

Executive Summary

There are few greater drivers of development than quality education. At the post-secondary level, the World Bank highlights “unequivocal” returns on investment, ranging from higher employment and greater productivity and innovation, to increased civic engagement, and better health outcomes.¹

In emerging markets, the number of primary and secondary education graduates is increasing, but enrollment in higher education remains low. In Sub-Saharan Africa, for instance, only nine percent of college-age learners continue from secondary to tertiary education.² While women’s enrollment in all stages of education is increasing globally, gaps in attainment persist in low- and middle-income countries. Women learners are limited by social norms prioritizing investment in men’s schooling and by lower rates of labor market participation than men. Demand for higher education is often unmet, suggesting the need to complement public resources and classroom-based education with new partners and delivery models.

Enter online education. From micro-credentials to the gamification of learning, digital delivery has the potential to lower costs and increase access to a more diverse set of learners. Nowhere is this potential higher than in emerging markets, where young populations, fewer existing educational opportunities, and expansions in connectivity set the stage for explosive growth. In 2021 nearly 65 percent of global investment in Educational Technology (EdTech) was in post-secondary education,³ and growth projections are high—HoloniQ predicts EdTech spending is set to reach \$404 billion in 2025, up from \$163 billion in 2019.⁴ Yet, access has been uneven and long-term economic outcomes are not fully understood, particularly for women learners.

The future of work and impacts of COVID-19 have increased the need to better understand the role of online learning in the educational ecosystem. Predictions on the future of work highlight the need for quality education that is accessible, affordable, and linked with market demand. Longer working lives, changes in high-demand skill sets, and job shifts caused by automation mean that to remain relevant in the workplace, adult learners will increasingly need to educate themselves many times over during their careers. This is especially so for women, who have suffered higher job losses during COVID-19.⁵ Women’s work is also more likely to be disproportionately impacted by future

advances in technology than men’s work, as their work tends to be concentrated in the service sector and routine in nature.⁶ Yet the digital divide can create a vicious cycle that closes off online education to underserved learners who are most likely to benefit from more accessible education but who have the most difficulty accessing online services. Nonetheless, online learning can support a successful transition to the future of work by helping learners develop a range of skills and credentials in a flexible format, especially if accessibility barriers are addressed.

COVID-19 has blurred the divide between online education and traditional in-person offerings. The pandemic accelerated the adoption of online learning, both as a stand-alone model and a complement to classroom-based learning—the future of education is likely to be an effective combination of the two. However limited research has captured the potential and challenges of online education for post-secondary learners in emerging markets, including if or how women benefit from online learning, leaving the scope of the opportunity in online learning unrealized.

This report aims to address knowledge gaps related to women’s participation in online education and to inform public and private sector approaches to improve life-long learning opportunities for women. Studies on the participation, use and challenges of learners in online learning have mixed results and comparing experiences and outcomes from different platforms can be challenging given the variety of content, payment, and delivery models. With a focus on post-secondary learners, this is the first study on women and online learning in emerging markets to provide comparable data across different geographies, demographic profiles, and subjects. The methodology combines several sources, including sex-disaggregated user data from Coursera’s then 96.9 million learners; detailed surveys of 9,551 learners in Egypt, India, Mexico, and Nigeria; and interviews with over 70 global learners and industry experts. The report tracks opportunities and challenges along the learner journey, from the search for education through post-learning career outcomes and explores the potential benefits for companies and economies of closing gaps in online education. Research is conducted under the Digital2Equal initiative in partnership with Coursera and the European Commission.

Key Findings

The report finds that online education offers an opportunity to improve access to post-secondary education for learners around the world. However, not all students can access online learning equally. Online education platforms can both grow their markets and drive greater development impact by addressing women's participation challenges and better serving women learners.



Who is learning online?



32%
in Africa

34%
in the Middle East

39%
in Asia-Pacific



45%
2020-2021

39%
2017-2019



75%
of all learners plan to
continue learning online
after the pandemic

- 1. Currently, women represent a minority of learners enrolled online in emerging markets on the Coursera platform, but their participation is growing.** While in North^a and Latin America women represent about half of online learners, globally there are gaps in women's participation. Women represent just 32 percent of learners on the platform in Africa, 34 percent in the Middle East, and 39 percent in Asia-Pacific. However, these gaps have continually decreased over the last five years. Enrollment gaps in emerging markets emphasize the urgent need to better understand how to recruit and serve women learners as online learning plays an increasing role in education.
- 2. The COVID-19 pandemic boosted women's enrollment and accelerated an already strong trend towards online learning.** During the pandemic, women's participation in online learning globally jumped from an average of 39 percent in the previous three years to 45 percent in 2020 and 2021. Twenty-six percent of women in the four focus markets (Egypt, India, Mexico, and Nigeria) compared with 20 percent of men, participated in online learning specifically due to the pandemic. Health concerns, family care, and value for money all emerged as higher drivers for choosing online education for women than men in this group.
- 3. Increased demand for online learning is likely to outlast the pandemic.** Seventy-five percent of all learners plan to continue learning online after the pandemic and an additional 24 percent said they will seek blended learning options, with women more likely to prefer blended options. Eighty percent of learners said they believe online credentials held some value to employers. Increases in online learning participation during the pandemic, coupled with learners' clear intentions to continue online education post-pandemic, offer a chance for platforms to retain new women users and close gender gaps.



How and why are women and men learning online?



*Deciding factors for
women:*

- ➔ **Mobility**
- ➔ **Safety**
- ➔ **Family obligations**

- 4. The majority of learners choose online learning out of preference, not necessity, but mobility, safety and family considerations impact women's learning choices.** Among those learners who chose to learn online due to personal preference, rather than those compelled to by the pandemic, men and women shared the top three motivations: flexible scheduling, access to high quality providers, and lack of in-person alternatives (for example, due to distance). However, women face a wider variety of considerations that restrict how and where they learn. Women were more likely than men to report that mobility (22 percent vs 14 percent), safety (26 percent vs 22 percent), and family obligations (22 percent vs 12 percent) were key factors when deciding where to study. In conjunction with women-centered policies on education, transport, and care, online learning could play a role in helping women achieve their learning goals.

^a For this report, North America refers to the United States of America and Canada. Mexico has been grouped with Latin America.



would postpone or not study at all without online learning



rely on free or audited courses



pursue specializations and professional certificates

Women are more likely to enroll in courses with at least one female instructor, and they rated these courses more highly



5. Online learning is perceived as more accessible than in-person education for women as well as underserved populations. Forty-two percent of men, 45 percent of women, and 60 percent of women caregivers indicated that they would postpone studying or not study at all if online learning was not an option. Additionally, 17 percent of all learners self-identified as disabled and this group showed a slight preference for blended learning, reflecting the need to advance accessible learning options, as well as the value of creating connection among learners. Just under a quarter of learners identifying as lesbian, gay, bisexual, transgender, or queer (LGBTQ+) in Mexico and India felt slightly safer learning online than in person; additionally, 40 percent of LGBTQ+ learners were more likely to ask questions and 51 percent were more likely to voice their opinions online than in traditional classrooms. This echoes the small but notable portion of women learners who were drawn to online learning in part to address safety risks associated with offline education.

6. Women's lower access to funding impacts their learning patterns. Financing emerged as a major barrier to women's learning patterns. Fifty-three percent of women, compared with 42 percent of men, rely on free or audited courses, and only 36 percent of women, compared with 44 percent of men, use personal savings to pay for online courses, reflecting global income and financial inclusion gaps for women. Despite limited funding, women are also less likely than men to apply for financial aid. In Africa, Asia-Pacific and the Middle East, women accounted for approximately a quarter of aid applications. When asked what would make online learning more appealing, both women and men cited "greater affordability" as the top request. Financial gaps likely influence both the overall number of women learners online and their learning objectives; for instance, women may be less likely to pursue multi-course certifications in the absence of clear funding. This indicates a need not only for better outreach on existing financial aid opportunities, but also for further investment in large-scale public sector partnerships to offer innovative payment models, dedicated scholarship opportunities, and other emerging funding models that support online access to education as a public good.

7. Women are exploratory learners who look to learn across subjects while men prioritize immediate career benefits. Men are more likely to focus on the short-term professional benefits of education, such as obtaining a new job or advancing in their current role. Sixty-three percent of men, compared with 52 percent of women, learn online with a career-related goal. In contrast, 79 percent of women compared with 68 percent of men, went online to explore a specific topic. More men (71 percent) pursue multi-course specializations and professional certificates than women (52 percent). This suggests that women are exploratory learners who look to learn across subjects, but also that some women may not have the funding to commit to multi-course certifications or may not always see a clear connection between completing learning online and achieving professional objectives. Supporting women in accessing such credentials and demonstrating the potential return on investment can help build a stronger pathway between online learning and opportunities for success in the labor force. Unfortunately, patterns of gender segregation are replicated online—37 percent of those enrolled in science, technology, engineering, and mathematics (STEM) courses in 2021 were women, although enrollment rates have increased from 31 percent before the pandemic.

8. Women face challenges to course participation and completion, but practical solutions are emerging. Compared with men, women learners tend to spend less time on the Coursera platform per session and are online fewer days per week. Fifty-seven percent of the women enrolled in paid specialization and professional certificates complete their courses, compared with 64 percent of men, and women are more likely to cite lack of time and family obligations as reasons for dropping out. However, specific approaches can improve women's engagement. Notably, women were more likely to enroll in courses with at least one female instructor, and they rated these courses more highly. Women also reported that flexibility to complete courses on their own timelines through asynchronous courses and more mobile-friendly options would increase the appeal of online learning. Women show interest in blended learning options and community building and are 38 percent more likely than men to indicate they plan to pursue a blend of online and offline learning in the future. This emphasizes the need to build a future of education that leverages multiple points of entry and engagement.



How does online learning impact learners, businesses, and economies?



37%

of learners report new job, new business, or improved performance as a result of online learning

1/2 of the learners who joined to start or grow enterprises succeeded in doing so



Closing gender participation gaps could add up to

\$14 billion
to the market



One new job
is added to the economy for every 30 people trained by Coursera in the four markets surveyed

- 9. A significant portion of online learners report improved career opportunities and/or income increases.** Thirty-seven percent of learners report a new job, a new business, or improved performance as a result of online learning. This includes learners who are currently employed, unemployed, or entrepreneurs who have completed at least one lesson on the Coursera platform. An additional 19 percent believe they have improved their potential by acquiring new skills. Furthermore, 31 percent of learners without at least a bachelor's degree report positive outcomes, a number comparable to those with bachelor's degrees (38 percent). Skills learned online translate into tangible changes in income for many, with 22 percent of women and 29 percent of men reporting positive outcomes, also reporting income increases. Levels of increases varied but could be substantial. Of those whose income increased, 38 percent of women and 51 percent of men saw an increase of at least 10 percent. While women are less likely to report increases in career benefits or income, this relatively small difference is itself notable given that women learners come with fewer specific career objectives and enroll in fewer certifications.
- 10. Online learning can also be a powerful tool for entrepreneurs to start and grow their business.** Fifteen percent of men and 10 percent of women say they joined Coursera to start or grow their business and women and men achieved equal results. Nearly half (47 percent) report they have succeeded in starting and growing their business as a result of online learning. While both men and women join to enhance their subject matter skills, women list confidence building as the most important thing they learned online.
- 11. The market for post-secondary online learning in emerging markets could increase up to 10 percent by 2026 if gender gaps are closed.** In addition to the fundamental imperative to expand women's access to education, learning platforms stand to benefit significantly by expanding women's engagement online. Depending on the market growth trajectory, closing gaps in women's enrollment could add up to \$14 billion to the value of the market for online education in emerging markets in the five years between 2022 and 2026 alone, equivalent to increasing the market by approximately 10 percent. Further gains would accrue as the market grows.
- 12. One new job is added to the economy for every 30 people trained by Coursera in the four markets surveyed.** In addition to individual learners who get new or better jobs, online education also produces gains within the broader economy. Improved skills and qualifications create new jobs directly through the creation of new businesses. Jobs are also created indirectly through increased consumption and economic activity driven by higher incomes. These results reflect learners at multiple stages of engagement with online learning, from new enrollees to those completing credentials. Moving forward, these benefits can be maximized by encouraging enrollment in courses that build high-demand skills and strengthening the path between educational opportunities and the labor force.



Recommendations

Urgent action is needed to ensure that women and other underserved learners around the world can benefit equally from the expanded opportunities offered by online learning. The table below outlines key recommendations for platforms, governments and institutions, and the private sector, to collectively ensure that online learning can become a valuable tool for everyone.



Platforms

- Collect sex-disaggregated data
- Market to women learners and adapt to their preferences
- Highlight female role models and instructors
- Increase accessibility and language options
- Improve credential portability and “stackability”



Governments and Institutions & Platforms

- Prioritize access to broadband, devices, and mobile and low-bandwidth solutions
- Address challenges for refugees and learners in conflict areas
- Create physical and virtual spaces for community interaction
- Target early-stage learners and women re-entering the work force
- Improve accreditation and authentication



Private Sector

- Adopt skills-based hiring practices



Governments and Institutions & Platforms & Private Sector

- Find financing solutions for women’s online learning
- Prioritize women’s entry into high-demand skill areas
- Strengthen pathways between learning and careers