Testing Prototypes to Increase MOOC Usage and Certification Rates

A Case Study from Colombia

AMDI

The Advancing MOOCs for Development Initiative

USAID FROM THE AMERICAN PEOPLE | IREX | MAKAIA® Asesoría Internacional www.makaia.org

Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia
www.irex.org
Copyright © 2016 by IREX
IREX
1275 K Street, NW, Suite 600
Washington, DC 20005
E-mail: irex@irex.org
Phone: (202) 628-8188
Fax: (202) 628-8189
www.irex.org

Authors: Scott Andersen (IREX) and Juan Camilo Perez (MAKAIA)
Contributors: Sheila Scott and Laura Agosta (IREX)
Design and layout: William Stuart

Notice of Rights: Permission is granted to display, copy, and distribute the Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia in whole or in part, provided that: (a) the materials are used with the acknowledgement "Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia is a product of IREX in partnership with Makaia with funding from USAID."; (b) Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia is used solely for personal, noncommercial, or informational use; and (c) no modifications of the Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia are made.

Acknowledgment: This case study is made possible by the support of the American People through the United States Agency for International Development (USAID).

Disclaimer: The contents are the sole responsibility of IREX and do not necessarily reflect the views of USAID or the United States Government.

Recommended citation: Andersen, S. & Perez, J.C. (2016). Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia. Washington DC: IREX

Introduction

In theory, online learning affords access to the highest levels of education, frequently free of charge, to anyone with an internet connection regardless of geography. However, the potential of online learning – especially Massive Open Online Courses (MOOCs) – to improve educational and employment opportunities in low- and middle- income countries is poorly understood. To fill this gap, IREX and its partners conducted original research under The Advancing MOOCs for Development Initiative (AMDI)[1]. First, the AMDI report 'An Examination of MOOC Usage for Professional Workforce Development Outcomes in Colombia, the Philippines, & South Africa' broke new ground on topics pertaining to MOOC user demographics, employer and government perceptions of MOOCs, and motivations of MOOC users in transitioning economies.

Now, Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia addresses the pressing topic of how MOOC providers might improve upon often single digit MOOC completion and certification rates. As a result of commonly reported data that many people begin MOOCs but few finish,[2] IREX and MAKAIA sought to test variables in a focused case study. Of the three countries in AMDI (Colombia, South Africa and the Philippines), Colombia was chosen for its high internet penetration,[3] applicability of lessons learned elsewhere in Central and South America, and to redress the dearth of case studies on MOOCs outside the English speaking world. In conducting this case study, IREX and MAKAIA drew upon decades of experience supporting the development of inclusive information societies, and in particular public access internet via telecenters and libraries, to examine how variables such as awareness, support, and select incentives might influence MOOC usage and certification.

The results provide a snapshot in time from the rapidly evolving field of MOOCs. IREX hopes it will be of interest to academic institutions, workforce development practitioners, international education specialists and MOOC providers alike. We are grateful for the support in Colombia of Red de Bibliotecas de Medellín, Sistema de Bibliotecas de Medellín and Bogotá, telecenters in the network of Trust for the Americas and the program Antioquia Territorio Inteligente. IREX would also like to thank USAID for its support of AMDI's research and awareness raising activities, including this case study.

The Advancing MOOCs for Development Initiative - Colombia, Philippines & South Africa.
https://www.irex.org/projects/advancing-moocs-development-initiative-amdi

Abstract

Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia was conducted between April and June of 2016.

The study tested practical approaches for libraries and telecenters to increase completion and certification rates of Massive Open Online Courses (MOOCs). The target audiences were (1) infomediaries (telecenter facilitators and librarians) in venues offering public access to information and communication technologies (ICTs) in urban Colombia; and (2) end users of these institutions between 18 and 35 years of age.

Following trainings for telecenter facilitators and librarians on the basics of MOOCs, these infomediaries then promoted MOOCs for workforce development purposes among end users in their respective institutions. Informational support was coupled with financial incentives for MOOC certification.

In total, 634 people received information about MOOCs, 10% of whom enrolled in a MOOC relevant to their professional development. Among those who enrolled, 35% completed and obtained certification. Although the small sample size precludes broad conclusions, an analysis of findings related to participant demographics, motivation, awareness, ICT accessibility, and financial incentives offers some insight into variables that influence MOOC usage and certification rates in Colombia.

What is a MOOC anyway?

There is no 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 in 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.

Keywords

MOOC, massive open online courses, lifelong learning, workforce development, Colombia, libraries, infomediaries, online learning, education, internet, telecenters.

Methodology and Parameters of the Study

Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia examined how variables such as demographics, motivation, awareness, ICT accessibility, and financial incentives influence MOOC usage and certification.

The target audiences for the case study were (1) infomediaries (telecenter facilitators and librarians) in venues offering public access to information and communication technologies (ICTs) in urban Colombia; and (2) end users of these institutions between 18 and 35 years of age. The age range was aligned with USAID workforce development criteria.[4]

Target Groups

Telecenter and library infomediaries

Staff of 20 urban libraries and telecenters in 4 different cities and smaller communities in Antioquia.

Reason to choose: Increase the knowledge and tools available for motivated individuals whose work entails the promotion of life-long learning and access to information in their communities.

End users of telecenters and libraries

Visitors between 18 and 35 years old to participating telecenters and libraries.

Reason to choose: Encourage usage and certification of MOOCs among people who frequent community internet access points, and identify recommendations on how to increase both.

Infomediaries discussing MOOCs and the incentive program to users at the San Cristobal public library in Medellin.

The study comprises four components to test practical approaches for libraries and telecenters to increase MOOC usage and certification rates for professional development purposes.

Network of Partners

- Sistema de Bibliotecas de Medellin (5)
- Red de Bibliotecas de Medellin (1)
- Sistemas de Bibliotecas de Bogota (7)
- Telecenters of Trust for the Americas (7)
- Programa: Antioquia Territorio inteligente

Awareness Raising

- Train infomediaries on MOOCs basics
- Infomediaries conduct awareness raising campaigns to promote MOOCs among users

Certification Incentives

- Provide illustrative list of MOOCs which could be completed within study's timeframe
- Cover cost of certification for MOOCs up to 50 USD

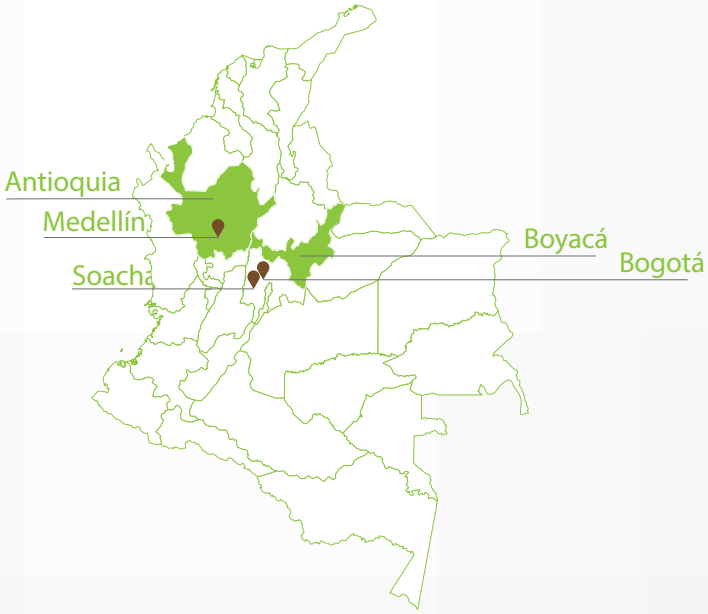
Data Analysis

- Collect and analyze participant data

Network of Partners: IREX and MAKAIA partnered with 13 public libraries, 7 Trust for the Americas' telecenters[5] and Antioquia Territorio Inteligente (former Antioquia Digital)[6] in urban areas of Colombia to raise awareness of MOOCs among individuals 18 to 35 years of age.

Partners were selected which:

- Embrace online learning as part of their mission to support workforce development and life-long learning in their communities.
- Employ experienced infomediaries with ICT skills.
- Provide free public access computers and reliable internet connectivity.



Awareness Raising: IREX and MAKAIA designed and delivered a training for infomediaries in partner institutions on what MOOCs are, available platforms (including a list of relevant Spanish-language professional development courses that could be completed in the timeframe of the study -see Appendix) and promotional materials describing the financial incentives available for study participants who obtained MOOC certification.

Infomediaries developed awareness campaings that consisted of:

- Community outreach (educational institutions and important local community groups).
- Youth-focused events.
- Personalized consultations.
- Posters and flyers.

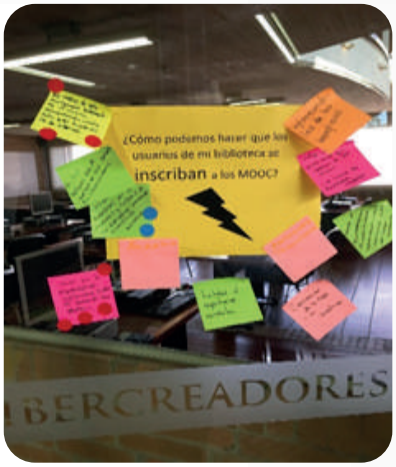
Certification Incentives: IREX and MAKAIA offered all potential MOOC users up to $50 USD to cover the cost of certification to test whether removing cost as a barrier would influence MOOC certification rates.[7]

Data Analysis: MAKAIA collected data from library and telecenter infomediaries who participated in MOOC training and conducted outreach events, data from the infomediariers who certified a MOOC as well as end users in public libraries and telecenters who enrolled in a MOOC for professional development. Data collection included:

- Phone surveys of individuals who started but failed to complete a MOOC (demographics, motivation, barriers).
- Online surveys of those who completed and obtained MOOC certification (demographics, awareness, motivation, ICT accessibility, financial incentives).

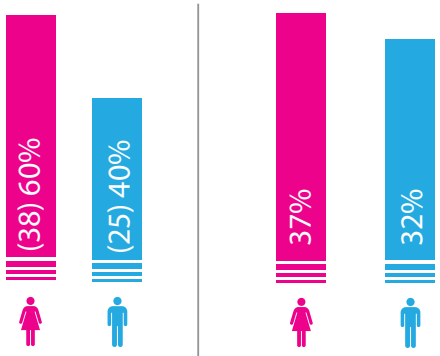
Research Limitations: As with all research, there were constraints that limit the generalizations that can be made from this case study. Primarily, the sample size was small and non-representative, and self-selection bias may exist.

Limited data was available on individuals who were made aware of MOOCs, but did not enroll in, complete or certify them. Nevertheless, given the fact that research on MOOCs in developing countries is evolving quickly, the trends noted here may be of interest as a focused case study understood within these limitations.[8]



Participant Demographics

Of the 634 individuals made aware of MOOCs throughout the campaign, 63 enrolled in a MOOC



22 completed and obtained certification

- 8 infomediaries
- 14 end users

41 began but failed to complete

- 24 infomediaries
- 17 end users

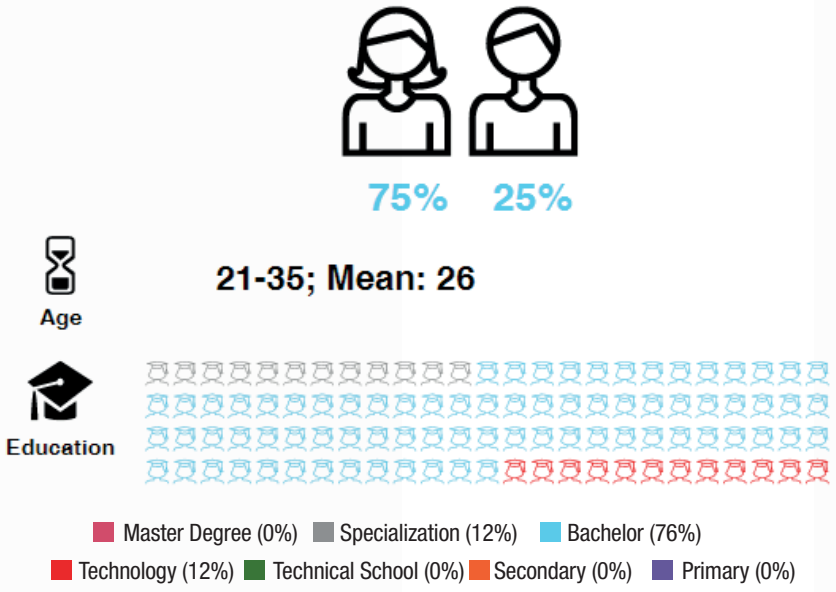
This represents a completion rate of 35%

- 25% of infomediaries who enrolled obtained certification
- 45% of end users who enrolled obtained certification
- Less than 10% had taken a MOOC before, and only 23% had formal full time employment

Demographics of Infomediaries:

All 8 infomediaries who obtained certification were employed and the majority had higher education.

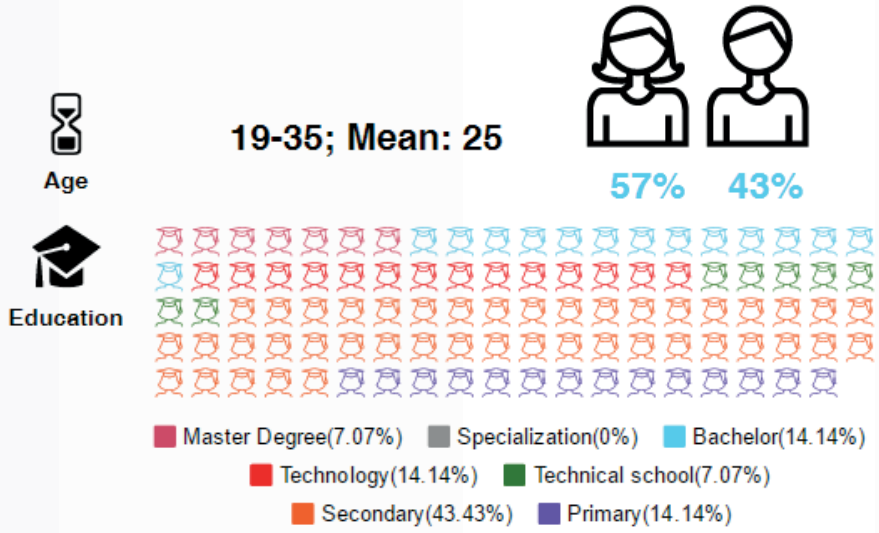
Female infomediaries were slightly more likely (4%) to certify their MOOC than men.

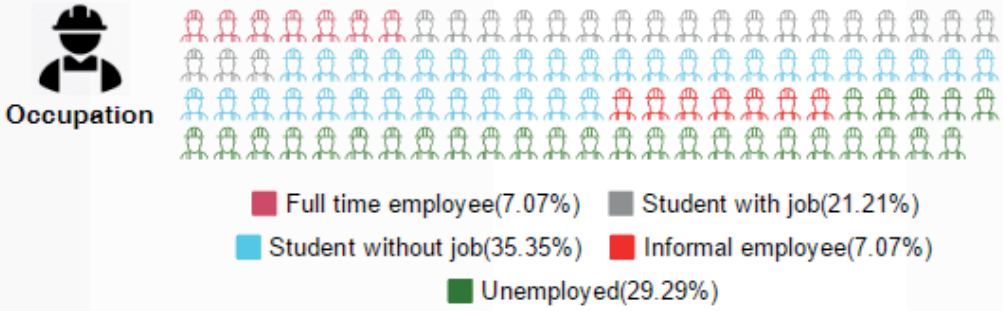


Demographics of End Users:

The majority of 14 end users who certified were not employed and had not completed higher education.

Female end users were more likely (15.5%) to certify their MOOC than men.





When asked about reasons for not completing a MOOC, respondents noted the following reasons: (1.) Insufficient time; (2.) Lack of MOOC on theme/topic related to professional development of particular interest to the participant; (3.) Inability to register with a cellular or mobile device.

Key Findings

Key finding. Certification rates in this case study were high: 35% of end users and infomediaries who enrolled successfully completed a MOOC and obtained certification. Excluding infomediaries – all of whom were employed – the rate was 45%.

Demographics

Key finding. Women were more likely to complete and certify MOOC, but gender was more highly correlated to certification among end users than among infomediaries.

Key finding. End users of libraries and telecenters were more likely to complete and certify MOOC under the program than infomediaries.

Below the study analyses the main findings related to participants' perception of the support they received, motivation, courses of interest, ICT accessibility, and financial incentives.

Support

An overwhelming majority (78%) of end users who obtained certification felt that the support of infomediaries was essential for the completion of a MOOC, and 64% would like to see MOOC-related activities regularly conducted in libraries and telecentres. Telecenter users were reportedly more likely to certify than library users. This distinction may be due to the fact that telecenter facilitators offered support groups for employment related training courses; while most librarians offered personalized advice to end users but without collective support activities. It is also important to note that telecenters informed 250 more individuals about the program than libraries.

The majority of infomediaries said they would like to continue activities to increase usage of MOOCs by showcasing various platforms, offering personalized advice and creating MOOC support groups.

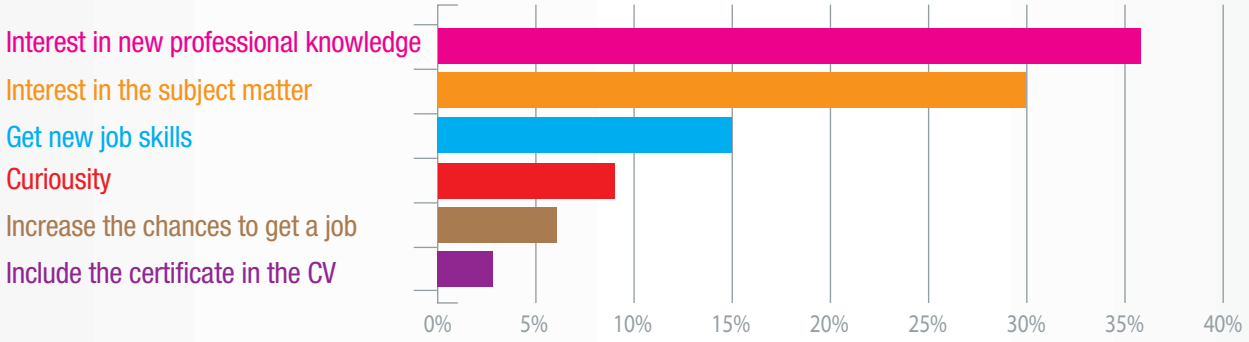
IDEA!

MOOC awareness raising was reportedly more successful when coupled with support groups and collective activities. A majority of end users indicate they would like some form of greater individualized attention.

Motivation

Improving digital and job preparation skills were among the top reasons identified by end users and infomediaries to complete a MOOC. This is particularly important as 43% of end users who obtained MOOC certification had no technical or university studies, and the majority were either unemployed or without formal informal employment.

Reasons given to take a MOOC by infomediaries and end users:



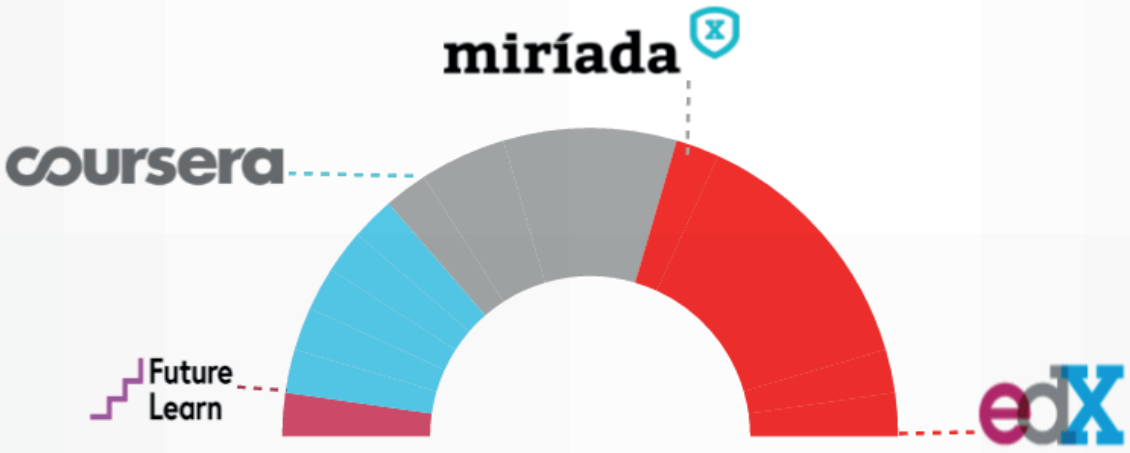
Courses Taken

The types of courses taken also addressed the issue of motivation. The majority of end users and infomediaries chose MOOCs related to ICT skills (45%) followed by 'soft skills' (32%), project management (14%) and education and pedagogy (9%).[9]

Of the courses chosen by infomediaries to improve their professional or occupational skills, slightly more than half of the librarians took courses to improve their ICT skills. In the case of telecenter facilitators, more than half decided to work on soft skills,[10] others on education and pedagogy, ICT skills, and project management.

> "I enjoyed the possibility to interact with others and the autonomy to be able to complete the course according to my schedule" End user

Certified MOOC by Provider:



*For a complete list of the courses taken by people who certified, please refer to the appendix.

Topics of the courses initiated included the following:

Key finding. Participants reported higher satisfaction when providers offered short videos, autonomy to carry out course-required activities at any time, interaction with others through forums, and a creative teaching environment.

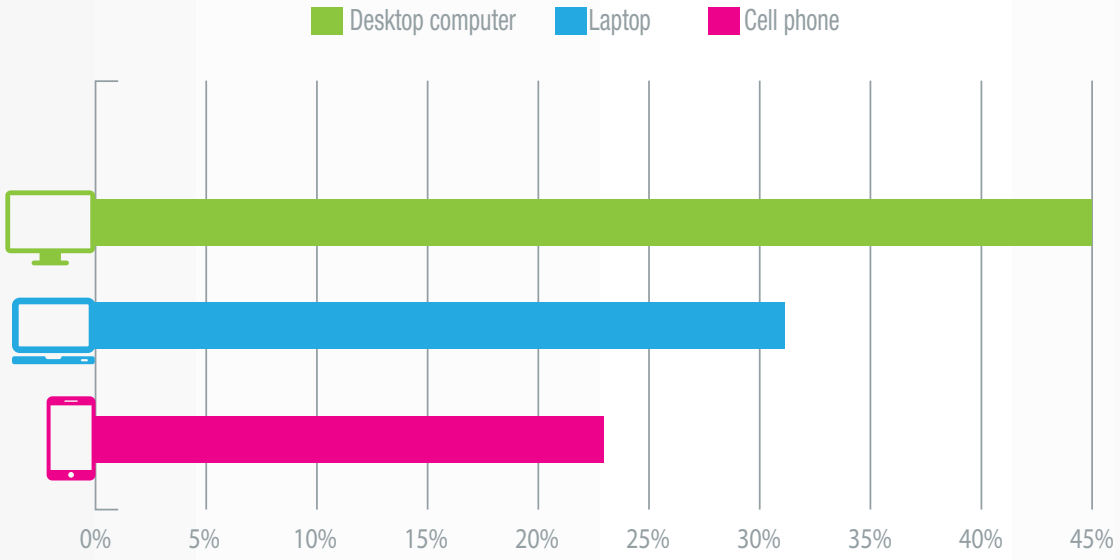
Key finding. Individuals who obtained certification viewed this case study as an opportunity to improve their professional skills, although not necessarily linked to concrete job opportunities.

Key finding. Nearly 75% of end users and infomediaries completed MOOCS on ICT related skills and 'soft-skills'.

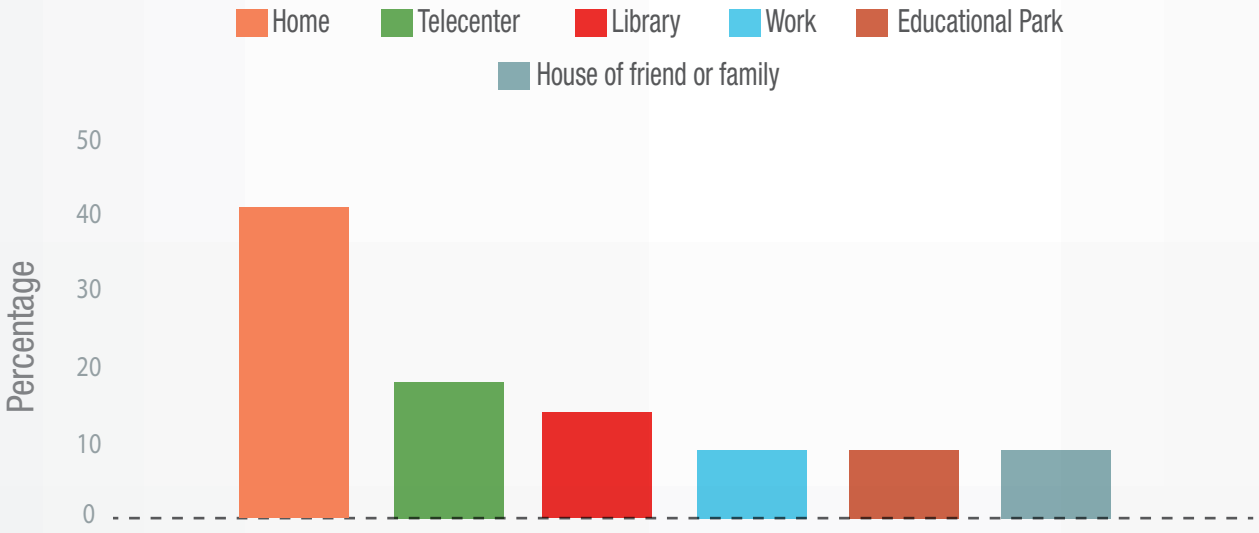
ICT accessibility

Colombia has seen extensive growth in the use of mobile devices (up 49% since 2009) and MOOC providers are increasingly offering mobile applications.[11] Nevertheless, most participants reported to use desktop computers to navigate MOOC provider sites; devices like cellphones were reported as the main means to access internet by only twenty-three (23%) of the people who certified.

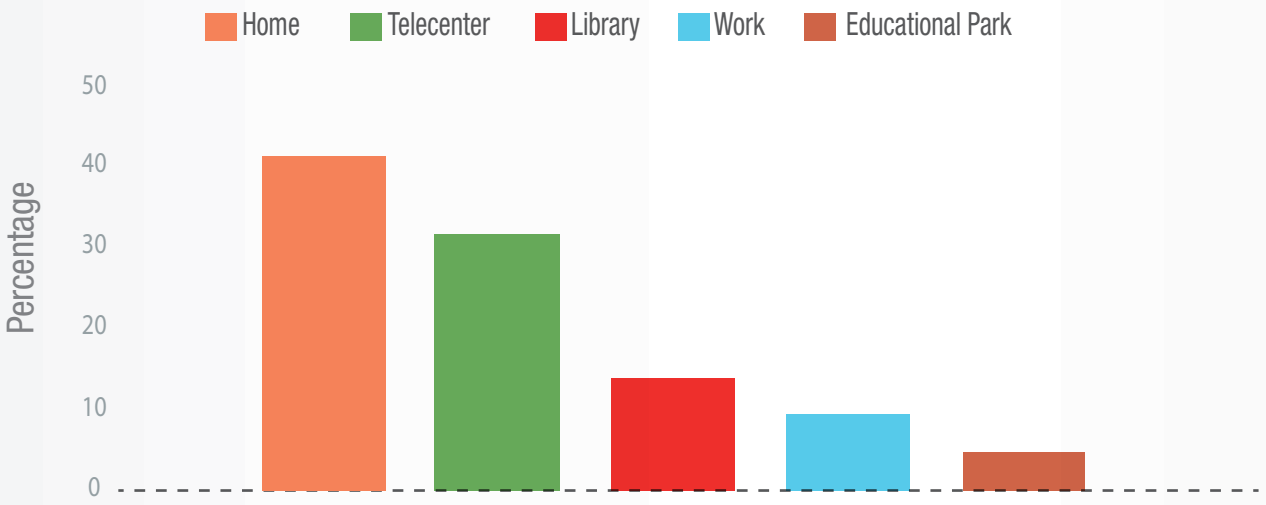
Equipment you normally use to access internet:



From where do you access internet more frequently?



Where did you complete the majority of the MOOC you took?



Key finding. A large majority of those who completed MOOCs did so at home and the majority reported use of mainly desktop computers to access internet.

Financial incentives

Fewer than 10% of those who enrolled in a MOOC had done so prior to participation in the case study. Of those who had, only 2 individuals had previously paid for a certificate.

When participants whose certification costs had been covered through the case study were asked if they would have paid for it themselves, 64% of end users and 75% of infomediaries stated that they would not. The primary reason reported was certification prices were beyond their financial means.

Key finding. Most participants stated they would have not been able to pay for the certification without the incentive offered through the case study.

Conclusion

Testing Prototypes to Increase MOOC Usage and Certification Rates: A Case Study from Colombia provides a snapshot of urban MOOC users that supports many of the lessons learned throughout the Advancing MOOCs for Development Initiative.[12] Key takeaways from the overall AMDI research include:

- Demographics: MOOCs usage in Colombia appears to be far broader than would have been anticipated, appealing to those without fhigher education or financial means to cover the cost of continuing education.[13]
- Support: Awareness and outreach remain an overwhelming challenge to MOOCs usage, but where MOOCs can be offered by institutions in a systemic way that includes group-oriented activities, usage is likely to increase.
- Motivation: MOOCs on ICT skills and soft skills were considered a worthy long term investment of time and effort, even in the absence of related job opportunities.
- ICT Accessibility: In developing economies, mobile devices are overwhelmingly the preferred method of accessing the internet, yet a majority of MOOC users in Colombia continue to rely on desktop computers.
- Financial Incentives: Programs that reduce or eliminate certification costs, particularly for first-time MOOC users, should be considered as an option for the business community, educational institutions, government agencies and MOOC providers to boost completion rates for professional development purposes.

Appendix

COURSES TAKEN BY THOSE WHO CERTIFIED

Course	Provider
Entornos Virtuales de Aprendizaje.	MiriadaX
Big data: El valor añadido de los datos en su negocio.	MiriadaX
Ser más creativos.	Coursera
Iniciación y Planificación de Proyectos.	Coursera
Social Media.	Futurelearn
Tecnologias Educativas.	edX
Valoración de Futbolistas con el Método AHP Liderazgo y gestión de equipos de alto rendimiento (2.ª edición).	edX
Dispositivos Móviles para la gestión del territorio.	edX
Marketing Verde.	Coursera
Perspectiva Sistémica de la Empresa.	MiriadaX
Leer a macondo: la obra de Gabriel García Márquez.	Coursera
La ciudad como lugar de intervención desde la experiencia artística.	MiriadaX
Excel.	edX

End Notes

[1] Launched in 2015, AMDI is implemented by IREX in partnership with the Technology & Social Change Group of the University of Washington with support from support from the United States Agency for International Development and in-kind contributions from CourseTalk.

[2] http://www.newyorker.com/science/maria-konnikova/moocs-failure-solutions

[3] Colombia is the third most connected country in Latin America with 28.6 million internet users http://www.emarketer.com/Article/Colombia-Set-Reach-286-Million-Internet-Users-2015/1011864

[4] https://www.usaid.gov/what-we-do/education/expanding-access-higher-education-and-workforce-development.

[5] Libraries and telecenters were located in Bogota, Medellin, Soacha, Boyaca, and smaller municipalities in the Colombian province of Antioquia.

[6] http://www.antioquiatic.edu.co

[7] In general, because of the schedule of the activities of the case study, infomediaries had more time to complete the courses (around 60 days) than end users (less than 60 days). Beneficiaries of these incentives, had to choose a MOOC that related to his or her professional development. The payment was made directly by MAKAIA to the MOOC provider.

[8] https://www.irex.org/resource/examination-mooc-usage-professional-workforce-development-outcomes

[9] End users and infomediaries were given a list of proposed MOOCs offered in Spanish, that fit the timeline of the case study and that had a certification cost within the incentive plan ceiling, so there was a self-selection bias in the process of selecting the MOOC. They chose from this list but also from other lists available in the platforms.

[10] Soft skills are interpersonal skills and competencies that characterize a person's relationships with other people. In the workplace, soft skills complement hard skills, which refer to a person's knowledge and occupational skills. See http://www.childtrends.org/wp-content/uploads/2015/06/2015-24WFCSoftSkills1.pdf

[11] http://www.internetworldstats.com/sa/co.htm

[12] https://www.irex.org/project/advancing-moocs-development-initiative-amdi

[13] Garrido, M., Koepke, L., Andersen, S., Mena, A., Macapagal, M., & Dalvit, L. (2016). An examination of MOOC usage for professional workforce development outcomes in Colombia, the Philippines, & South Africa. Seattle: Technology & Social Change Group, University of Washington Information School.

This Case Study was developed under the AMDI initiative. AMDI partners include:

USAID FROM THE AMERICAN PEOPLE — www.usaid.gov

IREX — www.irex.org

TECHNOLOGY & SOCIAL CHANGE GROUP, UNIVERSITY of WASHINGTON Information School — tascha.uw.edu

MAKAIA Asesoría Internacional www.makaia.org — www.makaia.org

coursetalk — www.coursetalk.com