how to cope with many elements of daily activities, proves to be highly beneficial to the mentees, who also perceived it as a way to overcome the absence of human touch. "So basically that's why I am happy about communication, since they kind of help you with the decision that not always is so simple". This more personalized and rich content of training activities seems to better satisfy the need to facilitate value creation from an ecosystem perspective, giving novel riders the opportunity to discuss their role with respect to the relationship with the other members of the ecosystem. The involvement of

experienced riders in the training sessions was found to help obtain information on how to
behave in different situations that would be difficult to obtain otherwise.

All training sessions were performed in the onboarding phase, usually during the first
days of work or in the first access to the app after registration. An exception regards Covid-
related training, for which riders were continuously informed via mail after the pandemic
started. Thus, although platforms differ in providing training aimed solely at standardization
of behavior or rather aiming at a richer personalized developmental opportunity, in both
cases, platforms do not adopt structured training activities that follow performance
improvement over time.

Theme 2: ecosystem feedback – measurement and management
Interviews enunciated a variety of feedback processes implemented by the different
platforms. In line with an ecosystem perspective, we found out gig workers referred to
feedback from both the platform managers and the customers. The platforms' technical
structure in the gig economy is often connected to the possibility for customers to rate,
provide reviews or provide feedback on the service obtained. In our case, platforms differed
in the implementation of feedback practices a) on whether they allow the customer to rate
the overall delivery service or to give feedback to the rider directly; b) on the extent to which
the customer rating is disclosed to the rider.

In half of the sample apps, customers have the possibility to rate the overall delivery service,
sometimes according to pre-specified criteria such as punctuality and quality (*Respondent 1*,
Cocai Express). Thus, the app is aimed at measuring the ecosystem performance not allowing it
to disentangle the performance of the singular actors. In most cases, the overall evaluation of
the delivery service is not shared directly with the rider. Indeed, gig workers recognize they are
actually evaluated by customers, but this information is retained by the platform. So, "*basically
the firm can see them [the ratings] but not me*" (*Respondent 13,* Cocai Express), such that *"I'm
never being informed if somebody is satisfied or not satisfied by me*" (*Respondent 5,* Wolt). In the
other three cases, the app would instead allow customers to provide feedback on the riders'
performance. Performance evaluations appear to serve as non-monetary incentives to boost gig
workers' motivation to perform while also indicating the need to improve interpersonal skills to
elicit positive client feedback. Apps provide feedback with different levels of granularity.
Deliveroo presents a lower level of granularity, with customers being able to select the rider as
one of the variables they liked about the delivery in the overall delivery feedback (*Respondent
2*, Deliveroo). In this case, the information about "liking" is shared with the riders who receive
direct notification. This promotes the possibility of receiving positive direct feedback from
customers, which may reinforce positive behaviors. In Uber Eats and Glovo, both positive and
negative feedback can be directly obtained from customers. Uber Eats allows customers to
express their positive or negative opinion on the rider using a "thumbs up or thumbs down"
approach (*Respondent 16,* Uber Eats). Receiving both positive and negative feedback allows us
to not only reinforce effective behavior but also signal performance deficiencies. Glovo provides
the most detailed information from clients, as it is the only case in which riders receive
customers' feedback after each delivery.

The platform's feedback system distinguishes between the automatic feedback provided
in the app's dashboard (in the case of Deliveroo and Uber Eats) and direct contact with the
managers for the remaining platforms. Regarding feedback from managers, all respondents
in our sample share the idea that feedback is infrequent. They lament that platforms suffer
from a lack of communication and clarity in this regard, which was listed as the main reason
for disliking the venture and negatively affecting their relationship with the platform.
Although riders were deemed "business partners" of the platforms, their relationship and

communication with the platforms on day-to-day delivery matters is entirely virtual and performed through the app chat box. In general, responses and instructions were received quickly, while there were instances when the app assistance service was unable to respond or did not know how to assist. In addition, gig workers raised the issue that other work-related problems unrelated to deliveries that were communicated by email were rarely paid attention to or responded to. Moreover, the majority of respondents share the assumption that feedback from managers is limited to cases of bad behavior, such as illegal behaviors or mistakes, or bad evaluation from customers (e.g. *Respondent 6,* Glovo; *Respondent 3,* My Menu), and that no feedback is provided otherwise. Only two cases in our sample reported that negative but developmental or positive feedback was provided by managers. The first case regards Respondent 16:

> When I started working, at first, I was not doing very well, and I was receiving negative feedback. Thus, they contacted me and explained to me what I was doing wrong, and then I, of course, improved my mistakes (Respondent 16, Glovo).

The second case refers to a local app "They called me and told me I was doing good, I would have become an important resource for them when emergencies occur" (*Respondent 1*, Cocai Express).

As we will discuss in the next session, these different practices from the platforms induce in gig workers different emotional and behavioral responses.

Theme 3: emotional response to platforms' training and feedback
Food delivery workers appear to have experienced a neutral to negative emotional response to the app's training and feedback practices. Specifically, our analysis indicates that a negative emotional response results from the perceived lack of training and, more generally, from the perceived lack of attention on the human side of the relationship with the rider. Some riders display a more neutral emotional response based on their assumptions about the app's working environment.

A mostly negative response was attached to feedback practices, both because riders contest the validity of the measurement tool and the attainability of customers as raters, and because of a dearth of exploration of the causes of poor performance. When referring to training opportunities from the platform, many respondents perceived it as "minimal" and "impersonal" (*Respondent 16*, Uber Eats). Informants felt emotionally disturbed or frustrated by the little attention given to training and development. The little time and content dedicated to training were described as unfortunate and upsetting:

> Actually, this is quite an upsetting part, because the only thing that they offered was at the beginning, which was how to use the app, they just explained that and nothing more (Respondent 6, Uber Eats).

Especially for those riders working for platforms that rely on online videos and messages, online communication was perceived as clear and very direct, but this also elicited feelings of disconnection as "I would not even know who my employer is" (Respondent 14, Uber Eats) and "they do not care who you are, they just go straight to the point" (*Respondent 4*, Wolt). The lack of human contact in training and feedback tends to blur the connection with the platform firm from the very beginning of their relationship and increase the likelihood of turnover intentions in the long run. For instance, *Respondent 13* (Cocai Express) expresses the willingness to look for different opportunities in the future that entail stronger human interaction "in a longer future for sure, [. . .] maybe something that is more in contact with persons so that I am not working alone completely."

Interestingly, a group of riders present a more neutral emotional response about little training opportunities, as they share the assumption that the job tasks are easy and require few skills, thus the minimum training provided by the app is enough to perform properly. Although all riders in our sample use gig work as an opportunity to earn additional income and perceive it as transitional work, which may lead to low emotional investment in the activity, they seem to develop different expectations on the platform. Some giggers developed a psychological contract characterized by few obligations from the platform and, at the same time, no loyalty to the platform. In this case, the emotional response to minimal training was neutral, but training was still considered relevant, especially for riders with no previous experience, as these excerpts indicate:

> [. . .] for now I would say that I'm actually doing quite a good job. However, when I was a newbie, I was not sure what I was doing exactly or if I was doing it right and I had a lot of questions about it. It would have been much more difficult without the initial training (Respondent 6, Glovo).

On the other hand, some courier's testimonies indicate a reciprocity feeling with the platform, as they feel they represent the platform they are working for and want to provide the best service to their customers. For instance, Respondent 5 (*Wolt*) expresses:

> Yes, it makes sense for me, because, the customer doesn't care who are you, customer knows that you're holding the Wolt bag, wearing the Wolt jacket, so you are speaking from, like, you are standing on the first line, and your habit, behavior speak about the company you're working with.

In this case, riders also had higher expectations for the platforms' duties related to training activities and trusting communication from the platform.

Our data also show some variability in the emotional response of gig workers based on the type of feedback and the source of feedback. Referring to feedback obtained by managers, riders' feelings of unfairness and disappointment are linked to the fact that in most cases only negative feedback is communicated, while positive feedback is taken for granted. One informant maintains:

> Mostly if you make any mistake, they always reach out to you, they always call you and tell you that you did this and that's it, and that's bad. Obviously, customers also have a rating system. When they put, let's say, a negative rating, they're going to investigate something. If you get normal ratings, good ratings, no one tells you anything (Respondent 6, Glovo).

In the few cases in which developmental or positive feedback was given, it was perceived as fair and a motivational driver for their performance. Respondent 1 (*Cocai Express*), for instance, states: "Well yes of course, I was very pleased to hear this and it also positively stimulated me to do a lot more and develop more trust." Positive feedback also helped riders feel like part of the company. As expressed by *Respondent 12* (Deliveroo), despite the nature of the relationship with the platform, receiving appreciation for their work and encouragement spurs a stronger sense of belonging. Indeed, the couriers who perceived having proper feedback from the platform also reported during the interview having belonging feelings to the platform (*Respondent 1*, Cocai Express; *Respondent 4*, *5, 10*, Wolt; *Respondent 15*, Deliveroo). On the contrary, those riders who perceived communication and feedback to be negative and limited to episodes of bad performance did not express feelings of belonging. This aspect indicates how crucial feedback and communication are, not only for the worker's future performance but also for retaining the worker on the platform.

As for customers' feedback, the absence of available feedback ratings led to opposite feelings; on one side, the absence of information was considered stressful to cope with. For instance, *Respondent 12* (Deliveroo) states: "I feel a bit of pressure, I think probably for the reason that I am alone and I don't know if I am doing right or wrong." On the other hand,

customers' rating systems are considered so impersonal and untrustful that riders prefer not to have any, as a Wolt rider (*Respondent 4*) explains "We don't have a rating system in Wolt and I feel less robot here." Indeed, when customers' feedback systems are present, respondents show relatively high skepticism toward the implemented systems first because of unclear information on how the scoring algorithm works (for instance, they reported that receiving a particularly high or low rating may not change your overall score proportionally); second, because they perceive customers' ratings as unfair, "I wouldn't say they are fair, in most cases, customers do not understand that order might be late because of restaurant or cafe or whatever it is. I mean, usually, when a customer's order is delayed, they automatically rate us negatively" (*Respondent 16*, Glovo). The perception of unfairness was particularly linked to the fact that it is difficult to disentangle their performance assessment from that of other members of the ecosystem (e.g. restaurants). Respondent 12 (*Deliveroo*) explains, "[. . .] maybe everything in the deliver gets wet because it was not packaged well and like this is a typical problem that is yeah embarrass me a lot because you don't know what to do because at the same time it wasn't very much your fault, but you are the person who is going to face the customer so you have the responsibility." Perceived unfair evaluations frequently result in feelings of powerlessness and frustration because riders feel they have no power to challenge the feedback or explain that external factors (such as bad weather, wrong addresses, restaurant mistakes, heavy orders; *Respondent 8*, Glovo; *Respondent 12*, Cocai Express) have affected their bad performance. Moreover, if they try to challenge the feedback by contacting the support service, they usually receive an automatic reply or no reply, causing frustration. For instance, Respondent 2 (*Deliveroo*) explains:

> On several occasions I received an evaluation that I did not deserve. I tried to contact the platform many times, but I always received the same copy-and-paste email, always the same one, which was not answering my questions at all, and was very frustrating.

The above data demonstrate how difficult it is for food delivery gig workers to get constructive feedback. Constructive feedback based on customer evaluation is important and appreciated by riders and they take it into consideration to improve their delivery service, as Respondent 6 (*Glovo*) explains:

> Negative customer's feedback affects our rating, obviously, and we riders do our best to not to receive bad rating and we try to do our job professionally. And, to be honest, it also affects your mood, like, when you feel like you did a good job, you're in a good mood, obviously, but when you get a bad rating, yes, it kind of sucks.

Theme 4: behavioral response to platforms' training and feedback
Data suggests that to cope with the weaknesses of training and feedback processes, gig-workers have developed some behavioral responses. To overcome the limited and mostly impersonal training practices of platforms, data show that riders engage in learning from peer-to-peer interactions, both in virtual and face-to-face settings.

Although the basic training during the on-boarding phase allows riders to acquire the technical knowledge on app use and information about the task, when facing problems to solve or to understand how to improve their performance, riders rely on peer support rather than platform support. Gig workers engage in talking with other peers while they wait for orders to be delivered, or by meeting somewhere on the way to the delivery. Social interactions are aimed at acquiring further information about how to use the app, how to manage difficult situations,

how to enhance quality and productivity, as well as how to understand the rating system. The
following riders' excerpts indicate the usefulness of peer learning:

> On the first day I was with another runner that taught me how to interact and how the job has to
> go" (Respondent 13, Cocai Express). No, at the beginning I was quite insecure [in performing the
> job]; however, talking with the various riders, you steal a little here, you steal a little there, you
> steal their experience, you learn slowly, then I do the same in my turn with the new riders, I can
> give them advice: Let's say we are a kind of big family, even if we don't know each other we
> gladly help each other (Respondent 2, Deliveroo).

Respondent 8 (*Glovo*) recognizes the relevance of mutual support in solving problems and in
creating a sense of family between gig workers. "I would say all the riders are really friendly
with each other, and we kind of consider ourselves as part of a family, [. . .], and we try to help
each other in everything. Because we understand how difficult it could be sometimes and we
don't feel like we're strangers for each other, even though we are, when I see someone with a
Glovo bag, the person is immediately not a stranger to me and I want to get to know them
and even help them if they need any kind of help." Social learning is not only perceived as a
way to acquire useful information, but also as a possibility to create social connections to
overcome the lack of human touch on platforms. In this regard, riders expressed a stronger
sense of belonging to the family of riders rather than to the platform itself.

Learning from social interaction happens also through online communities:

> We have a very big Facebook group including only my company's couriers, and a very big public
> group, where you can exchange your experiences, and advice. For example, when I was a junior
> courier, I had so many questions, and they were very helpful with me and I'm doing the same now
> with the new ones (Respondent 5, Wolt).

In the given specific instances, lack of initial training and lack of continuous human
interaction have led giggers to create their rider communities where they support each other
and can socialize.

As explained in the previous section, most riders share negative feelings about
customers' feedback processes. To overcome the limitations of receiving no or little
feedback, it emerges that gig workers have developed some mechanisms for accounting for
their performance evaluations. The most common is comparing with others the way they
work. Talking with their peers about how they perform their daily work gives them the
possibility to learn from each other and improve themselves. The following comment best
represents the collaboration among workers aimed at trying to improve how they perform at
the job: "I don't receive feedback, the only thing is just to confront with other Deliveroo
workers and see how they work" (*Respondent 12*, Deliveroo).

In a few cases, riders rely on their personal daily experience or anecdotal evidence to
create an idea of how to improve their performance. For instance, *Respondent 5* (Wolt)
acknowledges that in the absence of formal feedback from customers, he takes into account
the feedback he receives at the moment of delivery, from the face, voice and words of the
customer. Overall, both behavioral responses show how social relationships account for
alternative mechanisms to address training and feedback needs within the ecosystem.

Discussion
Addressing recent calls for recognizing changes in HRM practices for the digital labor
market (McDonnell et al., 2018), this article contributes to a relatively infant academic
inquiry by exploring HRM training and feedback practices in low-skilled app-based gig
work and investigating how gig workers perceive and respond to those practices. A
representation of our findings is provided in Figure 1.

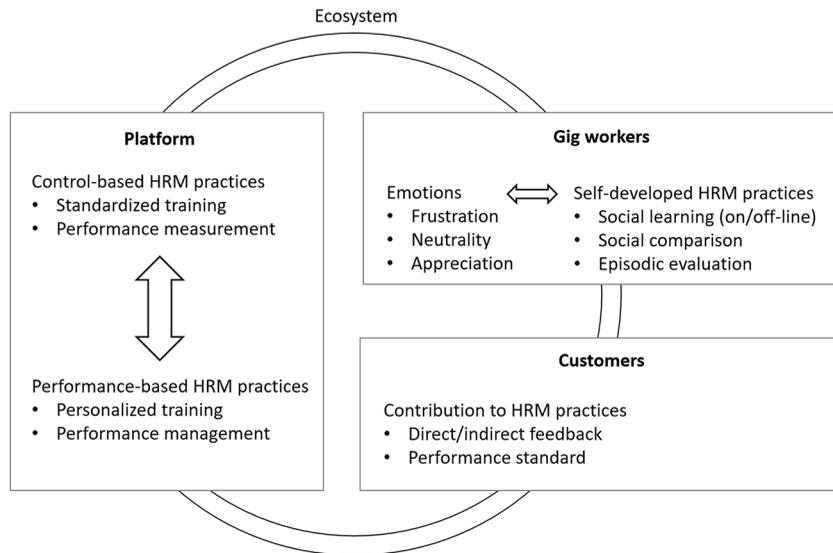**Source:** Authors' own work

So far, the literature has mainly posited that training and development opportunities for workers in the gig economy are severely limited (Duggan et al., 2020; Meijerink & Keegan, 2019). In app work, a limited attention to training may not be surprising because it represents a working context with low barriers of exit and entry; platform firms may avoid pursuing employer-like activities; and the current working environment is already deviating toward a "radical responsibilization" of the individual, meaning the cost of and responsibility for skill development today strongly falls to the individual rather than the organization (Boocock et al., 2020).

Our empirical results confirmed that although all food delivery platforms in our sample provide training opportunities, they only partially invest in them. The effort in providing training possibilities differs across platforms, showing a tension between the controlling and developing HRM perspectives. Half of the sample offered limited training activities aimed at standardization of behaviors. The other half of the platforms invested in more advanced training activities, such as a mentoring meeting with more experienced gig workers. Even in this second case, however, the developmental perspective was limited to the short period of onboarding, totally neglecting long-term development. This disinvestment in people can be harmful to labor productivity and economic growth (Fleming, 2017), as well as deleterious for mutual trust and value creation in the gig economy ecosystem. Indeed, in terms of emotional responses, the majority of app workers in our sample reported dissatisfaction with the platforms' training content and method, feeling frustration and emotional disconnection from the platform in response to the perceived lack of interest in their development. However, the emotional response seems to be dependent on the psychological contract the rider establishes with the platform.

Literature has shown that feedback is a crucial part of people's development (Kluger & DeNisi, 1996). However, in app work, feedback is mainly conceived in terms of scores that predominantly serve performance evaluation rather than performance management purposes.

Usually, ratings from clients refer to the overall platform service and do not allow disentangling the value creation of gig workers. Although this approach may be consistent with an ecosystem perspective, it leads to riders' skepticism, frustration and powerlessness, as they perceive not to have any voice in the process. Moreover, besides a few cases, feedback from managers is generally absent or expected only in cases of bad behavior or frequent negative ratings. This lack of information on their performance makes it harder for gig workers to improve, develop skills and build self-esteem in their careers (DeFillippi & Arthur, 1994). This was found to undermine the perceived truthfulness of the platform and the gig-workers' commitment.

To compensate for the perceived flaws of platforms' HRM practices related to training and feedback, gig workers developed HRM alternative mechanisms, mainly based on social learning and comparison. Previous research has identified the lack of social interaction in the gig economy as one of its main negative features (Lane, 2017; Tran & Sokas, 2017). Platforms usually provide minimal services concerning the possibility to create relationships and share information with other workers (Jabagi et al., 2019). However, the availability of free interaction spaces and virtual communities has been shown to play a vital role in platform workers' experiences (Tassinari & Maccarrone, 2020; Wood, Graham, Lehdonvirta, & Hjorth, 2019). Our results indeed highlight that most gig work learning and feedback happen through social interaction with peers. This adds to previous research by showing that not only gig-workers collectively develop ways to respond to platform management (Bucher, Schou, & Waldkirch, 2021; Lehdonvirta, 2016), but also socially respond to the flows of the platform's provision of training through self-developed practices, in line with Kuhn et al. (2021) and Waldkirch et al. (2021).

Previous studies have hypothesized three main scenarios regarding the influence of the gig economy ecosystem perspective on HRM practices. The first imagines different parties of the ecosystem (e.g. platforms and clients) each providing different aspects of HRM practices; the second would entail parties of the ecosystem sharing the administrative and financial costs of providing HRM through a third-party agency; and the third considers HRM would be provided among a network of gig workers as a community of practice (Kost et al., 2020). Our results seem to suggest that, at least for what concerns training and feedback practices, these three scenarios are not mutually exclusive. Indeed, while the platform provides training and multiple actors provide feedback (e.g. clients and platform) to overcome the flaws of these practices, gig-workers also rely on a community of practices.

Limitations and future research directions

The present study presents limitations that may be addressed by future research. The first concerns the composition of the sample, which should ensure efficient and effective saturation of categories (Morse, Barrett, Mayan, Olson, & Spiers, 2002). The sample included in this study, although showing variability in gig-work experience in terms of type of platform and level of engagement in the app work, is composed of young individuals that mainly relate to the category of short-timers (Dunn, 2020). Being in a transitional period of their life, these people may not invest much in their gig-work profession. Thus, although we achieved saturation in the themes emerging from our sample, its peculiarities may prevent our research from identifying key themes that may be relevant for other categories of app workers.

Second, this study is exploratory in nature, thus it does not meet the theory development verification strategy proposed by Morse et al. (2002). Although this study highlights the variability of the emotional and behavioral responses of gig-workers, it does not provide insights on the moderating variables that may influence gig-workers' perceptions and reactions. Our findings suggest that, besides economic dependency and performance (Rahman, 2021), perceived task difficulty and the need for relatedness may influence the

emotional and behavioral responses of gig-workers. Future studies might consolidate this suggestion. Third, as our findings confirmed the relevant role of social interaction for learning and feedback in the context of app work, future research may investigate whether implementing social features such as platform-based forums and chatting could positively enhance not only learning, but also motivation and commitment (Jabagi et al., 2019). Finally, although our study provides insights to better understand the influence of the gig economy ecosystem perspective on HRM practices, we encourage future research to investigate under which conditions different HRM scenarios may occur.

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