Platform-led Upskilling

Marketplace Platforms as a Source of Livelihoods Training

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ABSTRACT

Platform-led upskilling is training that marketplace platforms provide to vendors and self-employed workers, outside of an employer-employee relationship. Based on expert interviews with 15 heterogeneous platforms, this study identifies platform-led upskilling as a practice worthy of further programmatic and research attention from the technology and development community. Through the interviews and accompanying landscape scan, we identify three broad approaches to platform-led upskilling—face-to-face, online, and in-workflow training moments—and several content types—platform proficiencies, financial and digital literacies, vocation-specific skills, and soft skills. This kind of training is important to current debates about digitization and the future of work because some platform-led upskilling aims to teach portable, lifelong skills, bringing platforms into the broader education landscape and potentially strengthening the social contract between platforms and vendors/workers. However, the scale at which platform-led upskilling will impact individuals and markets remains undetermined and needs further research.

CCS CONCEPTS

• Applied computing~Education~E-learning • Human-centered computing~Collaborative and social computing~Collaborative and social computing theory, concepts and paradigms~Computer supported cooperative work

KEYWORDS

Platforms, e-learning, digital literacy, future of work, skills, ICT4D, ICTD

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1 Introduction

Many developing economies have young populations, with relatively higher rates of underemployment and of people joining the workforce. Whether this growth presents a challenge or opportunity depends in part on whether young people can acquire the skills they need to participate in increasingly digital economies. This paper identifies a promising new source for such skills. We document how some of the same digital marketplace platforms that are changing economic sectors and connecting workers to gigs are putting upskilling (training) at the core of their experiences.

Informed by 15 in-depth primary company expert interviews as well as by secondary materials, this report surveys the landscape of what we call platform-led upskilling, with an emphasis on its use in sub-Saharan Africa. Our three goals and primary contributions to the ICTD community are to (1) describe the contours of platform-led upskilling, (2) reflect on its promising role in emerging digital economies, and (3) identify new possibilities for collaboration between platforms and the development community, including ICTD researchers.

2 Background: Platforms, Skills and Livelihoods in the Digital Age

Digitization is rapidly changing livelihoods around the world, shifting the dynamics of value creation and the nature of employment and livelihoods under the banners of the future [27] or changing nature of work [50]. At the same time, shifting demographics make the livelihoods challenge particularly acute in emerging economies such as those in sub-Saharan Africa [33], where tens of millions of young people seek to join the workforce every year, often without the skills required to prosper [51]. Accordingly, this study examines how one element of digitization, the entry of platforms into markets, might intersect with one element of the livelihoods challenge: the need for skills.

2.1 Marketplace Platforms

In almost every economic sector multi-sided marketplace platforms match buyers and sellers of goods, assets, services, and labor. Lean by design, platforms rely on digital systems to scale with relatively few investments in infrastructure, inventory, or employees [38, 41].

Global platforms increasingly look to the markets of the Global South as drivers of future growth, while regional players experiment in almost every conceivable market niche. A recent study by Insight2Impact found more than 300 marketplace platforms operating in eight major markets in sub-Saharan Africa alone; 80% of these were founded in Africa [32]. Many will be acquired, merge, or fail, but others will succeed and join the ranks of the high-valuation regional ‘unicorns’: Alibaba in China, Flipkart in India, Gojek in Southeast Asia, MercadoLibre in Latin America.

Marketplace platforms create new avenues for micro and small enterprises, and also for the self-employed via what is often called the “gig economy” [48]. Some platforms connect individuals digitally to work around the world, others to local employment and service-delivery opportunities. Flexibility has increased, and moonlighting in second gigs has become common [1]. But important questions for individuals remain: Is a platform worker an employee [44]? If not, then hard-won worker protections and job stability may be in retreat [19].

Against this backdrop, Caribou Digital, in partnership with the Mastercard Foundation, embarked on this project to understand the relationships that platforms build with individuals and small vendors. In an earlier whitepaper [7] and project website [8], we offered case studies and multimedia illustrations from Africa and beyond to inform platform efforts to achieve higher productivity and market success. In this paper, drawn from the whitepaper, we focus instead on the implications for the development community, and on how ICTD researchers might engage with the idea of platform-led upskilling.

There is nothing new in suggesting that better skills help individuals find good livelihoods, nor in the idea that employers should invest in upskilling [54]. Instead, the overarching research questions animating this inquiry were (a) could we find marketplace platforms also providing training, outside of the employer-employee relationship and, if so, (b) in what ways and for what reasons.

2.2 Platform-Led Upskilling in Related Literatures

Our framing and exploration of a new concept, *platform-led upskilling*, situates it at the intersection of several broader conversations and research traditions.

The closest analogue is employer-led training [25], with its established rationale for return on investment, skills acquisition, and competitive advantage [2, 6].

Yet among communities more germane to ICTD, the proportion of a working age population that can expect training from large, well-resourced employers is small and

possibly shrinking. Indeed, we use “livelihoods” instead of “jobs” or “employment” precisely to allow for the many who are self- or fractionally-employed. Livelihoods research is a rich tradition in development studies [23] and in ICTD [13, 29]. Although we don’t interrogate these terms deeply in this paper—as others have done—we treat platform work as a livelihood [18] and extend our inquiry with the expectation that the training offered by platforms can be applied to those livelihoods.

Platform-led upskilling can also be seen as a new approach to business development services (BDS)—a long tradition of providing training to the self-employed and small enterprises around the world [31].

Some policymakers and development practitioners might view platform-led upskilling through the theoretical lens of economic discussions about the contribution of “human capital” to development [3].

And, even more broadly, platform-led upskilling represents a new dimension in e-learning. This is a broad space, ranging from classrooms that teach digital literacy [24] to massive open online courses (MOOCs), electronic courseware [15], and specialized approaches to mobile learning [47]. While the pedagogies are continually evolving, platforms may someday train as many people as any university courseware or dedicated mobile learning site.

Researchers are investigating how these topics are co-evolving in the platform era: For example, the CrowdLearn project at the Oxford Internet Institute looks at how European gig workers learn livelihood skills [30]. Similarly, Ryan Craig, at University Ventures, describes the “win-win” of last-mile training offered by platforms to attract talent [10]. Raval and Pal [40] explore the contours of training offered by a beauty and wellness platform in India, finding patterns of “care” and investment in “professionalism” that transcend characterization as simple transactional support. Finally, Genesis Analytics identifies transferable skills, “such as good communication skills, financial management, business and entrepreneurship skills” as an essential “building block” of Kenya’s emerging gig economy [17].

3 Methods

This project was commissioned and executed as an initial inquiry, part of an overall focus on the changing landscape for skills training in Africa. As such, the methodology employed is one of a business case, combining secondary and literature research and landscape scans with the expert interviews with platform actors.

The thirteen participating platforms and two training organizations (Arifu, eduMe) were selected purposefully for maximum conceptual heterogeneity rather than representativeness [26]. We prioritized discussions with platforms based in Africa [Sendy, Lynk, Jumia, Ahwenepa, Sokowatch, Gokada, Max, DigiFarm], the region in which we

are currently working with the Mastercard Foundation. We intentionally balanced these with conversations with some major platforms in other markets—the US [Upwork, TripAdvisor], China [Taobao], and India [Flipkart]—to expand generalizability. Industry sectors included Logistics, Services, e-Commerce, Taxi/Ride-hailing, Travel, Agriculture, and Freelancing. See the appendix for further details. The interviews were generally open-ended consultations. Each participant was aware of the funder and the purpose of the interview, and could review direct quotes before publication.

To our knowledge we are the first to document platform-led upskilling in a way that may lead to further exploration within the development/ICTD community. While the design of our study was appropriate to surface and sketch parameters of this phenomenon, it will not test its limits or surface its faults. There is more to explore via other methods, particularly by speaking directly to workers and by testing for impact. We will return to the various methods in the discussion section.

4 Results 1: Three General Approaches

Every one of the platforms we spoke to offered some kind of training/upskilling. In the two results sections that follow, we will present a typology of behaviors (approaches and content), and offer observations about that set of behaviors.

We found that platform-led upskilling involves three general approaches to training: **interpersonal training, online training, and in-workflow training moments**. Each draws on distinct traditions and relies on different experts working to improve them. Not all platforms use all three approaches, and, when they do, different teams at the company may lead different approaches.

4.1 Interpersonal Training

We were struck by how many platforms relied on face-to-face, or other forms of live contact with human trainers, to impart skills to their workers and small-scale vendors. Indeed, we found more examples of interpersonal training than online training, and platforms attached a great deal of importance to this type of training.

4.1.1 Interpersonal Training Requires Significant Investment. Lynk, a platform that connects Kenyan tradespeople to businesses and households, found that the workmanship provided by artisans ('Pros') on their site often did not meet customers' expectations for quality. Investigating further, they realized that Pros often used outdated techniques and struggled to access tools and quality raw materials. To address this, they set up Fundi Works, an end-to-end training and production workshop where carpenters can apprentice with master carpenters to improve their techniques and learn how to procure and store raw materials to ensure high-quality finished products. Once carpenters have completed this apprenticeship, they are better equipped to sell high-quality services on Lynk and elsewhere.

Gokada, a Nigerian motorcycle-hailing platform, partnered with the largest defensive driving academy in the world, based in Indonesia, to help them scale face-to-face driver training. With okadas (motorcycle taxis) known for recklessness, safe driving practices have become a differentiator of the motorcycle taxi app industry in Nigeria and a key focus of Gokada's platform-led, offline training. The partnership has allowed Gokada to reduce in-classroom and in-the-field training from seven days to three, and, in turn, work towards their ambitious growth targets.

While Jumia Kenya provides a range of online training modules, the e-commerce platform has found high-touch approaches to be the most effective. They encourage small vendors to attend classroom sessions, rather than online alternatives, by offering incentives for attendance, such as discounts on the Jumia store. But providing vendors with enough quality, face-to-face training is a challenge. To increase the reach of their in-person training, in late 2019 Jumia Kenya moved their vendor training facility to a larger unit in Nairobi's Central Business District, enabling them to run five trainings per day rather than one. While training is key to providing "sustainable income for merchants" and thereby increasing Jumia's sales, Sam Chappatte, CEO of Jumia Kenya, noted the significant costs of offline training in terms of renting training facilities and training the trainers.

Even when there is widespread knowledge of the company and a critical mass of sellers are using the site, larger platforms may still find that they need to invest in interpersonal training. Accordingly, giants like Alibaba's Taobao and Amazon work with third parties to upskill sellers through face-to-face training.

4.1.2 Even When it is not all Face-to-Face. Platforms can use interpersonal contact even beyond face-to-face training. For instance, Flipkart, one of India's leading e-commerce platforms, provides a tailored 60-day business incubation program for new sellers once they have been onboarded and listed their first item. The program teaches sellers how to manage an e-commerce business end-to-end so that they are self-sufficient by the end of the incubation. As part of the program, Flipkart's Key Account Managers call sellers every few days to discuss everything from how to fulfill the first order and identify opportunity areas within the seller's merchandise catalog to how to read a profit and loss statement.

Similarly, Jumia Kenya leverages its Facebook page to push different training topics to vendors, enabling them to ask questions and interact with the content through a live Q&A. These topics are reinforced through various other channels of communication with vendors, such as Jumia's Seller Center and vendor emails.

4.1.3 But Interpersonal Training Works Because it is Personalized and Flexible. Ahwenepa, a Ghanaian e-commerce marketplace platform specializing in the sale of African-inspired products, has taken a unique approach to face-to-face

training. In addition to classroom training sessions run for onboarded artisans, they have partnered with fashion schools to run e-commerce upskilling classes that help students prepare themselves, and their products, for the world of digital commerce.

DigiFarm, a digital platform for Kenyan farmers run by Safaricom, gives farmers access to products and services that help them source, transact, learn, and increase their outputs. While an integrated, automated SMS learning service is bundled into the core product offering, DigiFarm also provides offline support to guide and educate farmers.

A year after its 2018 launch, DigiFarm rolled out the DigiFarm Village Advisory Network (DVA), made up of over 1,500 field experts, to support farmers' digital journeys. The physical support network was introduced based on feedback from farmers who wanted to ask their questions in person. This hybrid model of online and offline training has been a success, despite the notable costs of managing a face-to-face support network like the DVA.

The farmers in DigiFarm's network are not the only ones who appreciate a human point of contact. Platforms like Sendy, a logistics platform linking couriers and transporters with customers in various African markets, say that, particularly in sub-Saharan Africa, face-to-face and interpersonal connections are crucial to establishing trust with drivers so that training messages are taken seriously.

In a world that seems increasingly digital, and among marketplace platforms with business models built on supposedly lightweight interactions between buyers and sellers, our initial interviews suggest that platforms in emerging markets are investing heavily in face-to-face training to address the skills gap and make their businesses work. In other words, many platforms have identified an ongoing need for a mix of "tech and touch" [39].

4.2 Online Training

Online training and support can be FAQs, training videos, or even Interactive Voice Response (IVR) helplines. Offline training content can also be recorded for reuse online.

Many of the largest global platforms have made sizable investments in online materials. For example, eBay has its "Seller Center", Google has "Grow", Amazon has its "Seller University", and at Upwork they just call it "help". Yet in each case, platforms don't simply tell an individual supplier or worker how to use the site; rather, they extend into broader topics, like how to create and register a small business, keep the books, do customer service, and so on.

For example, Tripadvisor's Experiences Supplier Resource Center website promises: "Industry-leading tips from the world's largest online tours and activities provider. From the latest trends and traveler insights to product management, listing advice, marketing best practices, and more—we'll help you attract more customers, boost your sales, and take your business to new heights."

While the above examples from global players represent one end of the spectrum, we found less content among the smaller platforms we interviewed. Even among those that, like Jumia, have invested in developing online content, online training may be secondary in importance and perceived effectiveness to interpersonal upskilling.

4.2.1 Platforms Use Video to Engage Workers in Training. Flipkart has found that its sellers are more likely to watch videos than read online content. Fortunately, video is an increasingly viable option in India thanks to increasing Internet speeds and falling data prices. They found that sellers favor video because having things explained in their mother tongue is important when developing a skill, even if they can manage transactional conversations in English. Therefore, Hindi and English textual training content on the site is complemented by videos, which can be more easily provided in additional languages.

Sendy described a trial of a new training concept based on the idea that video could be an effective way to reach drivers at dispersed physical locations during their downtime. After struggling to encourage drivers to sacrifice working hours for in-person training, they designed videos for drivers to watch at mechanic workshops or gas stations while their bikes are being maintained or repaired—either on iPads installed by Sendy or on their own phones using Sendy-supported Wi-Fi.

Lynk is also experimenting with different mediums. For instance, its app's "Lynk Lounge", contains videos and text training modules on various topics, such as how to create an appealing profile or provide good customer service as well as vertical-specific tips.

4.2.2 Some Use Alternative Media for Training, like SMS and IVR. Arifu, an EdTech company, provides SMS-based learning content to farmers on Safaricom's DigiFarm platform. In addition to training, Arifu conducts learning evaluations (quizzes) and provides certificates through SMS. Similarly, Gokada, which runs an in-person psychometric assessment for recruiting drivers, is also planning to move the process to USSD to help with scalability.

4.3 In-Workflow Training Moments

In the third approach to upskilling users may not even realize they are receiving training because it is delivered alongside the main functionality of the platform.

These in-workflow training moments draw on an emerging practice of user-experience design that supports learning-while-doing. Recently, the broad concept of nudging has become a popular concept in behavioral economics and user experience [43], but here we refer to a subset of nudges or other cues in which interface and experience design has been deployed specifically to transfer skills to the user.

In other words, in-workflow training moments are not just designed to drive outcomes (work more hours!, drive here!, grab this job!) but to inform better tool use or service delivery. And, although not every platform employs in-the-moment

approaches, we are seeing examples of UX thoughtfully designed to help workers and vendors improve their own skills and proficiencies while using the platforms.

4.3.1 Platforms can Deploy Real-Time Coaching. Ronke Olubowale, Head of Driver Productivity at MAX, told us how it sends in-app messages to drivers to reiterate and reinforce lessons taught during face-to-face onboarding training sessions. Some messages might focus on defensive driving practices sent alongside daily “safety scores”; others are tips on how to maximize the in-app heatmaps to remind drivers of where to find the busy hot spots. Other messages might include a link to a video for deeper coaching engagement.

4.3.2 Platforms can Use AI to Anticipate, Identify, and Personalize Training Interventions. Jumia’s AI Seller Coach is designed to provide personalized and scalable content. Jumia provides real-time coaching to merchants as they upload new products to the e-commerce site through the Seller Center’s “Content Score”, which automatically measures the quality of a product’s listing. The Seller Coach helps vendors increase their online business through subtle hints designed to accelerate their sales and improve the quality of goods on offer. The tool, customized to vendors’ individual businesses and integrated into the Seller Center portal, provides actionable recommendations on topics from pricing to stock control.

Similarly, Flipkart coaches sellers on product selection and pricing. The product selection tool mines data from customer searches to alert relevant sellers to lacking inventory variety and availability. It creates an upskilling opportunity by working with sellers to troubleshoot challenges to capitalizing on the opportunity, such as understanding the business case or accessing a photo studio to showcase a new product. The pricing insights engine suggests optimized prices for merchandise based on historical data. Both tools allow Flipkart to offer insights on how sellers can generate more business on the same listings (even when they compete with other sellers) and basic economics about which prices led to the highest conversion rates. Indeed, delivering, for each seller, customized insights that appreciate the diversity of sellers and their skill sets along several dimensions via very scalable technology is both a challenge and a strategic priority according to Nishant Gupta, Head, Flipkart Marketplace.

There is a lot of potential for upskilling here, but it is not easy. These kinds of user experiences—which blur the line between effective tools and educational ones—are fueled by considerable investments in big data, user analytics, and extensive personalization.

4.4 Upskilling Beyond the Platform

Of course, some upskilling occurs outside a platform’s leadership or control. WhatsApp groups, YouTube tutorials, Facebook groups, and third-party workshops can exist without a platform’s blessing, or even its knowledge, yet all are popular resources [39]. Informal training from family,

friends, and mentors also plays an important role in helping entrepreneurs navigate the complexities of marketplace platforms [39]. Similarly, the research group BFA Global suggests WhatsApp groups could be a powerful way to provide “microconsulting” [42].

5 Results 2: Content Types

In the previous section we described several different approaches to upskilling but mostly avoided remarking on the topics covered by those training endeavors. In this section, we flip the lens from *approaches* to *content*, reflecting on why platforms have elected to pursue a variety of upskilling topics.

The most obvious kind of content is the most conventional—the “how to” onboarding sessions or online FAQs and manuals. Collectively, we call this content “platform proficiency”. Every platform explains how to use the platform as a tool: how to upload photos, link a profile to a bank account, activate an app to accept rides, and so on. We do not want to discount the importance of this kind of training, whether face-to-face or online. Indeed, when the platform functionalities are extensive, this training is not even necessarily basic.

But beyond basic platform proficiencies, most platforms we spoke to engaged in training across a wider array of content types including: (1) vocation-specific tutorials, (2) general digital literacy, (3) financial literacy, and (4) soft skills. What unites this array, and what might most pique the interest of the ICTD community, is that these skills are generalizable.

5.1 Vocation-Specific Content

Hypothetically, it is one thing to teach a user how to sell a cake on an online platform. It is another thing entirely to teach that user how to bake the cake in the first place. Yet we found plenty of upskilling that looked less like cake selling and more like cake baking.

Nigeria’s motorcycle-hailing and delivery platform MAX focuses a significant part of its training on driving practices. Through onboarding and retraining, their MAX “Champions” (i.e., drivers) “all receive extensive training to make them the safest and most professional drivers on the streets [34].” That is, both during their onboarding training and later through retraining activities and on-platform moments, MAX upskills drivers to not only be proficient in using the platform but also proficient in their industry skill of motorcycle taxi driving.

Similarly, the service platform Lynk is developing vocation specific content across multiple verticals. Because its Pros’ work sometimes did not meet their standards for quality—and in the face of inconsistent training standards at vocational colleges and no suitable partners—Lynk has started bringing technical expertise in house so that they can develop vocational content themselves. In this way, platforms are beginning to fulfill some of the roles traditionally played by vocational schools.

5.2 General Digital Literacy Content

There is a similar element of potential generalizability at play with digital skills. As mentioned above, most platforms offer instructions about how to use the features of the platform—how to upload photos, describe the characteristics of an object for sale, and so on. What is more challenging, and yet something platforms do, is teaching general, portable, digital skills.

For instance, Lynk found that their Pros were missing notifications about potential jobs because they were turning off data on their phones to preserve credit and battery. However, they also noticed that Pros were not using the entirety of their data bundles before they expired: these concerns stemmed from a lack of knowledge about how to manage data. Now, the company trains workers on things like how to buy a data bundle and how to see how much data is left in a bundle and determine which apps are draining the battery and data and turn these off.

Similarly, Alibaba identified a need to improve the quality of rural producers' product photographs to improve their sales on the Taobao platform. Now they work with third parties to offer training on how to take high-quality photos alongside training on better online marketing, handling customer service via chat, and promoting products via live streaming.

The Ghanaian e-commerce platform Ahwenepa teaches artisans how to leverage social media as a marketing tool. Its founder, Henry NiiAyi Cobblah, explains how digital literacy training focuses on "marketing Ahwenepa links on social media channels, and then the implementation of how to get social media strategies up and running." Initially training focused on platform proficiency, but "this became too boring for vendors" and they started to look at what other tools artisans were accustomed to using to promote and market their products: "We tell them that our platform is a way to optimize and organize their products, and social media sites are a means of marketing."

The Ahwenepa and Taobao examples are particularly powerful because these are not simply basic digital skills. Social media marketing—the multifaceted digital literacy of knowing how to generate and manage positive attention across multiple platforms and channels—is an empowering skill for the digital age and inherently generalizable.

5.3 Financial Literacy Content

Some financial training topics—linking a bank account to a profile, calculating sales tax, and so on—are best seen as extensions of platform functionality. But, as is the case with vocational skills and digital literacies, some platforms find it necessary to teach general financial literacy, such as business practices like accounting, or personal-finance practices, like budgeting and saving.

Recently, Flipkart formed a partnership with the chartered accountant FinTech firm ClearTax to answer queries about financial transactions and e-commerce. Examples include how

to register the business, obtain a tax registration number to do business online, and register a trademark.

In July 2017, India changed from a VAT to a goods and services tax (GST) regime. During the transition, Flipkart ran a campaign and initiative called Flipkart GST Genie—an eight-to ten-month program to inform affected users how GST would work so that Flipkart sellers would be prepared to continue their businesses under the new scheme. Sellers were taught how the transition would affect invoicing, taxation, and so on. Nishant Gupta, Head, Flipkart Marketplace, noted, "We are very proud at the end of the transition that there was a third-party study in which sellers voted Flipkart as the number one platform that assisted them during that transition."

Part of DigiFarm's service offering is access to input loans through Safaricom's M-Shwari product, bundled with insurance provided by Pula and OneAcre. To support these offerings, along with digital payments, Arifu provides financial education training to farmers.

As a loyalty benefit, Sendy provides riders with the option to join their Savings and Credit Co-Operative (SACCO). During training, Sendy actively encourages riders to use this facility to save money, highlighting how this practice prepares them for longer-term financial needs, and teaches them how to plan their finances to maximize their accumulated savings, for instance by buying a second bike. "We are basically teaching them how to run a business," said Victor Maina, Sendy's Commercial Director.

Uber partnered with the financial firm Old Mutual to equip driver-partners across sub-Saharan Africa with financial management skills. These in-person "On the Money" financial literacy seminars [37], delivered by Old Mutual but held at Uber's support centers, aim to equip driver-partners with critical money management skills, entrepreneurial skills, information on how to best manage their finances, the habit of proactive saving, and developing healthy savings habits. The program was launched in 2016 in South Africa, and, following the success of the program there, expanded to Nigeria, Ghana, and Kenya in 2017.

Financial literacy training is difficult and labor-intensive; obtaining significant, durable results is challenging in the classroom, let alone online [14]. Designers of financial literacy programs in platforms will need assistance, investment, and the mutual exchange of best practices to be successful in their efforts to upskill digital literacy.

5.4 Soft Skills Content

Similar lifelong learning challenges surround the idea of soft skills: interpersonal intelligence, presentation, courtesy, attentiveness, and so on. Soft skills are essential for platform environments where producers meet customers face-to-face as well as those where producers have direct electronic relationships with customers.

Both MAX and Gokada view soft skills training as one of the most important elements of their driver training. For MAX, soft skills training, such as how to answer calls and provide good customer service, is the first priority for driver training. Recently, Gokada partnered with Wave Academies to deliver refresher training focused on customer service. “Training is focused on what makes a good customer experience,” shared Ayodeji Adewunmi, co-CEO.

Likewise, Uber provides training on how to deliver a great customer experience at multiple touchpoints in a driver-partner’s journey. Uber retrains driver-partners on soft skills if ratings fall below a certain threshold based on community guidelines. Driver-partners receive the link to an online course in app and via email. The customer service module includes videos and text content as well as quizzes to consolidate learning. By hearing from their peers through short videos, Uber driver-partners learn how to improve their customer service and hence ratings. Once the driver completes the training they are reactivated on the platform.

Lyнк also understands that soft skills are critical and provides soft skills training interpersonally, online, and via in-app moments. Not only does it provide this training during onboarding, it also reinforces it on small reference cards, given to each Pro, that map out the steps for delivering a service to a customer with explanations about the importance of punctuality and sample scripts for different scenarios; for example, what to say if they were late, how to deal with an unsatisfied customer, and so on

Sendy takes a different approach, emphasizing incentives and flexibility rather than analysis or routinization. Marvin Kirschener, VP Growth & Data, explained “Analyzing [drivers] would be easier and might create better positive impact but we want to make sure they are empowered to make their own decisions not just follow a script. There are so many scenarios we can’t anticipate.”

Some of our discussions about soft skills underscored how challenging it can be to teach such topics. The term has become a catch-all for anything outside technical and vocational skills, and, in some contexts, soft skills can evoke deep class tensions with symbolic, socioculturally embedded complexities that far exceed the construct of skills transfer. As Raval and Pal’s [40] research with platform-based beauty workers in India illustrates, the “enactments of professionalism” are an interplay between the rules of the platform and the choices and dignity of its workers. We recommend that platforms considering soft skills as part of a training curricula be particularly attentive to how such training is interpreted and experienced and design programs *with* the trainees, rather than *for* the trainees.

5.5 When Taught, Content is Combined, not Discrete

There are overlaps between content types: between vocational training, “how to run a shop”; financial literacy,

“how to keep books”; digital literacy, “how to back them up”; and soft skills, “how to keep a customer.”

The first question Jumia poses in its onboarding vendor training sessions is “What is e-commerce, and how does it differ from your offline business?” Through classroom training, online videos, short blogs, and in-workflow training moments, Jumia is constantly upskilling and re-skilling its vendors with offerings that include a combination of these generalizable skills—financial literacy, digital literacy, and digital sales and marketing—that become mixed under the banner of e-commerce.

6 Discussion

Having presented the results as a mix of approaches and content types, we can now move from description to prescription.

We are confident that platform-led upskilling happens worldwide. eBay’s “Seller Center” and Google’s “Grow” are just two prominent examples. However, because skills are an important part of the development/livelihoods challenge, the prospect that digital platforms could play a role in upskilling in the Global South, and among low-resource communities in the Global North, makes it an important area for further scrutiny by ICTD researchers. In the three discussion subsections, we first briefly address the business case for platform-led upskilling, then focus on four domains in which ICTD research might do to further assess this potential. Finally, we frame platform-led upskilling as the kernel of a potential alignment between the respective strengths and goals of marketplace platforms, their users (workers, suppliers, and customers), and the development community.

6.1 Business Case for Platform-Led Upskilling

Put together, the three approaches to upskilling (interpersonal, online, in-workflow training moments) and the five types of content (platform proficiency, vocational, digital literacy, financial literacy, soft skills) can be expressed as a matrix of possible choices. Thus, at this point, there is no single rationale that we can express in terms of a discrete return on investment. That said, we can offer a few reflections about how businesses approach platform-led upskilling:

6.1.1 Platforms Upskill Because They Have To. Consider these quotes from participants, about the rationale for training:

Training is a differentiating factor, we are happy to make the upfront investment...within the marketplace, drivers are really critical and whoever is going to win in the market will have over-invested in the drivers. — A. Adewunmi, co-CEO, Gokada

Flipkart is a marketplace so the entire success of where we are is attributable to the sellers. Our growth has to come from the sellers. We focus on: “What is the value we can help them build?” —Nishant Gupta, Head, Flipkart Marketplace

Many digital platforms view upskilling as a core strategic activity and central to their success because the producers represent a platform's brand and business. Moreover, since platform revenue depends on producers increasing volumes, platforms fail when their participants lack the necessary skills to be effective across the platform. Training is a necessary investment, and key to platform growth...Training results in sustainable income for merchants and more revenue for Jumia. —Sam Chappatte, CEO, Jumia Kenya

This centrality of training is evidenced by performance indicators that link operational performance to seller upskilling initiatives. For example, Flipkart tracks metrics specific to each upskilling initiative. For the organization's 60-day business incubation (upskilling) program, it tracks: how many sellers listed how many products; how many sellers were able to dispatch a product on time; how many sellers are transacting on the platform; and how many are getting above a certain threshold of business. These metrics work alongside seller satisfaction scores to help Flipkart translate its upskilling initiative targets into operational goals. Flipkart's integration of skill acquisition into related indicators is illustrative of an organization that has carefully considered the business case for training and upskilling.

Nobody told platforms they *had to* do upskilling, especially beyond the basics of "platform proficiencies." In fact we would suggest that, despite these quotes, they don't want to do much of it. Perhaps in the ideal case for the platforms, the rest of the ecosystem would take care of all worker training. Workers and vendors would graduate from secondary schools, technical programs, and universities with skills in place. Barring that, other parts of the value chain like larger suppliers, NGOs [16], or third-party training academies, would take care of the gaps. Indeed, certificate programs and lifetime training are popular and important parts of the ecosystem.

However, at least in the near term, such ubiquity is unlikely, and instead the platforms must step in [12]. Whereas a platform working in the Global North might be able to invest mostly in platform proficiencies, platforms working in the Global South must also invest in training around concepts that are more likely to be generalizable.

6.1.2 Calibrating the Right Mix of Approaches and Contents is an Ongoing and Expensive Process. In designing its training/upskilling approach, each platform chooses:

6.1.2.1 The Mix of Delivery Methods. Generally, the economics of face-to-face content accept higher costs-per-trainee in exchange for rapid customizability and more reliable impact. Nothing beats a face-to-face training session, at least until you have hundreds or thousands of suppliers to train. Similarly, the investments required to weave anticipatory AI or other in-the-moment interventions into the workflow are expensive but more scalable.

6.1.2.2 The Breadth of Vocational Content Offered. Developing vocation-specific upskilling content will be more

costly for platforms that touch multiple vocations than ones that focus on just one or two sectors. It is probably worthwhile for Uber to train its driver-partners on the vocational skill of better driving; but the same returns, distributed across dozens of content categories, might be more challenging to attain for multi-service platforms like Upwork.

6.1.2.3 The Source of the Upskilling. Greater reliance on third parties, or even on crowdsourced content, might alleviate some of this production burden. Linking to YouTube could prove more cost-effective than the upskilling that platforms themselves could provide. But reliance on third parties is not a recipe for quality control, tailoring, or advantage in something as difficult as training. So, it makes sense for platforms to do more training in house as they grow.

Clearly, the upskilling challenges for a delivery app are different from those of a retail or agricultural marketplace. That said, there are commonalities, and we suggest that platforms can think more expansively about training by looking at what platforms outside their sector are doing. Because platforms are investing heavily in experimenting with different training techniques and modalities to find the most effective approaches, sharing best practices across sectors could add value.

6.1.3 Platforms do Most Upskilling Themselves Because of a Lack of Partnerships. In our discussions, platforms expressed enthusiasm for solutions where third-party experts could be counted on to design and deliver training. There are some partnerships in place; Sendy works with the bike manufacturer Yamaha, Gokada with a defensive driving academy, and others work with specialty vendors, such as EduMe. Yet in general there appears to be a dearth of suitable partners and advantageous partnerships.

Platforms seek third parties to help relieve some of the training burden, and third parties are starting to realize the potential. But more needs to be done both in terms of improving the quality of outsourced, third-party training options and connecting platforms with suitable providers.

6.2 Assessing the Development Case for Platform-led Upskilling

The development case for upskilling requires more scrutiny. Our discussion turns now to four general domains where further studies by ICTD researchers could be useful:

6.2.1 How Widespread is Platform-led Upskilling? We discussed upskilling with a small sample of the hundreds of platforms active in Africa and only a few from outside that region. It would be helpful to survey a more representative sample of platforms to get a better estimate of how prevalent these practices are. The matrix of upskilling approaches and content types identified by this study could be populated for more platforms, within either a country or a region.

6.2.2 Is there Demonstrable Impact on Workers and Small Firms? Notably, the evidence remains sparse in terms of

demonstrable, but publicly discussable, returns for individual platforms. That the platforms we spoke to are investing in upskilling is, in some sense, evidence of an ROI (return on investment), because that spending must be justified each year. However, the approaches we uncovered were so heterogeneous that we have not been able to derive an ROI figure for training. That would be better pursued on a case-by-case basis and aggregated/revisited once more studies are in the research domain.

Similarly, we did not speak directly to individual workers or the small firm owners that may be the target of upskilling activities. Studies of various methods, quantitative and qualitative, should look closely at the efficacy of skills training by platforms in cost-effectively transferring skills, perhaps in comparison to other sources like training academies or secondary schools. We think efficacy is likely to vary by content type and by approach, and it would take significant effort to establish ‘best practices’ in terms of impact.

6.2.3 Are the Impacts Portable? Training is notoriously difficult, and—while we are enthusiastic that the on-the-job, close to the livelihood-style training that platforms can offer may have a great deal of resonance and suitability for adults—we don’t yet have enough evidence to know which training approaches or topics more or less result in portable, ‘lifelong’ skills, nor which of those particular skills is most important in terms of the overall portion of highly skilled workers in a country, or to the overall marketability of individual workers. Demonstrating some portability of acquired skills—letting individuals take what they have learned elsewhere, to the benefit of the overall level of human capital in a workforce—is key to making platform-led upskilling part of the development conversation, and not simply part of the business models conversation

6.2.4 And, how does Upskilling Intersect with the Dynamics of Inclusion and Exclusion? Any impacts of platform-led upskilling need to be understood relative to broader dynamics of economic inclusion and exclusion. In the long run, it will be important to develop an evidence base that examines whether and how these kinds of training impact those most in need. For instance, how does platform-led upskilling intersect with languages of instruction? With rural versus urban locations? With age and technology savviness? With gender [49]? In other words, how does platform-led upskilling relate to broader efforts underway to make the contours of the digital society more equitable and inclusive? ICTD research can play a role in discouraging dynamics that follow the existing patterns of technology use which accrue disproportionately to the digitally savvy [45]. Some of this may include critique; in the multidisciplinary space of ICTD there is an important role for perspectives and analyses that, while interrogating the whole idea of a private-sector platform [22], might question why and whether training in livelihoods could or should fall to such an entity.

6.3 ICTD can help connect platforms and the development community

We hope others will join us in conducting research into platform-led upskilling, in other geographies and contexts. In the meantime, and in parallel with empirical work, there is a role for ICTD to play in connecting platforms to the development community.

6.3.1 Framing Upskilling as a Development Contribution. We argue that platforms are likely to have greater success when speaking to the development community about generalizable skills—the very same skills in financial and digital literacies, vocation-specific activities, and even in soft skills—that the platforms themselves have diagnosed as necessary to train their users on.

Amazon India, for example, points proudly to the 700+ videos on its Indian “Seller University” site as one of the ways in which it is generating economic impact for India—how it is “Impacting Lives.” [11] Likewise Echo, a microenterprise marketplace in the UK, described in 2015 how proud they were of their onboarding training (which they say increased sellers’ volumes on the site as much as twentyfold), and also that it extended beyond the platform. “Bringing users together regularly offline for both training and networking ‘socials’ helps to develop the social capital and relationships they need to trade outside of Echo, aiding the development of resilient local communities, which is a key driver for us. Echo users are now going on to develop commercial relationships outside of the platform—hard to track but a great early outcome” [35].

Companies that, like Echo, frame worker/microenterprise successes in which they will never directly participate as a key goal are part of the shift to platform-led upskilling. ICTD researchers may look to work with platforms to document/evaluate any training in generalizable, portable skills.

6.3.2 Helping Platforms Forge New Upskilling Partnerships. Launched in 2019, the Flipkart Samarth program [53] illustrates how platforms and the development community can form partnerships around upskilling initiatives. It aims to bring India’s artisans, weavers, and handicrafts producers into e-commerce. With dedicated support for onboarding, cataloguing, account management, and business insights, it coordinates with governmental and NGO organizations to deliver training and other benefits to help rural entrepreneurs launch their own e-commerce businesses.

In general, partnerships like Samarth present an opportunity to work with smaller-scale suppliers, lower-skill workers, and so on; this is both an opportunity and a constraint, but it is a definitive path to linking platform activities to discussions about economic inclusion and development. ICTD researchers and practitioners may be well-positioned to lead or support such partnerships.

6.3.3 Nurturing a Broader Community of Practice. Clearly, platform upskilling is not carried out by one person via one channel. Depending on a platform’s size, business model, and

culture, it may draw on operations or education specialists, or third-party training vendors. Initiatives will involve frontline trainers, experience designers, coders, and technical writers. Beyond the platforms, it involves researchers and policymakers as well as government, education, and labor ministries seeking to improve workforce skills. Wherever one draws the boundaries, platform-led upskilling is a multi-stakeholder transdisciplinary community of practice, one in which ICTD can play a prominent role.

6.3.4 Building an Ecosystem around Platform-led Upskilling. Finally, as this community of practice comes into being, there is an opportunity to think about how it can lay down new pathways for collaboration and new social and economic infrastructures to amplify the benefits of platform-led upskilling.

For example, skills portability would be improved by turning platform training experiences into certification programs. Additionally, if individual workers or suppliers can be certified, so too can specific platforms. Echoing the worker-protection certification that the Fairwork Foundation does [20], another approach might be to offer certification to platforms that have demonstrated a commitment to upskilling.

As upskilling continues to grow there will be additional opportunities for other specialist training companies, like EduMe, to work with platforms and serve as important parts of a training ecosystem. This ecosystem would also include schools, traditional employers, and universities.

7 Conclusion

These roles for ICTD researchers and practitioners are interconnected. A stronger evidence base for the effectiveness of platform-led upskilling will facilitate greater investment and new partnerships between platforms and the development community, which, in turn, ICTD research and practice can help steer.

Reforming and expanding upskilling and training is essential to the future of work. As this document has highlighted, platforms themselves can be part of reimagining what many—including the World Economic Forum [9], marketplace platform leaders like Stephanie Kasrial of Upwork [28], and the ILO [27]—have referred to as a new social contract between labor, business, and society.

Of course, even a broad rollout of platform-led upskilling would not be a silver bullet for the challenges of underemployment in the Global South [5]. Nor does it represent the sum of any platform's interactions with the workers, firms, and markets in the societies in which it operates.

Our new interconnected digital world must promote “fair work” [20] and dignity [21], protect crowdsourced and gig workers of all kinds [4], allow platform workers to organize collectively and/or, as the ILO argues, create “an international governance system for digital labour platforms. . .to require

platforms (and their clients) to respect certain minimum rights and protections [27]”. It must explore regulatory levers to preserve and create competitive markets and ensure that small-scale producers, especially suppliers of labor and commodities, retain a reasonable proportion of the overall value created [46]. It must demand privacy protection and less surveillance as platforms capture more details about lives online [52]. And, it must increase worker agency. As gig work expands, it will become important to increase the portability of worker benefits like savings, pensions, and insurance [36].

All that being said, this paper has identified platform-led upskilling as an increasingly important part of the training landscape, and as a possible input to building a more inclusive and productive digital society. Accordingly, it is an area in which marketplace platforms and the development community are more likely to be partners than antagonists.

Marketplace platforms are not the exclusive stewards of the markets in which they operate—nor would we want them to be—but as this paper demonstrates, platforms in Africa and throughout the world are adding upskilling activities, many of which go beyond narrow platform proficiencies, to their competitive offerings. Platforms benefit by doing so, and, by extension, so do individual users and labor markets.

The more generalizable the skills a platform seeks to nurture, the more amenable other government and developmental organizations may be to co-creating content, piloting programs, and exploring new partnerships. This is a promising area for further engagement with ICTD research.

We are grateful to the Mastercard Foundation for the support to work on this project and to the platform managers and leaders who took the time to speak with us. In the months ahead, we look forward to being part of a process to grow this community through workshops, future work, and consultations. If we are successful, the community of those speaking about platform-led upskilling will soon be far broader than those we interviewed for this project. We hope readers will share their upskilling stories with us. We will add many of them on our project website [8], and we hope this is the start of many conversations to come.

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APPENDIX: PLATFORMS INTERVIEWED

Platform	Sector	Region
Sendy	Logistics	Kenya
Lynk	Services	Kenya
Jumia (Kenya)	e-Commerce	Kenya
Flipkart	e-Commerce	India
Ahwenepa	e-Commerce	Ghana
Sokowatch	e-Commerce	Kenya
Gokada	Taxi	Nigeria
MAX	Taxi	Nigeria
DigiFarm	Agriculture	Kenya
Taobao	e-Commerce	China
Upwork	Freelancing	Global
Tripadvisor	Travel	Global
Arifu	Training Vendor	Kenya
EduMe	Training Vendor	Global