Massive Open Online Courses as a Tool for Workforce Development in Colombia, the Philippines, and South Africa

Findings from the report "An Examination of MOOC Usage for Professional Workforce Development Outcomes in Colombia, the Philippines, and South Africa" available for download at www.irex.org/amdireport.

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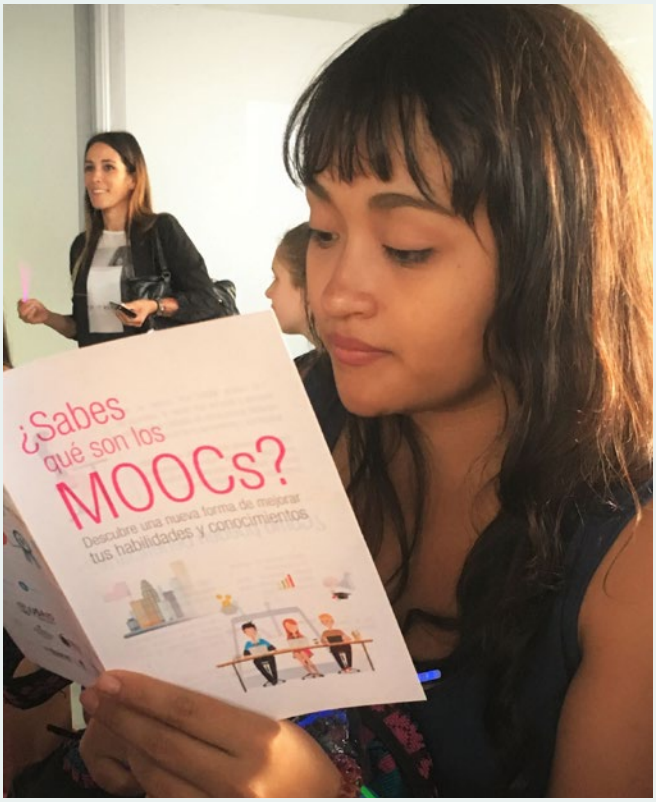
Why study MOOC usage in the developing world?

There is a worldwide shortage of skilled employees and often limited access to quality education. According to the McKinsey Report *Education to Employment: Designing a System that Works*, 43% of employers surveyed reported not being able to find enough skilled entry-level workers and half of surveyed youth are not sure their postsecondary education improved their chances of finding a job.

IREX is committed to increasing economic opportunities for youth, broadening access to quality education, and expanding access to information and information technology. Given our unique experience, capacity, and networks, IREX designed and led, in coordination with our partners, a study in Colombia, the Philippines, and South Africa to look more closely at MOOC usage and potential as a resource for professional workforce development. Through this research we aimed to address the disconnect between the skills employers are looking for, the skills the current workforce has, and how MOOCs could be used to better equip the workforce by widening access to quality education through lifelong learning.

What is a MOOC anyway?

There is not a universally accepted or understood definition of a Massive Open Online Course or MOOC as they are commonly known. For this study's purposes we define a MOOC as an online course that brings together people from diverse backgrounds interested on a particular topic with no prerequisites. Courses are usually free, and they can support an unlimited number of participants. MOOCs are offered in many ways through providers such as Coursera, Edraak, EdX, FutureLearn, Miríada X, Udacity, Udemy, and UP Online Program.



At the launch of the Advancing MOOCs for Development Initiative, there was little information available about MOOC usage in developing countries. To fill that knowledge gap, we explored the following research questions.

1. **Who uses MOOCs in developing countries, for what purposes, and what are the perceived benefits for users from an employability perspective?**
2. **Who is not using MOOCs, what are the reasons for not participating, and what factors could increase the likelihood for non-users to take these courses?**
3. **What is the general awareness of MOOCs at the government and employer levels, and how might the perceptions of these learning platforms among different stakeholders influence policy development and workforce decisions?**
4. **Using the three countries as settings, what are the general challenges and opportunities for MOOC usage to increase employability for the young workforce in the developing world?**

How we conducted the study

IREX and its partners embarked on an extensive study of young adults and government, education, and employer stakeholders in Colombia, the Philippines, and South Africa in order to draw findings that may inform practices across the developing word. These countries were selected due to their current status as emerging economies in their respective regions as well as their prevalence of internet access.

Online surveys were created targeting MOOC users and non-users and administered in English and Spanish. The surveys were promoted through the websites of project partners, email distribution lists, and social media in addition to personal interviews conducted by local research teams.

The team surveyed 1,400 MOOC users and 2,254 non-MOOC users across Colombia, the Philippines, and South Africa. Additionally, a series of semi-structured interviews were conducted either virtually or in person with 45 government and educational institutions and 28 private sector employers across the three countries.

ABOUT THE SAMPLE

Note: Due to rounding, in some instances totals may not add up to 100%.

MOOC USERS Total Sample: 1,400

Individuals 18 years and older who have registered for at least one course

56% 43%

70% are 30 years or younger

60% employed

38% still in school

80% low or medium income

MOOC NON-USERS Total Sample: 2,254

Individuals 18 years and older who have never registered for a course

62% 38%

83% are 30 years or younger

51% employed

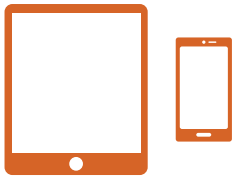
41% still in school

92% low or medium income

MAIN INTERNET ACCESS:

50% FROM HOME **30%** FROM WORK

42% on laptop or tablet



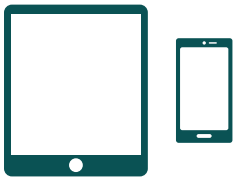
26% on mobile phone

90% HAVE INTERNET ACCESS AT HOME

MAIN INTERNET ACCESS:

50% FROM HOME **24%** FROM WORK

36% on laptop or tablet



42% on mobile phone

84% HAVE INTERNET ACCESS AT HOME

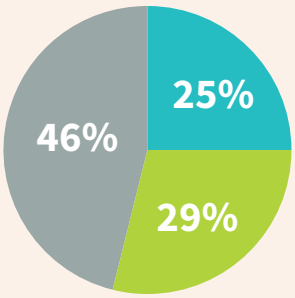
HIGH SCHOOL

VOCATIONAL SCHOOL

COLLEGE AND ABOVE

41%

WITH BASIC COMPUTER SKILLS



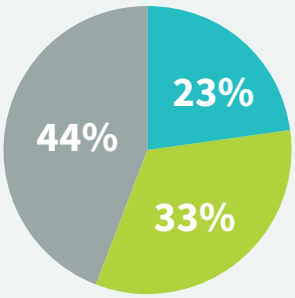
HIGH SCHOOL

VOCATIONAL SCHOOL

COLLEGE AND ABOVE

47%

WITH BASIC COMPUTER SKILLS



* 41% of MOOC users identified as having basic ICT skills, 40% have intermediate ICT skills, 19% have advanced ICT skills; while 47% of MOOC non-users identified as having basic ICT skills, 37% of MOOC non-users have intermediate ICT skills, 16% of MOOC non-users have advanced ICT skills.

 Note: Due to rounding, in some instances totals may not add up to 100%.

MOOC USERS PER COUNTRY

Based on the highest MOOC experience level achieved, there are four user types:

- **Registrants:** users that did not engage with the course after registration
- **Browsers:** users that browsed some course material but did not complete the course
- **Completers:** users that completed the course, but did not obtain certification
- **Certified:** users that completed the course and obtained certification

COLOMBIA

379

52% 47%

64% are 30 years or younger
72% employed
23% still in school
96% low or medium income

97% with internet access at home

THE PHILIPPINES

752

55% 44%

86% are 30 years or younger
48% employed
46% still in school
74% low or medium income

81% with internet access at home

SOUTH AFRICA

269

63% 37%

82% are 30 years or younger
67% employed
26% still in school
78% low or medium income

77% identify as black, coloured, or Indian-Asian
22% identify as white

93% with internet access at home

MOOC NON-USERS PER COUNTRY

Within this group there are two types:

- **Non-users aware of MOOCs:** individuals who are aware of MOOCs, but choose not to participate for various reasons
- **Non-users not aware**: individuals who are NOT aware of MOOCs

COLOMBIA

509

54% 46%

55% are 30 years or younger
66% employed
26% still in school
98% low or medium income

91% with internet access at home

THE PHILIPPINES

1,076

61% 40%

77% are 30 years or younger
48% employed
43% still in school
100% low or medium income

80% with internet access at home

SOUTH AFRICA

669

63% 37%

76% are 30 years or younger
45% employed
48% still in school
74% low or medium income

52% identify as black, coloured, or Indian-Asian
37% identify as white

84% with internet access at home

What we found

The majority of research on MOOC usage to date has focused upon a select number of highly developed, generally English speaking countries. These studies have indicated that the typical MOOC user was well educated, male, and usually wealthier than the population-at-large. Moreover, MOOC completion rates have consistently hovered in the single digits in developed countries. Below, we've highlighted findings from the AMDI report that challenge these commonly held assertions. These findings afford a window on MOOC usage for workforce development outcomes in emerging economies that differs considerably from previous studies.

WHO USES MOOCS IN DEVELOPING COUNTRIES, FOR WHAT PURPOSES, AND WHAT ARE THE PERCEIVED BENEFITS FOR USERS FROM AN EMPLOYABILITY PERSPECTIVE?

80% of MOOC users were from low- and middle-income populations, in contrast to wealthier, more educated populations researched in the United States.*

Over 80% of MOOC users only have basic or intermediate level ICT skills, challenging the belief that MOOCs are predominantly taken by people with higher level skills.

49% of MOOC users received certification in a MOOC class, and another 30% completed at least one course.* This is far above the single-digit rates reported in developed countries.

MOOC users in Colombia, the Philippines, and South Africa are less likely to have completed a higher education degree program than in developed countries. Of MOOC users surveyed, 46% held a college degree or above. This compared to the MOOC users in EdX, a MOOC platform that offers HarvardX and MITx courses, where over 70% hold a bachelor's degree.

Women are more likely than men to complete or get certified in at least one course.

The main motivations of MOOC users were found to be in gaining specific job skills (61%), preparing for additional education (39%), and obtaining professional certification (37%).

* HarvardX and MITx; Ho, A. D., Chuang, I., Reich, J., Coleman, C., Whitehill, J., Northcutt, C., Williams, J. J., Hansen, J., Lopez, G., & Petersen, R. (2015). *HarvardX and MITx: Two years of open online courses* (HarvardX Working Paper No. 10). doi:10.2139/ssrn.2586847 p.9

What we found *(continued)*

WHO IS NOT USING MOOCS, WHAT ARE THE REASONS FOR NOT PARTICIPATING, AND WHAT FACTORS COULD INCREASE THE LIKELIHOOD FOR NON-USERS TO TAKE THESE COURSES?

43% of those not aware of MOOCs have a college degree or above.

50% of non-users cite lack of time as the largest barrier to MOOC participation.

43% of MOOC-aware and 41% of not-aware groups agree that employers do not recognize skills gained from online learning.

WHAT IS THE GENERAL AWARENESS OF MOOCS AT THE GOVERNMENT AND EMPLOYER LEVELS, AND HOW MIGHT THE PERCEPTIONS OF THESE LEARNING PLATFORMS AMONG DIFFERENT STAKEHOLDERS INFLUENCE POLICY DEVELOPMENT AND WORKFORCE DECISIONS?

At varying levels of government there is basic awareness of the potential of using MOOCs for workforce development. MOOC promotion and development is highly compartmentalized, which has led to a lack of national strategies in all three countries in the study.

MOOCs offered by government institutions, more than academic institutions, are increasing in prominence and offer the most promise for workforce development outcomes. This is primarily due to the opportunity to link government certification to courses that are readily recognized by government institutions.

Employers were generally positive about MOOCs, although they mentioned barriers including the predisposition that in-person or blended learning offers more opportunities to learn practical skills, and a bias against considering a candidate who only has only been certified through MOOCs over concern of quality control.

Government respondents identified ICT infrastructure and skills as the major barrier to MOOC uptake, a stark contrast to the views of both MOOC users and non-users.

Public needs are driving the emergence of new types of MOOCs. In all three countries, government sanctioned certification is required for a vast range of occupations and MOOCs offer an affordable, reliable, and transparent means of acquiring those certifications.

So what did we conclude?

Through our research we have uncovered previously unknown nuances of perception and potential for MOOCs in the developing world. Some of our most significant conclusions are as follows.

- **MOOC users across the three countries are overwhelmingly more likely to complete MOOCs and obtain certification in MOOC courses** than they are in highly developed countries.
- **MOOCs represent a viable channel to expand training opportunities for women to gain skills and improve their competitiveness in the labor market**, especially in jobs and industries where women are underrepresented.
- **Employers feel that blended learning or in-person education still holds more benefits than MOOCs.** Respondents cited more opportunity to use practical skills in these contexts than with MOOCs.
- **Certification is understood as an important component of MOOCs because it is the only way to verify what kind of progress was made, who endorses it, and whether or not the learning goals set forth were achieved.** The need for documentation and the ability to have completed coursework certified led to higher MOOC completion rates.
- **The main barrier to accepting a candidate with only a MOOC certificate is mistrust of the quality of the standards and skills training.** MOOC qualifications remain difficult to verify and authenticate.
- **Slow internet speeds and quality of access to technology are obstacles when engaging with MOOCs, which even when free, can incur data and time costs.** However, internet connectivity and internet speed were not found to be as prohibitive to MOOC usage as was assumed prior to the study.

Where can we go from here?

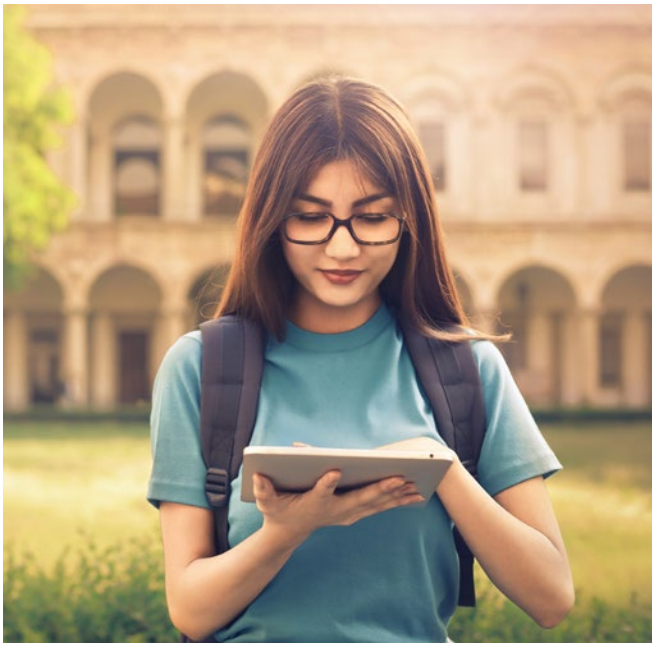
More research is needed to be able to draw MOOC usage patterns more broadly across countries. Continuing research on usage patterns and government and employer perspectives in more developing countries will allow for a more complete picture of the potential for MOOC usage as a pathway to quality education in less developed countries.

Social marketing to businesses about MOOCs could help build trust and familiarity of the quality of MOOC providers. Case studies need to be identified or created.

MOOCs present the opportunity to help extend reach of government programs and education institutions to individuals that are looking to improve their employability and job skills.

Navigating available and reputable MOOCs is a complex process. In order to assist with the acceptance of MOOCs, a viable option may be tools or guides that create a framework for understanding MOOCs and identifying quality MOOCs that could be used by MOOC users and presented to decision makers.

MOOCs are still at a nascent phase of development. Companies, government institutions and even academic entities are only beginning to recognize their value and incorporate them into their frameworks. As MOOCs platforms become more interactive to meet individual needs, as businesses learn to use MOOCs in context with hiring, promotion and retention strategies, and as governments adapt them for skills certification and licensing purposes, we are likely to swiftly observe wholesale demographic changes on who uses MOOCs, where they are used and why.



IREX

IREX is an independent nonprofit organization dedicated to building a more just, prosperous, and inclusive world by empowering youth, cultivating leaders, strengthening institutions, and extending access to quality education and information.

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