OVERALL ASSESSMENT REPORT

Ayitic Goes Global Program

Report for the Latin America and Caribbean Network Information Centre

Submitted by

3x3 Design

Key Abbreviations

AGG	Ayitic Goes Global
CBOs	Community Based Organizations
COI	Caribbean Open Institute
ESIH	Ecole Superieure d'Infotronique d'Haiti
ICT	Information and Communications Technology
IDP	Internet and Data Practitioner
IDRC	International Development Research Centre
IPv6	Internet Protocol Version 6
LACNIC	Latin America and Caribbean Network Information Centre
NGOs	Non-Governmental Organizations
NM&S	Network Management and Security

Credits & Acknowledgements

Introduction

The AYITIC Goes Global (AGG) program was a two-year partnership with the Latin America and Caribbean Network Information Centre (LACNIC), International Development Research Centre (IDRC), Ecole Supérieure d'Infotronique d'Haïti (ESIH), Caribbean Open Institute (COI), 3x3 Design (3x3), and the Slashroots Foundation. The program sought to enhance participation among young Haitian women in the global economy. The primary goal of the initiative was to create enabling conditions for youth to gain employment in the digital economy by addressing skills and infrastructure deficits in Port-au-Prince, Haiti. The program delivered three training rounds between March and September 2018, October 2018– and anuary 2019, and April and August 2019, thereby engaging more than 450 trainees.

Within this context, 3x3 was engaged to conduct evaluation of the program and study the factors that affected the successful completion of the program and monitor the performance of different implementation stakeholders with the objective to provide recommendations for scaling and improving the program. This report provides the overall assessment of the program and includes an analysis of data collected from all three training rounds.

Prepared by:

3x3 design

Commissioned by:

IDRC | CRDI

lacnic

Table of Contents

00   **01**   **02**   **03**

00

Executive Summary

This report presents the results of an evaluation study conducted between February 2018 and September 2019 by 3x3 for the International Development Research Centre (IDRC) and the Latin America and Caribbean Network Information Centre (LACNIC). The evaluation aimed to study the infrastructural, socio-economic, cultural, and pedagogical factors and the aspirations, needs, and barriers to participation and successful completion of the training provided under the Ayitic Goes Global (AGG) program and gainful employment in the digital sector.

The study was guided by three objectives: (a) assess the change or impact(s) attributable to programmatic activities, (b) isolate key factors to test within the overall program design that affect impact, and (c) identify environmental conditions or factors that affect the successful implementation of programmatic activities.

PROJECT CONTEXT

The AGG program addressed skill and infrastructure barriers in Haiti on multiple fronts. The first component was female-focused and intended to promote the growth of a digital data-related job market in Haiti by teaching digital skills to 316 female youth and facilitating the acquisition of remote jobs in overseas markets in digital and data-related services. The second component of the AGG program focused on boosting internet infrastructure and connectivity in Haiti.

The pilot built capacities among advanced Information and communications technology (ICT) professionals to encourage the growth and improvement of Internet services in Haiti. The third component of the AGG program focused on partner outreach for scaling and establishing partnerships to strengthen the activities of the program. Additionally, the pilot focused on addressing the fragile state of Haiti's economy.

METHODOLOGY

3x3 took a mixed-methods approach to data collection for the evaluation study. The scope of the evaluation was focused on three training rounds, each of which were three months long in duration. Learnings from the study captured throughout Training Rounds one, two, and three were iteratively and incrementally applied to program implementation but generally structured to inform program design and curriculum adjustments for future training rounds.

The evaluation data was collected from trainees, trainers, and implementation partners using multiple data sources, including a four-part trainee survey (N = 450), 8 focus groups, and one-on-one interviews (N = 22) to garner feedback and information on the experience and performance of the program. In addition, in-depth interviews were conducted with the employment coordinator and employers to understand the factors that affected the employment of the graduates in the domestic market or on the online platforms.

Course Participation Challenges for IDP Trainees

Infrastructure Deficits
75.68%

Time Spent
14.05%

Lack of Motivation
0%

Skills
14.63%
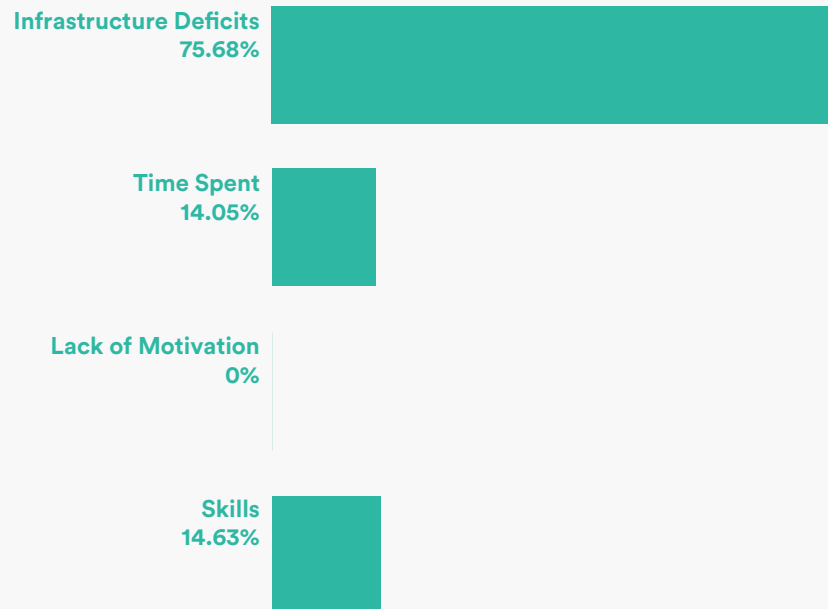
Source: Mid-Term Course Assessment Suvey, Training Round 1-3

KEY FINDINGS

The research identified key characteristics of the Internet and Data Practitioner (IDP) and Network Management and Security (NM&S) trainees and IDP trainee persona for graduate segments that were engaged with the employment activities of the AGG program. Three personas–the ambitious student, the independence seeker, and the self-supporting professional–were identified, and their corresponding challenges, aspirations, and employment preferences were noted. Some of the key findings included:

1. Motivating Factors for Participation
In regard to the drivers and perceived benefits of the AGG program, the study showed that most trainees engaged in the program to gain the necessary skills to prepare for workplace market, increase digital proficiency, and discover new learning and employment opportunities. The affordability of the course, interactive and comfortable learning environment, and presence of online and offline facilitators supported high student

participation throughout the course of the program. Both the IDP and NM&S trainees saw the benefits of continued education and were interested in engaging with more programs like AGG.

2. Infrastructural Barriers
The IDP and NM&S trainees faced a myriad of infrastructural barriers(e.g., limited internet bandwidth, frequent power cuts, and expensive transportation) to participation in the training rounds, which inspired a range of adaptation tactics. In particular, the provision of the free tablet helped mitigate to some degree limitations related to power and internet access, but trainees also reported its provision as an intrinsic motivating factor that encouraged them to participate in the program with more enthusiasm and dedication.

A key tactic employed among trainees was identifying multiple sources of electricity and internet connectivity across their common workplace and university settings to account for inconsistent access and thereby facilitate device charging, studying, and downloading

coursework content. Some trainees saved money to travel to the Ecole Supérieure d'Infotronique d'Haïti (ESIH) campus and also to purchase a backup battery to reduce dependence on a continuous power supply.

In addition, the IDP trainees reported that the early release of schedule at the time of orientation helped them save money and reduce travel costs while giving them enough time to ensure that the activities did not conflict with their university schedule.

3. Socio-cultural Barriers
The evaluation study showed that more than 90% of the trainees in all of the courses reported that they had adequate family moral support and encouragement to pursue the course. However, time spent on competing activities (i.e., education, work, and household responsibilities) emerged as the top barrier to meaningful interaction with the course after infrastructural factors. The time management sessions held at the time of the orientation had a meaningful effect on IDP trainees, which was evident

Course Participation Challenges for NM&S Trainees

**Infrastructure Deficits
56.20%**

**Time Spent
21.17%**

**Lack of Motivation
7.30%**

**Skills
2.19%**

through some of the feedback received during the focus groups and interviews. For example, IDP trainees discussed that they had more acceptance of the need to delegate to others or limit household work and find times within their existing lives for the course.

NM&S trainees showed more receptiveness toward the time management session in Training Round 3 than in Training Round 2. NM&S trainees from Training Round 2 were particularly affected by the fact that they were specifically asked if they could dedicate time to the AGG course at the time of their interview. The interview question remained in the memories of the trainees, prompting them to allocate enough time to complete the AGG coursework.

4. Pedagogical Barriers
A number of pedagogical factors were evaluated to explore their relationship with trainee performance: course content, peer learning, course technology and language, access to trainers, communication channels,

and self-directed learning. In an effort to increase retention rates, online and in-person trainer support was coupled with course design and delivery that was tailored to the characteristics of an adult learner: allowing autonomy and the ability to be goal-oriented.

The experiments with facilitation groups in Training Rounds 2 and 3 demonstrate that there is a possibility of implementing the IDP course completely online as long as the trainees receive an opportunity to orient in-person at the orientation session and if communication channels such as Google Classroom allow them to communicate with trainers in a professional manner and administer their progress. There is value to introducing a strategic number of in-person sessions for both the courses to allow the trainees to build relationships, network, and learn through their peers.

5. Employability Barriers
Based on the learnings of the demand research study, outreach done during Training Round 1, and trainee employment preferences, LACNIC

decided to target online platforms as the pathway for helping IDP graduates secure jobs and contracts. Results of the evaluation study indicate a desire among IDP graduates to engage with new employment pathways, but that significant barriers exist related to engaging with platform and within the broader employment climate.

As such, limited employment successes associated with the intervention period cannot be attributed exclusively to technological, cultural, or political dynamics, but rather the confluence of all three. However, evidence of the high degree of IDP graduate engagement in higher education could indicate that IDP graduates interpret their growing capacity to engage with these platforms as one element of a broader digital literacy that could provide supplemental benefits over time in a politically and economically insecure environment in Haiti, particularly if combined with increased higher education achievements and other employment avenues.

Employment Challenges for IDP Trainees

I need one job experience to increase my profile credibility online
67.78%

I lack certification to prove that I have required skills
37.78%

I do not have access to a credit card to get paid for the job
68.89%

I do not have the necessary language skills
37.78%

I frequently had Power/Electricity Cuts at my home
23.33%

I did not have adequate access to internet
23.33%

Source: Impact Assessment Survey, Training Round 1-3

PROGRAM PERFORMANCE

The program met its benchmark thresholds for key performance metrics—enrollment, attrition, graduation rate, and trainer to trainee ratio—for IDP and NM&S courses, respectively. All of the courses were delivered on time, and ESIH's local leadership and expertise attracted the right profile of students and facilitators. The program made adjustments to increase the graduation rate of NM&S trainees in Training Round 3 by providing multiple exam dates, ensuring that one of the dates fell on weekend. This helped maintain the graduation rate above 50% despite the stress created due to the political unrest.

The IDP graduation rate was also affected by the political unrest, falling from 86% in Training Round 1 and 93% in Training Round 2 to 77% in Training Round 3. But ESIH showed flexibility, rescheduling exams so they would not conflict with the exam schedule of universities in Port-au-Prince and provided multiple dates to take the

exam. The positive impacts ranged from producing better digital citizens to supporting new businesses created by the graduates. The findings and ability to raise funds and implement iterations in other parts of the Latin American and Caribbean region demonstrate the program's capability to scale and contribute to the effort of increasing the capability of youth to join digital economy in other regions.

GENDER PERCEPTIONS TRANSFORMATIONS

The findings of Training Rounds 1 and 2 indicated that the deep-seated gender perceptions and restrictive gender norms in Haiti contribute to Haitian women's inequitable access to education and employment opportunities in the digital field. The evaluation study therefore took a gender transformative approach in Training Round 3, examining gender roles, norms, and interpersonal relations of the trainees. The findings indicated that the digital training and the gender

workshop enabled IDP graduates to challenge gender inequalities and exercise transformative agency. The trainees experienced a gradual change in knowledge, self-perceptions, behavior, gender roles, and relationships with friends and family members over the course of the program.

SCALING RECOMMENDATIONS

The evaluation study surfaced lessons learned and programmatic recommendations built upon the main findings to support and accentuate the successful elements of the program:

Enrollment: To maintain larger number of applicants and high enrollment numbers, future iterations of the program should:

1.1: Continue leveraging existing relationships with community-based organizations to garner support for enrollment activities

1.2: Consider the trainee profile and personas while selecting

Employment Challenges for IDP Trainees

I did not have the necessary technological equipment
58.46%

I was not able to dedicate adequate time because of household chores
26.15%

I did not have adequate support and encouragement from my family
24.62%

I had to relocate abroad
24.62%

I was not able to dedicate adequate time because of marital life
20.00%

Skills I acquired did not match the skills required to advance my career
16.92%
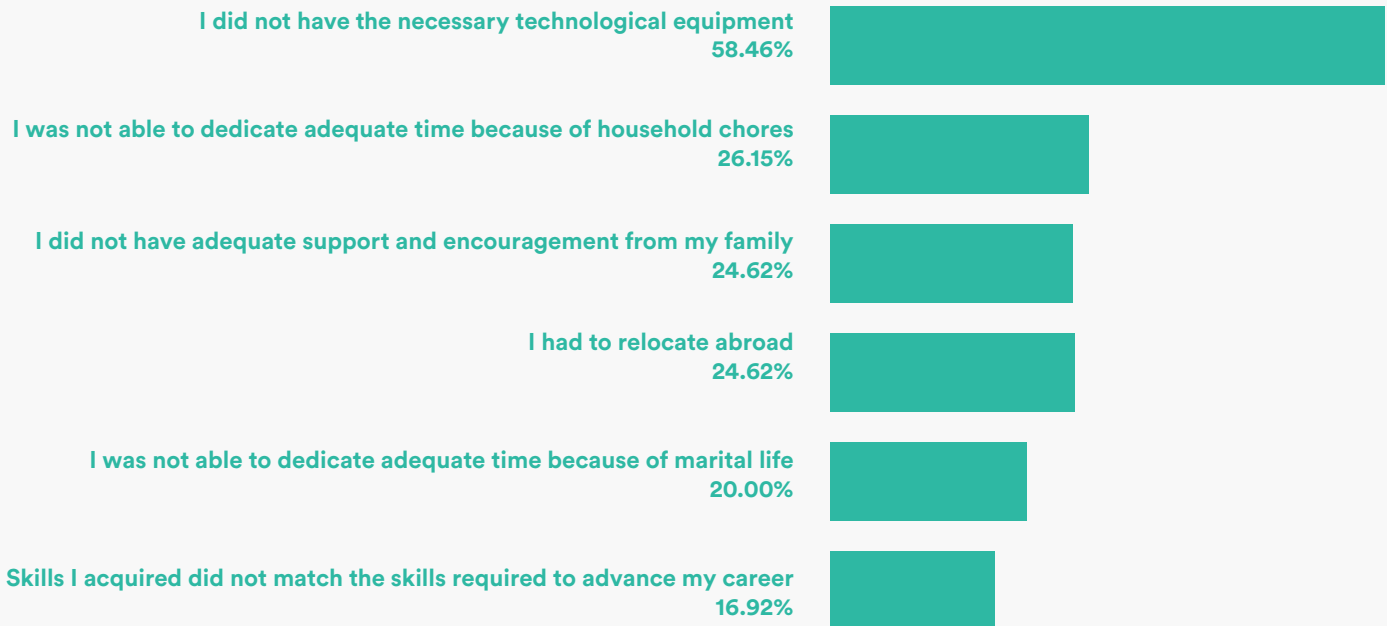
Source: Impact Assessment Survey, Training Round 1-3

candidates to ensure base digital and language proficiency and confirm availability

1.3: Set clear expectations regarding the theoretical nature of the NM&S course and absence of potential internship opportunities

Orientation: To maximize the positive impact of the orientation session, future iterations of the program should:

2.1: Continue to implement the time management activity for IDP and NM&S trainees on the orientation day

2.2: Separate the time management activity for male and female NM&S trainees to better focus on different gender needs

2.3: Provide adequate time for training of trainers during the orientation week

2.4: Continue to offer an orientation session that provides an introduction to the course structure, tools, and communication channels, and commonly encountered technical problems

Course Delivery and Design: To increase effectiveness of course delivery and increase learning, future iterations of the program should:

3.1: Strategize facilitation preferences for future iterations of the IDP trainings, keeping in mind that the study showed online trainings could be successful if supplemented with strategic in-person touchpoints at the onset of the training with and one to two practice sessions

3.2: Use Google Classroom as opposed to Slack, WhatsApp, or similar platforms for communication between trainees and trainers

3.3: Build scenario-based exercises for IDP trainees to stimulate the environment of remote jobs

3.4: Divide the NM&S course into a greater number of modules, each including multiple midpoint quizzes to ground concepts at the moment of learning rather than test concepts only at the end of each module. Explore the possibility of adding practice sessions to

the NM&S courses that provide simulation exercises on deployment and attack under cybersecurity and network management

Culture and Infrastructure: To mitigate some of the socio-cultural and infrastructural barriers, future iterations of the program should:

4.1: Secure agreements with institutional partners that have the availability to provide further support to trainees including access to facilities for power, internet connectivity, and access to computer labs

4.2: Maintain the circulation of activities scheduled at the orientation to enable trainees to plan ahead and save money for transportation to ESIH

4.3: Secure partnerships with community-based organizations (CBOs) or local non-governmental organizations (NGOs) that can provide weekly practice facilities

4.4 Continue to provide flexibility with the quiz and exam dates to prevent dropouts

Employment Challenges for IDP Trainees

84% GRADUATION RATE FOR IDP COURSE

52% GRADUATION RATE FOR NM&S COURSE

3% ATTRITION RATE FOR IDP COURSE

7% ATTRITION RATE FOR NM&S COURSE

Source: Impact Assessment Survey, Training Round 1-3

Employment Factors: To increase capacities to engage with employment opportunities on online platforms and in the domestic market, future iterations of the program should:

5.1: Provide a workshop on the payment system, successful bidding strategies for online platform, and strategies for obtaining online referrals and testimonials

5.2: Provide program certificates immediately following graduation so it can be used for establishing credibility on the online platforms

5.3: Continue offering mentorship opportunities to increase access to more employment opportunities in the domestic market and gain support and confidence

5.4: Conduct outreach and secure service agreements with companies that have the capacity to offer a large volume of micro engagements to serve as initial employment opportunities to trainees and graduates

5.5: Conduct parallel outreach to domestic markets for internship and employment opportunities

5.6: Invest in building an alumni community to increase the opportunities for peer-to-peer chances of referrals, job opportunities, mentorship, guidance, and support

CONCLUSION

A key assumption of the program was that online platforms could provide a surplus of jobs and that disparities and digital divides could be reduced by addressing infrastructural challenges and up-gradation of skills and education among young people. The AGG program delivered trainings to help female youth become employable. Several programmatic and pedagogical strategies kept the training completion rate high. However, efforts to secure employment prospects in the domestic market and on the online platform achieved only limited success.

The graduates faced uncertainty and stress due to political unrest and saturated domestic market. To secure their livelihood, the trainees did not engage in one professional activity but a range of learning and employment activities. Ignoring this reality would be self-defeating for a program. Engaging in mixed livelihoods is not just a coping mechanism for the trainees but a proactive employment strategy.

It is important that the trainees are able to engage in a range of flexible and evolving set of employment services. A simple metric that measures frequency of learning opportunity, income, and/or trainee's satisfaction in the opportunity could be a framework to begin with. A program that allows space and flexibility to measure the mixed income approach can also strengthened clarity in navigating programs with mixed income approach.

01 **Background**

The Ayitic Goes Global (AGG) program was a pilot initiative of the International Development Research Centre (IDRC) and the Latin America and Caribbean Network Information Centre (LACNIC) that sought to enhance participation among young Haitian women in the global economy. The primary goal of the initiative was to create enabling conditions for Haitian female youth to find employment in the digital economy by addressing skills and infrastructure deficits in Port-au-Prince, Haiti. Moreover, the pilot delivered 316 young female professionals trained in basic digital skills and focused on securing remote jobs for them in overseas markets. Through advanced-level trainings of 116 information and communications technology (ICT) professionals, the pilot also contributed to strengthening local human resources and initiatives to further internet development in Haiti, with the understanding that a more developed digital services market will demand greater maturity of local internet networks.

PROGRAM SIGNIFICANCE

The technological and socio-political changes of the fourth industrial revolution are poised to transform employment and recruitment across industries and countries. Three trends in particular present new forms of employment opportunities in developing countries within the digital economy: advances in computing power and big data, changing work environments, and the sharing economy and peer-to peer platforms (World Economic Forum, 2016). However, several barriers prevent Haiti from leveraging these new employment opportunities to tackle its critical youth unemployment challenge and address gender barriers.[1]

Internet penetration is low. With 1.2 million Internet subscribers (12% penetration) Haiti is one of the countries with the lowest Internet penetration in the Caribbean (42% average penetration). Access to mobile phones has increased rapidly, rising from 500,200 in 2005 to 7,160,000 in 2013, but smart phone access is still quite limited (ITU statistics).[2]

Access to education remains a challenge, particularly for girls and women. Adult literacy rates are alarmingly low. Estimates from the CIA Factbook place adult literacy at 61-64% for males and 57% for females, while the UNDP reports an even lower average adult literacy rate of 48.7%. The average girl in Haiti only attends school until the age of seven, as girls are often pulled out of school to assist with household chores or as a result of families unable to contend with steep tuition fees (Save the Children).[3] According to the Gender Inequality Index, which is a score that ranges from 0 to 1 and reflects the degree to which women are disadvantaged in relation to reproduction, empowerment, and the labor market, Haiti scores 0.62 (150th out of 162 ranked countries in 2018) (UNDP, 2019).[4]

Haiti has high poverty levels. Sixty percent of Haiti's 10.5 million citizens live on less than USD $2 per day. Haiti ranks 169th in the Human Development Index out of 189 ranked countries and is the least developed

Barriers Preventing Haiti from Leveraging New Employment Opportunities

57%
FEMALE LITERACY RATE FOR WOMEN IN HAITI

150
TH RANK OUT OF 162 COUNTRIES, GENDER INEQUALITY SCORE

60%
POPULATION LIVES ON LESS THAN USD $2 PER DAY

42%
INTERNET PENETRATION RATE, LOWEST IN CARIBBEAN REGION

Source: ITU Statistics and UNDP reports

country in Latin America and the Caribbean (UNDP, 2019).[5]

A range of strategies were needed to tackle poverty and gender inequality in Haiti through digital employment and the strengthening of Internet connectivity. The AGG program addressed the skill and infrastructure barriers on multiple fronts. The first component was female-focused and intended to promote the growth of a digital data-related job market in Haiti by teaching digital skills to 316 female youth and facilitating the acquisition of remote jobs in overseas markets in digital and data-related services.

Target beneficiaries included female youth between the ages of 18 and 29 with basic technical knowledge who were trained in digital skills and data-processing. Short-term needs were addressed through multiple ways. For example, free tablet computers were provided to IDP trainees to increase access to course materials. The tablets also made the IDP trainees less dependent on the electrical power supply and on access to training labs for

computers. Moreover, course content employed local examples to make the learning more relevant. Haitian creole was used for verbal instructions and French was used for the course content to mirror the educational system of Haiti and encourage meaningful participation in the course.

The second component of the AGG program focused on boosting internet infrastructure and connectivity in Haiti. The pilot built capacities among advanced ICT professionals to encourage the growth and improvement of Internet services in Haiti. Target beneficiaries included ICT professionals involved in developing and operating telecommunication networks across the country and professionals from technical colleges and universities. This group was offered advanced-level trainings on a range of ICT subjects such as network management, wireless data networks, computer security and Internet Protocol Version 6 (IPv6) deployment.

The third component of the AGG program focused on partner outreach for scaling and establishing partnerships

to strengthen the activities of the program. Additionally, the pilot focused on addressing the fragile state of Haiti's economy. Haiti ranks as the 12th most fragile country in the 2019 Fragile State Index (The Fund for Peace, 2019).[6]

The country is affected by weak systems of governance and natural disasters and Haitians have systematically been left behind due to fragmented and fragile state institutions. In particular, the mass demonstrations and protests against President Jovenel Moïse's administration affected participation of the young female professionals and ICT professionals in the training program. This report presents the results of the evaluation of the program conducted by 3x3 between February 2018 and September 2019. The evaluation aimed to study the infrastructural, socio-economic, cultural, and pedagogical factors and the aspirations, needs, and barriers to participation and successful completion of the training provided under the AGG program and gain employment in the digital sector.[7]

Program Research and Design Timeline

Research
04/17 – 11/17
Demand Research Study, 3x3
Design
Supply Research Study, ESIH
Pedagogical Research, Slashroots
Foundation

Public Consultation
11/17
All Partners

Program Design
11/17 – 02/18
Program Design, All partners
with LACNIC in lead
Curriculum Design, LACNIC
and COI

Overall Assessment
09/19 – 12/19
M&E Instruments, Data Collection,
and Report, 3x3 Design

Evaluation
03/18 - 09/19
M&E Instruments, Data
Collection, and Report, 3x3
Design with support of the local
researcher
Program Adjustments, All
partners with LACNIC in lead

Evaluation Plan
01/18 – 02/18
M&E Plan and Framework,
3x3 Design with advice on
pedagogical factors from
Slashroots Foundation

PROGRAM TIMELINE AND ROLES

Multiple studies by the research partners were carried out in 2017 to develop the programing for the pilot initiative. 3x3 supported the creation of the digital and data skills courses and curriculum through the study of demand opportunities in overseas market. The demand study sought to identify opportunities for greater fluidity in digital data markets between Haiti and abroad. Specifically, it focused on remote work, offering an opportunity to enable greater participation in the global digital economy and fostering inclusive growth in Haiti.

Complementing the demand study, supply research was conducted by Ecole Superieure d'Infotronique d'Haiti (ESIH) to understand the baseline profile of the two target beneficiary groups (i.e. young Haitian women between the ages of 18 and 35, and Haitian ICT professionals). Pedagogical strategy research conducted by the Slashroots Foundation sought to understand effective approaches that could help enhance student performance and limit attrition.

The Caribbean Open Institute (COI) designed the curriculum for the young women and LACNIC designed the curriculum for ICT Professionals. A public consultation was held in November 2017, following which the program design was developed by LACNIC with the support of all research partners involved in the study. Program design was confirmed by all of the partners, and the evaluation plan was set in early 2018. Three Training Rounds were designed and delivered (Training Round 1: March–September 2018, Training Round 2: October 2018– January 2019, and Training Round 3: April–August 2019).
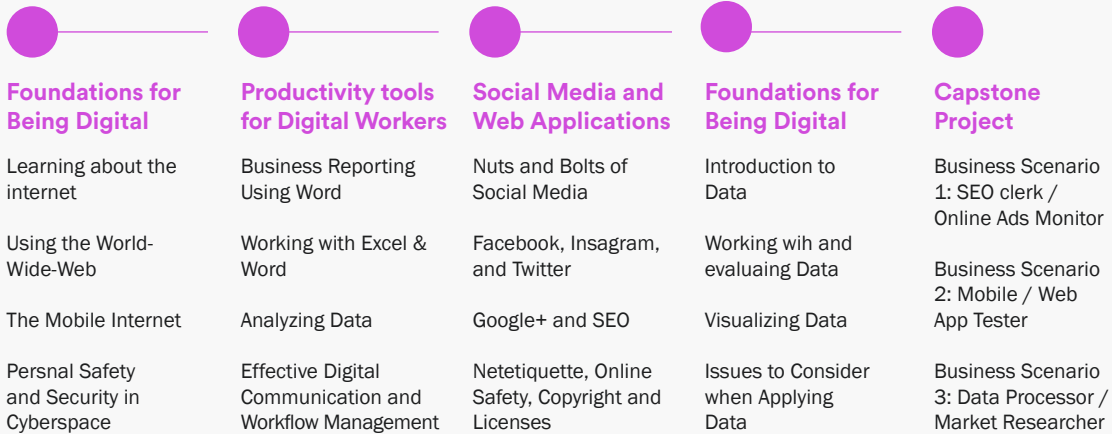
Each Training Round included three courses: one course for high school and university graduate females aged between 18 and 35 years old related to (a) Internet and Data Practitioner (IDP) content, and two courses for ICT professionals related to (b) Network Management and (c) Security. For reporting purposes in this document, hereafter the ICT-oriented courses are collectively referred to NM&S. Evaluation was conducted to study the

factors that affected the successful completion and impact of the program. Course content was designed by two partners, LACNIC and COI. NM&S course content was discussed between the professors selected for its development and technical experts in LACNIC with previous experience in Haiti. The professors were selected based on their technical knowledge and online learning expertise. They were both recommended by LACNIC's technology area, having worked for LACNIC previously.

Each module was reviewed and approved by a LACNIC technician, and additional expert advice was sought for specific topics. Local facilitators were also involved in the development of the courses, particularly as related to assisting with translation reviews, making technical language adjustments, and providing some content-based suggestions that drew upon on their local teaching experience.

The NM&S course content for was uploaded in .PDF format to Thess, the learning management system already

IDP Training Curricula

Foundations for Being Digital	Productivity tools for Digital Workers	Social Media and Web Applications	Foundations for Being Digital	Capstone Project
Learning about the internet	Business Reporting Using Word	Nuts and Bolts of Social Media	Introduction to Data	Business Scenario 1: SEO clerk / Online Ads Monitor
Using the World-Wide-Web	Working with Excel & Word	Facebook, Insagram, and Twitter	Working wih and evaluaing Data	Business Scenario 2: Mobile / Web App Tester
The Mobile Internet	Analyzing Data	Google+ and SEO	Visualizing Data	Business Scenario 3: Data Processor / Market Researcher
Persnal Safety and Security in Cyberspace	Effective Digital Communication and Workflow Management	Netetiquette, Online Safety, Copyright and Licenses	Issues to Consider when Applying Data	

in use by ESIH. With the exceptions of the quiz and chat forum features, no Thess-specific tools were used. Despite the recommendation of the research group, a significant barrier prevented group activities from being designed for trainees. Most of the ICT professionals worked full time and it was anticipated that they would struggle to coordinate and dedicate time for group activities.

The IDP course was developed in consultation with the students and faculty resources at the University of West Indies and curated with the help of various open education resources available online. Baseline scenarios for the capstone module were developed by COI researcher and the content was informed by demand research conducted by the 3x3. The capstone module was written as a business scenario related to a specific target job and required the ttrainees to analyze and evaluate issues in a given problem situation, select and apply the appropriate digital tools, and demonstrate previously acquired competencies as well as

demonstrate effective critical thinking, problem-solving, and communication relevant to the specific job scenario.

In contrast with the NM&S content that was deployed via Thess, the IDP course content was developed on ADAPT, the learning management system already in use by COI. The ADAPT tool enables the combination of text and graphic components on the scrolling page to intended to provide a rich, interactive, and responsive content consumption experience for users, especially those on mobile devices or with poor data connections.

ADAPT provides a variety of interactive components that allows course modules to be designed with directed, yet flexible learning paths. Using these features, the courses were designed in a consistent format throughout, as short, modular learning content with built-in quizzes and repetitive learner assessment in-line with content. This design facilitated a progressive, directed learning path that allowed students to achieve incremental mastery of a concept before moving on

to the next. The specific ADAPT platform features used included:

- Responsive eLearning content to work across device categories (i.e., mobile phones, tablets, and desktops)
- Ability to be deployed as web courses, as well as stand-alone mobile phone apps that do not require continuous internet connectivity
- Multi-lingual, enabling students to select between English and French

02 Evaluation Methodology

3x3 took a mixed-methods approach to data collection and analysis for the evaluation study. The scope of the evaluation was focused on three training rounds, each of which were three months long in duration. Learnings from the study captured throughout Training Rounds one, two, and three were iteratively and incrementally applied to program implementation but generally structured to inform program design and curriculum adjustments for future training rounds. Four hundred eighty-five trainees were trained under the program, 316 received training in the IDP course and 169 received training in the NM&S courses. The specific objectives of the evaluation study were to:

- Assess the change or impact(s) attributable to programmatic activities;
- Isolate key factors to test within the overall program design that affect impact; and,
- Identify environmental conditions or factors that affect the successful implementation of programmatic activities.

METHODOLOGY DESIGN

The evaluation data was collected from trainees, trainers, and implementation partners using multiple data sources, including a four-part student survey (N = 450), 8 focus groups, and 22 one-on-one interviews to garner feedback and information on the experience and performance of the program. In addition, in-depth interviews were conducted with the employment coordinator and employers to understand the factors that affected the participation of the trainees in the digital workforce following completion of the program.

Selection Application, Screening Interviews, and Baseline Reports: An online enrollment form and screening interviews, conducted by ESIH to determine the eligibility of the applicants for the program and select the final trainees, were used to gather key baseline indicators on the trainees. Trainee-level data collected included information on socio-economic factors, infrastructural factors, and baseline skills, which functioned as independent variables relative to trainee performance over the course of the pilot. This baseline M&E data was available on all of the participants of the program.

Course Assessment Survey Analysis: A course assessment survey (N = 450) was administered at the mid-point and completion of the program for all the three training rounds. The survey gathered key quantitative metrics related to different aspects of the program and captured trainee experiences related to different programmatic and pedagogical factors such as platform access, course content, trainer support, peer learning, self-paced learning and self-rating, challenges, overall experiences, and feedback for course improvement.

Course Assessment Focus Groups: A two-part focus group was administered with NM&S and IDP trainees at the interim and completion of the program for all the three training rounds. The focus groups provided qualitative information related to trainee perceptions of program performance and course curriculum. Information and observations were

Data Collection Methods, by Phase

Onset of the Training

1. Online application and screening interviews for NM&S and IDP trainees
2. Baseline reports from the partners

Mid-Point of the Training

1. Course assessment survey with NM&S and IDP trainees
2. Program assessment focus group with NM&S and IDP trainees
3. Mid-term reports from the partners

End of the Training

1. Course assessment survey with NM&S and IDP trainees
2. Program assessment focus group with NM&S and IDP trainees
3. End-term reports from the partners
4. Assessment interviews with NM&S and IDP trainees and trainers

Throughout the Training

1. Impact assessment survey with NM&S and IDP trainees
2. Focus groups with graduates of Training Rounds 1 & 2
3. Interviews with graduates of Training Round 3
4. Employment program assessment interviews with the employers, the employment coordinator, and two interns

captured related to trainee motivations, barriers to meaningful program participation, general expectations of the program, as well as feedback related to perceptions of what went well, what did not go well, what could be improved, and trainee expectations and definitions of success as related to employment. The focus group participants were representative of all the trainees and indicative of the significant socio-cultural and infrastructural barriers faced by the trainees.

Course Assessment Interviews: End-term interviews were conducted with two trainees and one trainer from the IDP and NM&S courses, respectively, at the completion of the programs to provide qualitative information related to the success of the initiative and to gather feedback on the performance of all the courses. The purpose of the interviews was to seek deeper insights related to previously gathered findings and themes associated with the focus groups and surveys (i.e., participant motivations, challenges, behaviors, and aspirations). Trainees that faced significant socio-cultural and infrastructural barriers were prioritized for the interviews.

Impact Assessment Survey Analysis:
An Impact Assessment Survey was administered two months post-completion of the program for all the three training rounds. The survey provided key quantitative information on program impact and captured graduates' experiences related to their attempts at joining the digital workforce. Factors that were measured included application of skills learned, perceptions of online platform and employment activities, challenges, overall experiences, and feedback for program improvement.

Employment Program Assessment Focus Groups: Focus groups were held with IDP graduates of Training Round 1 (n = 6 participants) Training Round 2 (n = 11 participants) to gather qualitative information related to the performance of the program and to assess the experience of the program and employment activities. Information and observations were captured related to trainee motivations, barriers to meaningful program participation, general expectations of the program, as well as feedback related to perceptions of what went well, what did

not go well, what could be improved, and student expectations and definitions of success as related to employment.

Employment Program Assessment Interviews: Interviews were conducted at the end of the employment program with one employment coordinator and two interns to provide qualitative information on the success of the employment initiative and to gather feedback on performance. The purpose of the interviews was to seek deeper insights related to previously gathered findings and themes associated with the focus groups and surveys (i.e., participant motivations, challenges, behaviors, and aspirations).

Document and Reporting: Baseline and end-term pilot reflection reports gathered information and feedback from the partners to document the planning process for the recruitment and selection of the trainees, orientation session, and the course delivery.

Survey Sample - IDP

Onset of the Training

Online Application Form
316 TRAINEES

Baseline reports
04 PARTNERS

Mid-Point of the Training

Course assessment survey
184 TRAINEES

Mid-term reports
03 PARTNERS

Focus group with trainees
38 TRAINEES

End of the Training

Course assessment survey
137 TRAINEES

End-term reports
03 PARTNERS

Focus group with trainees
28 TRAINEES

Assessment Interviews
12 TRAINEES + TRAINER

Throughout the Training

Impact assessment survey
119 TRAINEES

Empployment Interviews
06 PARTNERS

Focus groups with graduates
17 TRAINEES

Assessment Interviews
10 TRAINEES + TRAINER

DATA ANALYSIS

A number of methods were used to synthesize and structure findings associated with the data sources described above:

Tagging: Key phrases from qualitative research were tagged, or coded, to identify broad themes and patterns across the different modes and audiences. Attention was paid to context, consistency, and contradiction of views, frequency, and intensity of comments, their specificity as well as emerging themes and trends.

Statistical Analysis: The online form and survey questionnaire was structured to collect quantitative data related trainees experiences with different program activities. The quantitative data were analyzed to interrogate the validity of previously collected qualitative data. This effort was undertaken via descriptive statistics (e.g., percentage scores, weighted averages) as well as via regression models to explore whether relationships between key variables (e.g., infrastructure, socio-economic dynamics, pedagogical exposure, and employability) were statistically significant.

Triangulation: Data from all available sources were triangulated to validate findings, conclusions, and recommendations regarding future iterations of the program. Preliminary findings were validated and confirmed with the program partners and operators through an online presentation and discussion at the end of each training round to synthesize and determine recommendations.
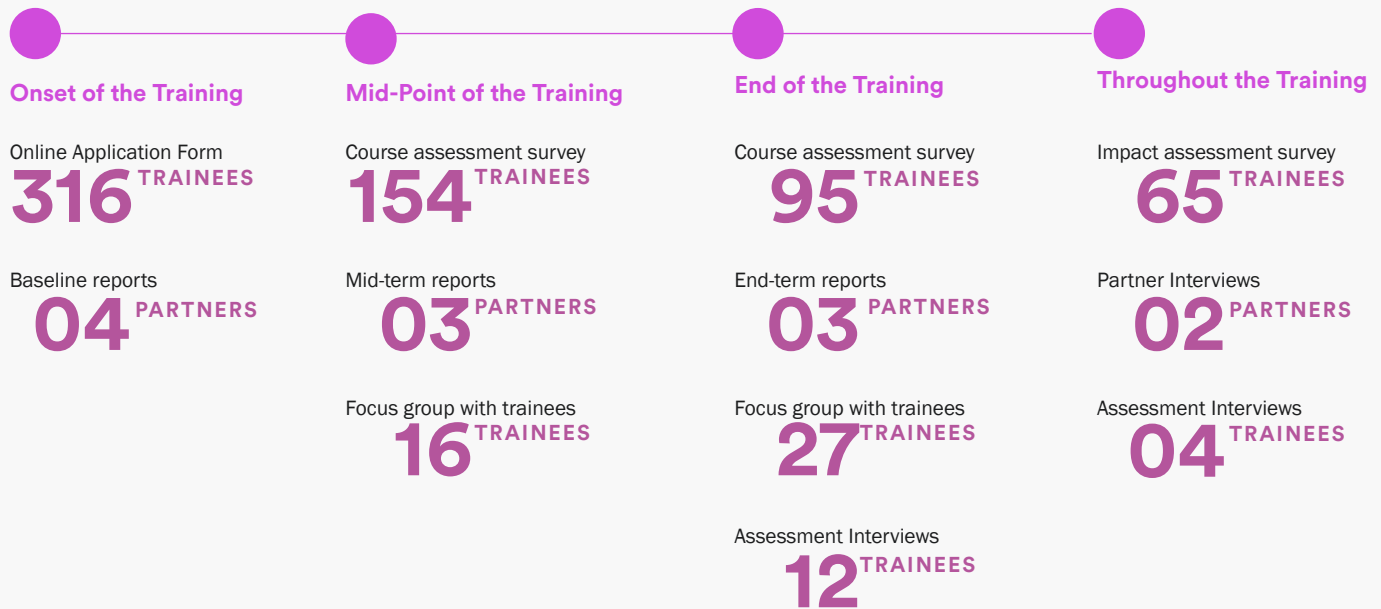
METHODOLOGY ADJUSTMENT

The evaluation methodology and sampling plan were adjusted during the course of the program to test the relationship between online and offline facilitation and attempt to identify the balance between both that could best support successful training completion. Evidence gathered in Training Round 1 indicated that the in-person facilitation was an important factor for meaningful participation of the IDP trainees. Further, the NM&S trainees expressed the need for practice sessions to increase comprehension and put into practice the theory they learned. However, preliminary findings also indicated that participant attendance at training sessions was limited due to a lack of affordable transportation options and insufficient available time owing to household- or employment-related responsibilities. An alternative considered was the provision of online practice sessions and facilitation, but unreliable access to internet and lack of in-person interaction have an adverse effect on the learning and trainee performance.

Rather than discard the viability of online training altogether, the research team opted to explore whether online training could be provided at an appropriate balance to account for logistical limitations, yet not attempt to altogether replace in-person training sessions. To this end, in Training Round 2, the trainees were split into groups with varying degrees of online and in-person training. One-fourth of IDP trainees voluntarily selected online-only facilitation, whereas among NM&S trainees, 16 trainees

Survey Sample - NM&S

| Onset of the Training | Mid-Point of the Training | End of the Training | Throughout the Training |

Onset of the Training

Online Application Form
316 TRAINEES

Baseline reports
04 PARTNERS

Mid-Point of the Training

Course assessment survey
154 TRAINEES

Mid-term reports
03 PARTNERS

Focus group with trainees
16 TRAINEES

End of the Training

Course assessment survey
95 TRAINEES

End-term reports
03 PARTNERS

Focus group with trainees
27 TRAINEES

Assessment Interviews
12 TRAINEES

Throughout the Training

Impact assessment survey
65 TRAINEES

Partner Interviews
02 PARTNERS

Assessment Interviews
04 TRAINEES

agreed to take the practice sessions online (via the Zoom online conference platform) while the other trainees took the practice sessions at ESIH Lab. Data gathered in Training Round 2 indicated that online facilitation was successful with IDP trainees, and moreover that a majority IDP trainees (58.7%) preferred online facilitation. The decision was made by program implementation partners to increase the number of IDP trainees in the online facilitation group to 50% (n = 164) for Training Round 3. Among NM&S trainees, performance of trainees within in-person practice sessions was better than those in online practice sessions. Also, 84% of the NM&S trainees had preference for in-person practice sessions. The decision was made to restrict the online practice session to a small group on a voluntary basis for Training Round 3.

LIMITATIONS

The evaluation methodology utilized for this study, while comprehensive, did encounter limitations as a result of practical and logistical challenges. First, there was a lack of awareness among

NM&S trainees of Training Round 2 regarding the evaluation activities that made them initially hesitant to share their feedback during focus group discussions. Second, the mid-term focus group for NM&S trainees was scheduled before their exam, and as such, many trainees opted to use their time to prepare for the exam as opposed to participate fully in the focus group. These two factors in combination negatively impacted trainee participation and engagement with the focus group. Following this, to help reduce the risk of repeating low focus group participation, trainers sent a note to all the trainees explaining the importance of the evaluation activities and requesting their proactive participation.

Moreover, the research team implemented the following changes: (a) 15 trainees were recruited as opposed to the initially planned 10 trainees to account for likely attrition, (b) more time was allocated to the end-term focus group to gain feedback and perspectives on some of the topics that were initially planned to be covered during the mid-term focus group, and (c) the focus group was held after the

evaluation activity. It was difficult to plan in advance the evaluation activities for the third Training Round, however, as training sessions were frequently rescheduled due to political unrest in Haiti. All of the graduates from Training Round 3 did not respond to the Impact Assessment Survey disseminated through email possibly because of the limited internet connection at the time of civil protest. The investigator from 3x3 joined existing trainee WhatsApp groups to encourage participation, increasing the survey response to 60%.

3A

IDP Trainee Profile and Personas

This section will describe the demographic, educational, and socio-economic characteristics of the IDP trainees and three personas that were developed following Training Round 1. Personas are not representative of specific individuals but rather combine commonalities and call out differences in characteristics between user types. Personas are frequently used in design research to synthesize user types and guide the design of products, systems, and processes, ensuring they meet the needs of a specific user groups.

The degree of variability in responses among IDP trainees necessitated the creation of personas as a means of interrogating the data. The IDP personas were also useful as lenses through which to consider employment pathways and challenges for IDP graduates. NM&S trainees, however, were comparatively much more uniform in their responses and characteristics, so the trainee profile established a granular enough framework for analysis of their responses.

AGE

The age requirement for applicants was 18 to 29 years old. The average age of participants was 24 years, with the mode being 26 years and median being 25 years.

MARRIAGE AND CHILDREN

The IDP trainees skewed towards being unmarried (6% married or engaged) and having no children (6% reported having one or more children). Given that the average of first birth for women, in the country, is 22.72 years the women were non-representative of general childbearing trends. This fact can be attributed to the education levels (above average) of the participants.[8]

EMPLOYMENT STATUS

Only 17% of the IDP trainees reported current employment. The formal employment trends within country remain low, with urban informal markets providing 47% of employment.[9]

EDUCATION

Half of the IDP trainees were in the process of obtaining a bachelor's degree. However, due to financial stressors, the higher education process is often neither straightforward nor continuous and as such it is not unusual for women to halt educational pursuits for a variety of reasons.

DIGITAL PROFICIENCY

The language competencies of the participants are spread amongst advanced Creole and French and basic English and Spanish. Microsoft Word, Excel, and PowerPoint had the highest levels of proficiency amongst the IDP trainees.

Participants reported having the ability to handle basic internet tasks such as properly using a browser search bar, downloading an application, and viewing videos on user-generated content sites such as YouTube. Using the Internet for informative measures such as bookmarking websites and signing up for newsletters were rated lower in comparison.

TIME SPENT

The IDP trainees spent a significant portion of their time engaged in household daily duties (M = 5.7 hours), which is typical among women who reside in developing countries. These duties included obtaining water and cooking (15% of total time), other household activities (11% of total time), taking care of children (9% of total time), and taking care of elderly people (6% of total time).

An average of three hours (21% of the time) was spent daily studying for university, which aligns with the fact that half of the IDP trainees reported current enrollment in a degree program. Additional average daily activities included religious and spiritual activities (1.7 hours), socializing and leisure activities (1.6 hours), and sports and recreation (1.3 hours). Only an average of 0.9 hours was reported working.

INFRASTRUCTURAL

Fifty-one percent of IDP trainees lived within a reasonable proximity (within 4 kms) to the ESIH facilities, residing in the metropolitan Port-au-Prince region, where ESIH facility is located, and near the main thoroughfare of Delmas. However, despite the proximity, commute times to ESIH were still quite long as a result of general traffic congestion and extended wait times associated with public modes of transportation.

The vast majority of participants indicated that they had access to a laptop (92%), but only approximately half reported owning a laptop (51%). Smartphone ownership, however, was extremely high (97%), possibly as a result of the capacity of smartphones to offer internet access at a typically lower price point than other devices.

Ninety-six percent of IDP trainees reported having electricity provided by Electricite d'Haiti (EdH), the national utility provider, between three and nine hours per day. Only four percent reported never having electricity in their household, and those who reported this t resided outside of central Port-au-Prince in and around Carrefour. Thirty-one percent of IDP trainees reported having access to at least one form of backup electricity: a fuel-based generator (24% of all respondents), an electricity grid-charged battery system, (11% of all respondents) or solar panels (29% of all respondents).

IDP trainees reported internet access through various pathways (at home [86%], or at a cyber cafe [76%],at an educational facility [61%], through street hot spot [61%], or at work [49%]).

PERSONAS

Personas were created by identifying correlational patterns between different variables in the participant survey. Three personas were identified, and their corresponding challenges, aspirations, and employment preferences were noted.

"Success for me is to realize my dreams. For example, a dream I had was to finish university in four years and I did. Another dream was for me to find a job, and I did. This is success…"

PERSONA 1: AMBITIOUS STUDENT

The Ambitious Student is a full-time or part-time university student enrolled in the AGG program to gain additional digital skills. She has high digital and language proficiency (e.g., a good grasp of Microsoft Word software, ability to install software applications, and proficiency in English, and Spanish). She has access to electricity with a power backup, the Internet, and a university-owned computer. Her residence is located far from ESIH and she is less likely to own a private vehicle.

Level of Digital and Language Proficiency

low — English and Spanish — Microsoft Word — high

Infrastructure Access

low — Ownership of vehicle — Internet, digital device, power backup, specifically through university labs — high

Needs & Aspirations

The Ambitious Student is mostly driven by peer recognition within the industry and a desire for female empowerment. She wants to be known in the industry for being a pioneering woman and an expert at digital skills. Her sense of success is driven by the ability to set goals and achieve them. She is family-oriented and seeking to provide her family a better future.
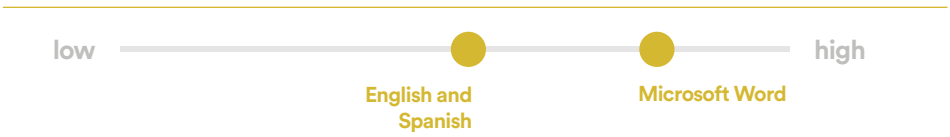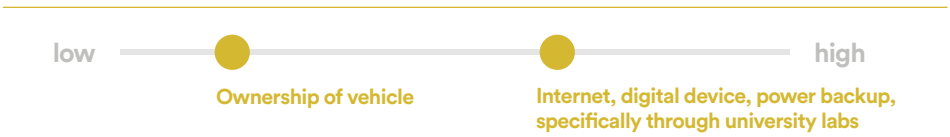
Challenges & Barriers

Her key challenges are infrastructure constraints followed by time management (i.e., (a) inadequate broadband connectivity and frequent power cuts, (b) conflict with the schedule of university activities, (c) lack of time for the course workload of both the university and AGG program, and (d) time balance priorities between studies, household activities such as cooking, sports and recreation, and religious and spiritual activities.

Employment Preferences

Among participants who align with this persona, the top three job priorities were career growth (62.96%), job stability (51.85%), and good working environment (48.15%). Key perceived challenges to gaining employment, in order of priority, were: (a) interview skills, (b) previous work experience, (c) transportation, and (d) confidence. Infrastructure—limited bandwidth, power backup, and transportation—were the main barriers to working on online platforms.

"Success for me will be becoming independent. Reaching economic freedom is a great challenge for the youth in Haiti, especially for women... "

PERSONA 2: INDEPENDENCE SEEKER

The Independence Seeker is unemployed, with no university education, and is seeking employability skills to gain financial independence. She has lower digital proficiency, low numeracy skills, and does not know how to operate a computer. She is more likely to have access to electricity but without a power backup, and she has limited access to the internet outside of the home. Generally, her residence is located close to ESIH.

Level of Digital and Language Proficiency

low ———————— high

English and Spanish — Microsoft Word

Infrastructure Access

low ———————— high

Ownership of vehicle — Internet, digital device, power backup, specifically through university labs

Needs & Aspirations

The Independence Seeker is mostly driven by a sense of worth in the eyes of family members. She is family-oriented and seeking to provide a better future for her family. She desires professional success to gain independence and dignity within society. She seeks independent work or part-time employment to either pursue further studies or concurrently manage household responsibilities and chores.
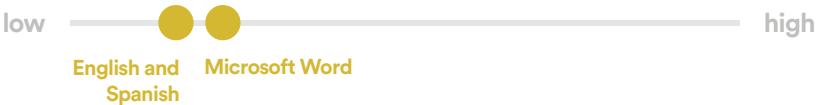
Challenges & Barriers

Her key challenge is infrastructural followed by time management and pedagogical dynamics: (a) inadequate broadband connectivity and frequent power cuts; (b) lack of motivation and commitment; (c) struggle with learning techniques; and (d) time balance priorities particularly related to childcare, household activities such as cooking, and religious and spiritual activities.

Behaviors & Attitudes

Among participants who align with this persona, the top three job priorities indicated were career growth (69.23%), flexibility (46.15%), and good relationship with co-workers (46.15%). The key perceived challenges to gaining employment, in order of priority, were: (a) previous work experience, (b) transportation, (c) interview skills, and (d) confidence. Infrastructure and lack of reviews or referrals were the main concern as related to freelance work.

"Success for me is to find financial stability given the political turmooil our country is in... I have to excel at this program and earn more... "

PERSONA 3: SELF-SUPPORTING PROFESSIONAL

The Self-Supporting Professional is either full- or part-time employed and has a university degree in a non-digital field. She is proficient in Microsoft Excel, indicating higher numeracy skills, and she has a good grasp on local languages. She has access to electricity but likely no power backup. She has Internet access at work or at home, and she owns a computer. Generally, her residence is located far from ESIH and she is less likely to own a vehicle.

Level of Digital and Language Proficiency

low ————————————————————————— high

Creole and French   Microsoft Excel

Infrastructure Access

low ————————————————————————— high

Ownership of vehicle   Internet, digital device, power backup, specially through university labs

Needs & Aspirations

The Self-Supporting Professional is mostly is mostly self-driven and aspires to high socio-economic status in society. She desires financial success to have a better tomorrow. Her sense of success driven by a fear of failure, specifically due to living in a country that is in political turmoil. She is individualistic and self-reliant and she seeks to learn from past mistakes.

Challenges & Barriers

Her key challenge is pedagogical, followed by time management and infrastructural: (a) learning new materials is difficult and requires a shift in mindset, (b) inadequate broadband connectivity and frequent power cuts, (c) needs to make sacrifices to find time for the course workload of the AGG program and work activities, and (d) time balance priorities between work and care of elderly people or children.

Behaviors & Attitudes

Among participants who align with this persona, the top three job priorities indicated were job stability (77%), career growth (55.56%), and independence and self reliant / flexibility (33.33%). The key challenges to gaining employment, in order of priority, include: (a) interview skills, (b) transportation, (c) previous work experience, and (d) confidence. Infrastructure is the main concern as related to obtaining freelance work.

3B

NM&S Trainee Profiles

In line with the activities geared toward strengthening Internet connectivity and infrastructure, there was a second beneficiary group of ICT professionals. The supply side of the research conducted by ESIH identified the profile of ICT professional through an online survey conducted with both potential trainees and local companies that employ IT professionals in Haiti. The research was used to determine the age range 19-34 and the basic educational requirements of a university degree in computer science. This section will describe the demographic, educational, and socio-economic characteristics of the NM&S trainees.

AGE AND GENDER

The average age of NM&S trainees was 27 years old. When disaggregated by gender, the average age of women in the cohort was 27 years old. The higher average age than the IDP trainees could be due to the higher education levels and full-time work status of the NM&S trainees. Most trainees had a computer science degree and were employed. The gender spread among this group was expected to trend highly in favor of male given the nature of the ICT field and the general disadvantages that women face with regard to access to formal work environments and educational opportunities in the country in general.

EDUCATION

All of the NM&S trainees had a bachelor's degree in computer science. Twenty percent of the NM&S trainees either had, or were in the midst of achieving, an additional professional certificate. Another 20% also had Masters degrees in the field of computer science.

MARRIAGE AND CHILDREN

The NM&S trainees, like IDP trainees, also trended toward being unmarried (10% reported they were either engaged or married) and having no children (10% reported having one or more child).

WORK STATUS

Fifty-eight percent of the NM&S trainees reported active employment. Job titles represented included IT programmer, IT specialist, and program analyst. Forty percent of the female NM&S trainees in the group were employed, primarily in research and auditing functions.

DIGITAL PROFICIENCY

The language ratings of the group ranked higher than the IDP trainees. This can be largely attributed to higher education and degree granted rates of NM&S trainees. With the exception of Windows, the participants reported low-middle knowledge rates of the common operating systems listed.

TIME SPENT

The average amount of daily hours spent on household related duties was significantly lower for the NM&S trainees (29%) in comparison to IDP trainees (41%). This can be expected due to the 80% male prevalence rate in the group. These household duties included 1.96 hours in cooking and getting water (1.96 hours), other household activities (1.5 hours), 1.39 hours taking care of children (1.39 hours). and taking care of elderly (.79 hours).

An average of 2.25 hours were spent daily studying for university program. Additional times referred to religious and spiritual activities (1.64 hours), socializing and leisure activities (1.62 hours), and sports and recreation (2.54 hours) also represented some portion of time. Given that the majority of the NM&S trainees were already employed, the significant portion of time reported spent on work (5.43 hours) was not surprising.

INFRASTRUCTURAL

The majority of the NM&S trainees, similar to the IDP trainees, resided in the metropolitan Port-au-Prince area and along the main thoroughfare of Delmas. The six percent who reported living elsewhere lived in the Nord Department city of Cap-Haïtien.

All of the NM&S trainees reported having Internet access on their mobile phones, while88% reported having Internet access within their respective residences. Access and ownership of laptops and smartphones was also high for this group, as 95% of the trainees reported owning laptop and 100% reported having access to a laptop at home.

Sixty-two percent of NM&S trainees had electricity provided by EdH for three to nine hours per day. As compared to the IDP trainees, the three-to-six hours range consists between the two groups, however it as the extreme ends (9+ hours: 36%, 0 – 3 hours:2%) that there were greater differences. This can be partially attributed to the higher incidence of the NM&S trainees residing in high income neighborhoods with better access to electricity. Ninety percent of the NM&S trainees reported having access to backup electricity in the form of either a generator (45%) or an inverter charged during normal electricity service (29%).

4A

Motivating Factors for Participation

According to feedback gathered throughout the program, several factors contributed to the trainees enrolling and participating in the IDP and NM&S courses. For IDP trainees, motivations included gaining the necessary skills to prepare for workplace market, increasing digital proficiency, and discovering new learning and employment opportunities. For NM&S trainees, common motivations included increasing knowledge in the domain of network management and security as well as networking with other professionals in the field.

The presence of trainers, online and in-person, to address concerns and questions helped make the learning environment comfortable for participants. In-person interaction on the orientation day and the emphasis on discipline and time management also motivated several trainees who had previously struggled to complete courses on other online and self-regulated platforms. The ability to track grades and flexibility around assignment deadlines also fostered a practical yet goal-oriented culture, enabling the trainees to self-regulate their progress.

IDP COURSE

The rise of the digital economy and a desire to close the gender divide in digital labor participation were the two most influential factors that motivated the IDP trainees to enroll in the AGG program. Technology was seen as a field that has superseded all other traditional fields and made them redundant. The IDP trainees expressed not wanting to be left behind men in a field that is omnipresent and rising. The trainees saw the skills gained through the course as a means to support and defend themselves and not be dependent on others.

The female trainees also sought to gain basic digital competency or digital skill sets that could enhance day-to-day work efficiency and employability, thereby increasing their access to internship opportunities and employment. The affordability of the no-fee online training proved to be a valuable option compared to other vocational sources, and moreover the IDP trainees were highly motivated by the provision of free tablets.

NM&S COURSE

The NM&S trainees sought continued learning that could deepen their existing knowledge in the digital world. They perceived network management and security as emerging fields, and they aspired to increase their access to jobs and internship opportunities through increased knowledge and technical skills in the domains of network management and security. Trainees saw the NM&S course as an opportunity to learn about topics that are not captured in typical university education offerings.

A majority of the NM&S trainees (65%) were also motivated to transfer the knowledge learned from the program to their peers at their current or prospective workplaces. The NM&S trainees valued being able to define the governance of information security at their workplace and identify risks associated with current security policies. Less than one-tenth of the NM&S trainees sought better salary and promotion post completion of the program.

> " I thought this would be a good program to gain digital skills and become independent. When I say independent I mean economically and reaching a level of education. Reaching economic freedom is a great challenge for the youth in Haiti, especially for women. When I think of myself, becoming economically free doesn't mean I only think of myself. I have a younger sister; I have to think about her as well.
> - IDP trainee

EMPLOYMENT

The employment preferences of IDP trainees were mostly driven by multiple learning opportunities and facilitating the flexibility to pursue different activities such as university education, certificate courses, business ownership, and solicitation of data entry-related employment on online platforms to practice skills. The majority of the IDP trainees preferred part-time work and/ or self-employment (70%) over full-time employment (18%).

In direct contrast to IDP trainees, a slight majority of the NM&S trainees (51%) preferred full-time employment at an IT company or a telecom company over self-employment (32%). Few trainees wanted to continue working at their current employer (11%) or teaching at their current academic institution (6%). When assessing opportunities, NM&S trainees saw value in factors such as career growth, job stability, and having a good working environment over other factors such as salary and level of responsibilities.

ONLINE PLATFORMS

The IDP trainees reported several perceived benefits of working on online platforms. Most graduates felt that online platforms increased work opportunities and provided access beyond traditional geographical boundaries and to jobs that are only posted online. The general understanding among the trainees was that with the increasing digitization of the economy, it is important to understand how to seek job opportunities online.

Program graduates valued the ability to balance paid work with other activities such as part-time university education, operating a business, and satisfying household responsibilities. They described remote working conditions as a helpful form of employment in a context wherein political conditions make traveling to pre-designated locations unsafe. Notwithstanding such risks, remote employment provides the ability to multi-task and eliminate engagement with congested and expensive transportation networks, which helped the graduates better manage their time and money.

CONCLUSION

Overall, the affordability of the course, interactive and comfortable learning environment, and presence of online and offline facilitators supported high trainee participation throughout the course of the program. Both the IDP and NM&S trainees saw the benefits of continued education and were interested in engaging more programs like AGG.

The peer-to-peer learning to foster knowledge, better understanding of course materials, and networking opportunities was also seen as valuable. The peers also used the online channels to encourage each other to complete assignments and share opportunities with each other.

In looking to future employment opportunities, learning opportunities and good working environments were preferred factors over salary, promotion potential, and title by both the IDP and NM&S trainees. Given the fragile nature of Haiti's economy, the trainees sought multiple pathways to upward job mobility post-graduation.

4B

Infrastructural Barriers

It was evident from the research conducted for the AGG program design that significant infrastructural deficits will need to be addressed or accounted for to achieve more durable trainee participation. The program planned for the provision of tablets to IDP trainees and access to ESIH labs in an attempt to account for these challenges. However, the evaluation study confirmed that despite planned provisions, infrastructure remained a top barrier for trainees.

Key infrastructural challenges included (a) inconsistent electrical power supply, (b) limited bandwidth capacity, (c) lack of affordable transportation alternatives, and (d) inadequate access to computers and computer laboratories. Infrastructural barriers were further exacerbated by political unrest in Haiti during the third training round. Street protests made travel to ESIH labs unsafe and expensive, and the fuel shortage made backup electricity more expensive, all of which further restricted trainee access to computer labs and in-person sessions.

LIMITED INTERNET CONNECTIVITY

Haiti's limited internet bandwidth made access to course materials a challenge for IDP (50.81%) and NM&S (23.36%) trainees. The IDP trainees were most impacted and faced challenges downloading course content and engaging in quizzes and educational materials available in the video format.

They also spent more study hours than anticipated attempting to meet training goals as a result of low internet speed, which often caused trainees to experience frustration and fatigue. The NM&S trainees had access to better internet bandwidth at their workplace but faced challenges when they were traveling for work. In Training Rounds 2 and 3, the NM&S trainees that selected practice sessions through Zoom video conferencing instead of in-person practice sessions at ESIH lab encountered frequent problems with calls dropping during the middle of sessions.

FREQUENT ELECTRICAL CUTS

Electric service is provided by the public utility, Électricité d'Haïti (ED'H), in the Port-au-Prince (PAP) metropolitan area through a centralized grid, with approximately 200 MW of connected generation capability, a level of supply that falls far below demand. In areas located outside of the Port-au-Prince area, electricity service is even more scarce and provided by roughly 10 regional grids, ranging from two to 20 MW in size operated by EdH. The evaluation study confirmed the issue of frequent power cuts was among the top barriers for the IDP (18.92%) and NM&S trainees (29.20%). Only 37.03% of IDP trainees reported having a backup power source at home in the form of a generator, inverter, or solar power. Power backups that run on gasoline are a luxury for the majority of the IDP trainees because of the cost of operation, but even the presence of generators or inverters does not guarantee that the household will use it to fully compensate for a given episode of partial or complete electrical grid failure.

> "My greatest challenges were electricity and the internet I had on my phone. Sometimes the signal would dropped without any warning" - IDP Trainee
>
> "There is no electricity in the country. There are times that you are free to read the materials but there is no electricity. Or, if there is electricity, it is at an inconvenient time and you have to wake up and then do the work." - NM&S Trainee

TRANSPORTATION AND DIGITAL DEVICES

Seventy percent of all travel in Haiti is done on foot, a dynamic driven by several factors including a lack of affordable public transport options and a high degree of vehicle congestion in the Port au Prince metropolitan area. The provision of free tablets made IDP trainees less dependent on the ESIH computer labs because of the ability to practice on the tablets at home.[10]

Given the lack of affordable public transport alternatives, each trip to ESIH represents a financial investment for IDP trainees. Forty-seven percent of IDP trainees lived at least four kilometers away from ESIH labs, and the majority of IDP trainees reported being required to make changes in their saving and spending habits to meet the travel expense requirements to travel to ESIH. Little could be done to address these factors in the study, but the schedule of in-person activities for Training Rounds 2 and 3 were released with greater lead time to help trainees make advanced travel plans.

EFFECT OF POLITICAL UNREST

A series of day- to week-long blackouts in Haiti caused by fuel shortages and political unrest negatively affected trainees' access to the course in Training Round 3. The graduation rate of the IDP trainees also dropped considerably, from 86% in Training Rounds 1 and 93% in Training Round 2 to 76% in Training Round 3. Many trainees reported not appearing for exams because of the stress created due to civil unrest and lack of safety on the streets.

The inability of trainees to predict electricity and internet accessibility, as well as the high cost of electricity backup generation due to the fuel shortage made planning for studying and quiz submission difficult and added to the stress of the trainees. These stressors wasted time that could have been used by the trainees for other tasks or accessing course materials. Both IDP and NM&S trainees found it challenging to access the ESIH lab because of the stress of unsafe travel between their residences and the ESIH campus.

CONCLUSION

IDP and NM&S trainees faced a myriad of infrastructural barriers to participation in the training rounds, which inspired a range of adaptation tactics. In particular, the provision of the free tablet helped to some degree with limitations related to power and internet access, but trainees also reported its provision as an intrinsic motivating factor that encouraged them to participate in the program with more enthusiasm and dedication. A key tactic employed among trainees was identifying multiple sources of electricity and internet connectivity across their common workplace and university settings to account for inconsistent access and thereby facilitate device charging, studying, and downloading coursework content. Some trainees saved money to travel to ESIH and also to purchase a backup battery to reduce dependence on a continuous power supply. In addition, the IDP trainees reported that the early release of schedule at the time of orientation helped them save money and reduce travel costs while giving them enough time to ensure that the activities did not conflict with their university schedule.

4C

Socio-Cultural Barriers

Haitian women's lack of equitable access to education can be attributed largely to gender norms that dictate a division of household labor and limited access to household income. Socio-cultural factors act as barriers to overall female employability and access to job opportunities in addition to limiting their ability to participate in and successfully complete pilot program activities.

Ninety percent of the trainees in all of the courses reported that they had adequate family moral support and encouragement to pursue the course. However, time spent on competing activities (i.e., education, work, and household responsibilities) emerged as the top barrier to meaningful interaction with the course after infrastructural factors. Fourteen percent of the IDP trainees and 21% of the NM&S trainees reported time management as a top barrier. Specifically, managing conflicting priorities was expressed as a major challenge. Women in the NM&S course also shared greater burden of household work than the male trainees.
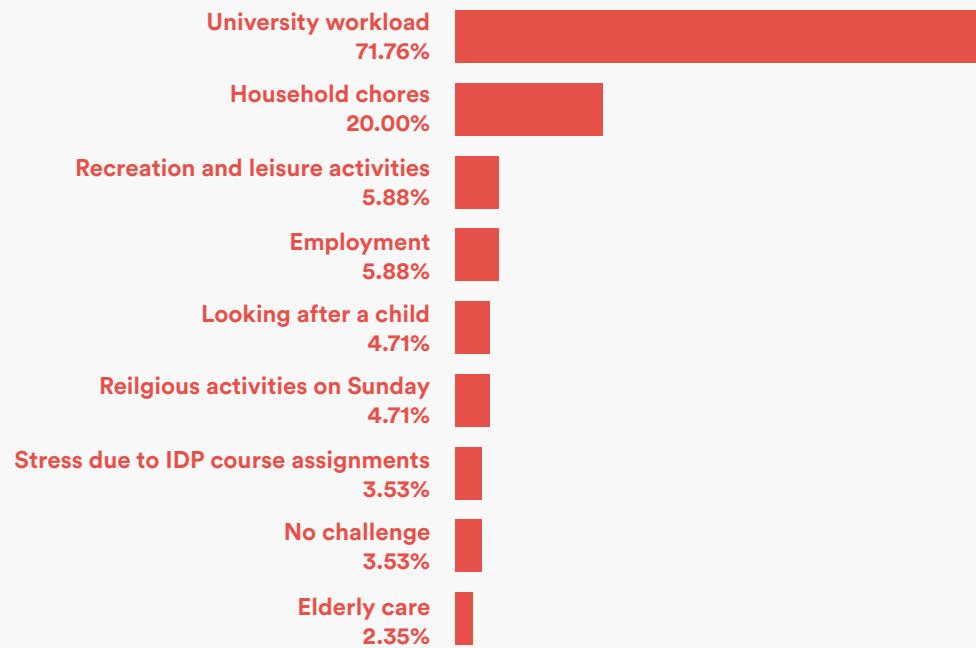
TIME SPENT

Time management was a large factor in the relationship between coursework and family- and work-related responsibilities. A majority of the IDP trainees came to the course with the perception that the online course would be difficult to manage because of the discipline and time management required to navigate a course designed to fit in between existing daily activities. However, the emphasis on planning a schedule and using productivity tools encouraged trainees to plan ahead and manage their time more efficiently throughout the course. The NM&S trainees were already working in professional environments and were aware of time management tools. Nonetheless, the majority of the trainees struggled to balance and prioritize different activities in life. The key conflict was often between competing educational and work-related activities. The majority IDP trainees were enrolled in university (61.65%) and the majority NM&S trainees were employed full-time or part-time (50.60%). Women in the NM&S course also spent 1.5 times more hours on household work than the male trainees.
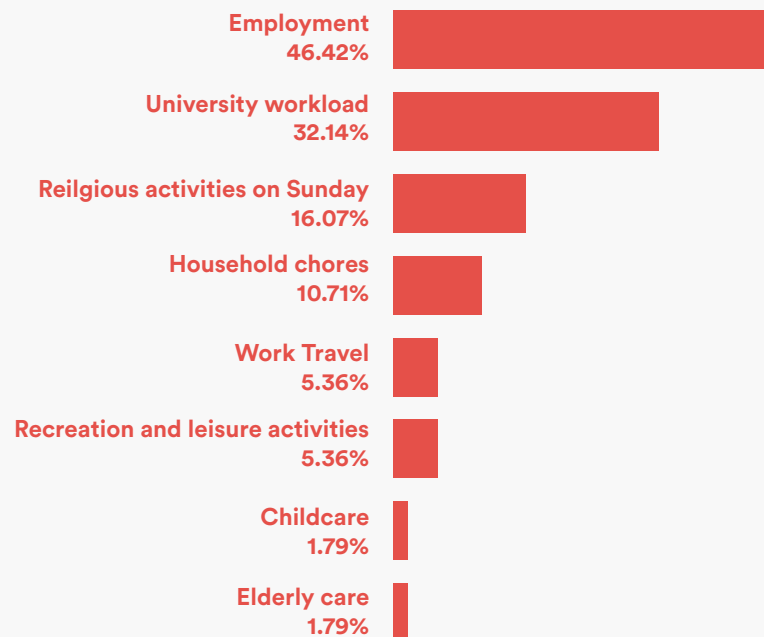
CONCLUSION

A time management session was held at the time of orientation for both IDP and NM&S trainees in Training Rounds 2 and 3. In addition, a time management module was added to the Google Classroom for Training Round 3 for IDP trainees. The sessions had a meaningful effect on IDP trainees, which was evident through some of the feedback received during the focus groups and interviews. For example, IDP trainees discussed that they had more acceptance of the need to delegate to others or limit household work and find times within their existing lives for the course.

NM&S trainees showed more receptiveness toward the time management session in Training Round 3 than in Training Round 2. NM&S trainees from training round 2 were particularly affected by the fact that they were specifically asked if they could dedicate time to the AGG course at the time of their interview. The interview question remained in the memories of the trainees, prompting them to allocate enough time to complete the AGG coursework.

Top three challenges faced while managing time to study for IDP course

University workload
71.76%

Household chores
20.00%

Recreation and leisure activities
5.88%

Employment
5.88%

Looking after a child
4.71%

Reilgious activities on Sunday
4.71%

Stress due to IDP course assignments
3.53%

No challenge
3.53%

Elderly care
2.35%

Top three challenges faced while managing time to study for NM&S course

Employment
46.42%

University workload
32.14%

Reilgious activities on Sunday
16.07%

Household chores
10.71%

Work Travel
5.36%

Recreation and leisure activities
5.36%

Childcare
1.79%

Elderly care
1.79%

Source:Mid-Term Course Assessment Survey, Training Round 3

4D

Pedagogical Barriers

A number of pedagogical factors were evaluated to explore their relationship with trainee performance: course content, peer learning, course technology and language, access to trainers, communication channels, and self-directed learning. In an effort to increase retention rates, online and in-person trainer support was coupled with course design and delivery that was tailored to the characteristics of an adult learner: allowing autonomy and the ability to be goal-oriented. The curriculum design and delivery also encouraged the culture of the 'self-evolving' student through the use of technology and regularized self-assessment sessions.[11] The evaluation study showed that the majority of the IDP and NM&S trainees found the course learning goals and objectives clear, course materials effective, the skills learned relevant, and were satisfied with their effort in all the modules. However, challenges appeared in relation to communication channels, the need for more practical demonstrations, and facilitation preferences.

LACK OF PRACTICAL SESSIONS

Trainee desires for the NM&S course to teach them applicable skills rather than ground them in theoretical knowledge remained in all the training rounds. While the trainees appreciated the availability of videos and practice sessions in Training Rounds 2 and 3, a sense of disappointment emerged through their responses regarding this disconnect between expectations and reality. Many trainees desired more simulations during practice sessions, specifically around the topic of deployment.

The trainees wanted to be more equipped with the necessary experience required to apply the skills learned to the professional world. Some trainees also expressed the need for breaking down the modules into smaller elements and adding more quizzes to facilitate better understanding of the content. In contrast, the IDP trainees did not mention any major challenges related to course content. The perceived effectiveness of the module and self-satisfaction of the effort put in by trainees in the modules decreased with increased difficulty.

COMMUNICATION WITH TRAINERS

The majority of the NM&S (83.44%) trainees preferred WhatsApp as the primary channel with which to communicate with the trainers. The IDP trainees preferred WhatsApp (39.62%) and in-person meetings at ESIH (31.45%) followed by Slack Channel (13.84%).
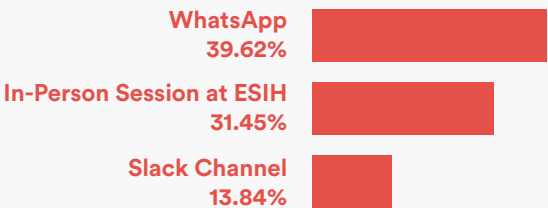
The decreased use of a Slack channel and increased usage of WhatsApp compared to Training Round 1 was reflected in the communication etiquette of the trainees. Some IDP trainees reported that a lack of purpose and structure prevented conversations on WhatsApp from being useful, with some trainees at time communicating with trainers in an unprofessional and informal tone that made other trainees uncomfortable. In Training Round 3, the use of Google Classroom to facilitate interaction among the trainers and trainees was found effective. In contrast, the NM&S trainees found the conversation on WhatsApp useful. The NM&S trainees helped each other by sharing information and posting words of encouragement.

Facilitation Preferences of IDP Trainees

**Online Facilitation
52.29%**

**In-Person Facilitation
47.71%**

Channel Preferences of IDP Trainees for Communication with Trainers*

**WhatsApp
39.62%**

**In-Person Session at ESIH
31.45%**

**Slack Channel
13.84%**

IDP Course Relevance Post-Graduation

**Foundations of Being Digital
2.13**

**Social Media & Web Applications
2.27**

**Productivity Tools for Digital workers
2.29**

**Data Fundamentals
2.52**

**Capstone Project
2.61**

Prior Digital Course Experience

**Digital Course in School
50.54%**

**Digital Course in University
27.17%**

**Certificate Program
22.28%**

Facilitation Preferences of NM&S Trainees

In-person practice Session at ESIH Lab
89.55%

Online practice session through zoom videoconference
10.45%

Source: End-Term Course Assessment Survey, Training Round 2-3

Channel Preferences of NM&S Trainees for communication with Trainers

WhatsApp
83.44%

In-Person Session at ESIH
8.61%

Source:Mid- and End-Term Course Assessment Survey, Training Round 1-3

NM&S Course Relevance Post-Graduation

I have applied the skills learned
59%

I have yet to the skills learned
41%
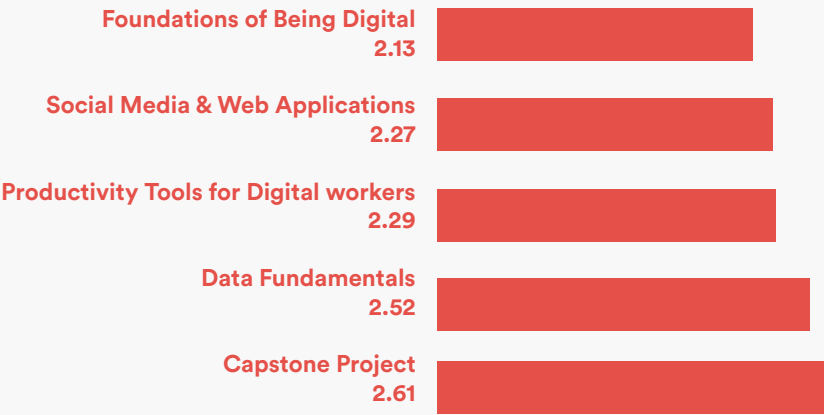
Source: Impact Assessment Survey, Training Round 1-3

Prior Digital Course Experience

Digital Course in School
17.93%

Digital Course in University
52.17%

Certificate Program
13.59%

Source:Mid-Term Course Assessment Survey, Training Round 1-3

> "Imagine spending 18 years sitting in schools learning, every day you are travelling back and forth. I really wanted to have this online experience." - IDP Trainee

> "I chose in person so that I would have better access to the tutor and familiarize myself with the other trainees in the class. I find these exchanges to be very important." - NM&S Trainee

FACILITATION PREFERENCES (IDP)

There was no significant correlation between the performance of the IDP trainees in (i.e., scores on quizzes and exams) and the choice of facilitation context (i.e., in-person or online). This was despite the increase in the number of IDP trainees who chose online facilitation, from one fourth of the class in Training Round 2 to half of the class in Training Round 3.

The low- to neutral-impact of facilitation choice on performance was consistent with the feedback received from the IDP trainees during focus groups. When asked which facilitation group they would prefer if given the chance to choose again, more trainees shifted from in-person to online than vice versa. Most IDP trainees preferred online facilitation (52%), partly because of the difficulty in traveling back and forth to ESIH and partly because they wanted to learn how to self-regulate their work. The IDP trainees who picked in-person facilitation did not know what the online facilitation would entail.

FACILITATION PREFERENCES (NM&S)

Most trainees in Training Round 1 reported a need for practice sessions to better understand the theoretical concepts being taught online. In Training Rounds 2 and 3, a provision was made for practical sessions accessed either through online video conferencing apps such as Zoom and/or Webinar or in-person sessions at ESIH Labs.

Most NS&M graduates preferred in-person sessions over online practice sessions despite scheduling conflicts due to employment and work travel. 90% of the trainees in Training Round 2 and 3 opted for in-person practice sessions at the ESIH Lab. The NS&M trainees gave high value to the peer learning that they gain access to while attending in-person practice sessions at ESIH. The exchange with peers improved their understanding of course materials and provided them networking opportunity with other professionals. Other reasons for preferring in-person practice sessions included access to tutors and the ability to exchange information in-person with them.

CONCLUSION

The trainees registered for the NM&S courses already have theoretical background in computer science and have the expectation that the NM&S course would be practical in nature. The addition of practice sessions and videos made the courses more effective and alleviated some of the concerns of the NM&S trainees, but additional simulation sessions were still requested.

The experiments with facilitation groups in Training Rounds 2 and 3 demonstrate that there is possibility of implementing IDP course completion online as long as the trainees get the chance to orient in-person at the orientation session and if communication channels such as Google Classroom allow them to communicate with trainers in a professional manner and administer their progress. There is value to introducing a strategic number of in-person sessions for both the courses to allow the trainees to build relationships, network, and learn through their peers.

4E

Employment Barriers

Based on the learnings of the demand research study, outreach done during Training Round 1, and trainee employment preferences, LACNIC decided to target online platforms as the pathway for helping IDP graduates secure jobs and contracts. To do so, LACNIC hired an employment coordinator to build the capacities of IDP trainees and implement a number of activities to further develop the employment component of the program. In addition to the focus on connecting graduates with online employment, LACNIC arranged for several companies to provide an introduction to the program and present any available employment or internship opportunities to IDP graduates. Despite positive outcomes associated with these efforts, the evaluation study captured a number of challenges related to the implementation of these strategies in relation to job acquisition among IDP graduates: (a) engagement challenges with online platforms; (b) limited return on upfront temporal investment; (c) cultural preferences for domestic market opportunities; (d) competing ambitions for university education; and (e) limited domestic market opportunities.

ENGAGEMENT CHALLENGES

Three major constraints prevented most IDP graduates from engaging successfully with the online platforms and submitting job applications:

Credibility: Lack of prior experience and certification limited participants' perceived credibility and self-confidence to apply to jobs, which put IDP graduates at a relative disadvantage in comparison to other bidders on the online platform. 83.33% of the IDP graduates reported this issue as a top challenge.

Financial Inclusion: Establishing payment pathways via PayPal, as required by the platform, was challenging for many due to a common inability to provide a linked credit card. This barrier indicates a need for alternative payment strategies as well as workshops on financial literacy. 54.39% of the IDP graduates reported this issue as a top challenge.

Language Skills: Lack of proficiency in English limited access to platforms and online jobs, which decreased the number of accessible opportunities in

an already competitive environment. 42.98% of the IDP graduates reported this issue as a top challenge.

LIMITED RETURN

All of the IDP graduates struggled with the reverse auction bidding system of the online platforms. The significant unanticipated unpaid upfront time required to position applicants to win bids lowered effective income rates and demotivated graduates from applying to more bids. Limited return on the time invested in bidding on online platforms led many graduates to decide to invest their time in applying for jobs in the domestic market.

CULTURAL PREFERENCES

Graduates described a cultural norm of distrusting strangers in Haiti. Fears of fraud and scams also prevented some graduates from engaging in online work that is paid post-delivery. Moreover, some graduates indicated a preference for jobs in the domestic market due to familiar culture and language and

> "When I was creating the profile I put a lot of effort into it. When taking the profile pictures I really dressed up, but on a blazer and everything. But it has been very discouraging. Like, you see there are some basic things that you could handle but that you do not speak English, you haven't been certified, or that you do not have a credit card.."

a belief that in-person application interviews provide more viable opportunities to make connections and convince potential employers.

COMPETING AMBITIONS

Career pathways chosen post-graduation demonstrate that the many graduates continued to pursue part-time (25.8%) and full-time (19.2%) university studies in addition to employment while 4.0% were already engaged in a full-time job. The IDP graduates who were engaged in higher education studies and full-time employment were also the group that participated the least in the capacity building sessions organized by LACNIC. In contrast, IDP graduates engaged in part-time employment (9.3%) or those who were unemployed (37.7%) had higher attendance in the capacity building sessions. These results indicate that the vast majority of IDP graduates leveraged the AGG program to improve their skills and digital proficiency and selected university education as the next milestone rather than join the digital workforce.

LIMITED DOMESTIC MARKET OPPORTUNITIES

In addition to the focus on connecting graduates with online employment, several companies were contacted to provide an introduction to the program and connect employment or internship opportunities for the IDP graduates. Companies engaged for this purpose focused on the marketing, telecom, and statistics sectors.

The outreach resulted in an informal opportunity with DIGICEL Haiti that offered three internship positions for 2019. Consequently, a resume-building session was held to provide support to IDP graduates who expressed desire to apply to the internship opportunities. No additional internship opportunities or contracts were secured in the domestic market, a dynamic that may be largely attributable to the broader conditions of economic instability caused by the political unrest. Many service providers who had expressed interest in hiring from the AGG program ultimately indicated that they had to back down due to a decrease in opportunities from North American markets.

CONCLUSION

Results of the demand research study indicate a desire among IDP graduates to engage with new employment pathways, but that significant barriers exist related to engaging with platform and within the broader employment climate. As such, limited employment successes associated with the intervention period cannot be attributed exclusively to technological, cultural, or political dynamics, but rather the confluence of all three.

However, evidence of the high degree of IDP graduate engagement in higher education could indicate that IDP graduates interpret their growing capacity to engage with these platforms as one element of a broader digital literacy that could provide supplemental benefits over time in a politically and economically insecure environment in Haiti, particularly if combined with increased higher education achievements and other employment avenues.

05

Program Performance

The program met its benchmark thresholds for key performance metrics—enrollment, attrition, graduation rate, and trainer to trainee ratio—for IDP and NM&S courses, respectively. All of the courses were delivered on time. ESIH's local leadership and expertise attracted the right profile of trainees and trainers. The digital profile of the trainees admitted to the internet and data practitioner course varied from basic awareness to relatively proficient in digital competencies. The outreach was done through partner NGOs who expanded the network of the ESIH to reach to candidates who can benefit from the course. The second screening was conducted through in-person interviews which provided ESIH an opportunity to further establish trust and credibility with the applicants and provided them a platform to raise any queries or doubts that might be a barrier to joining the program. This section expands on the key performance metrics and discusses how the graduates applied the skills learned in their personal and professional life.

ENROLLMENT AND SELECTION

Initial enrollment targets were 300 IDP trainees and 150 NM&S trainees. These targets were met, but additional trainees were subsequently enrolled in each program to account for attrition in Training Rounds 2 and 3, which resulted in a total enrollment of 316 IDP trainees and 166 NM&S trainees. ESIH took an active role in the early stages of trainee recruitment by screening online applications and subsequently organizing in-person interviews which were also attended by members of partner organizations (i.e., LACNIC and COI) and course trainers. The presence of a diverse selection committee that included perspectives of all parties involved in the development and delivery of the courses allowed for a more transparent and informed trainee selection process. The role of the courses in the context of AYITIC was explained, offering trainees a broader look at the AGG initiative. Involvement of the trainers promoted their leadership in addition to the development of a relationship with trainees.

TRAINEE TECHNICAL ORIENTATION AND TIME MANAGEMENT TRAINING

The trainee interviews and focus group revealed that both IDP and NM&S trainees greatly appreciated orientation day as it provided opportunities to understand the structure of the course and become more familiar with trainers and program partners. Moreover, the orientation day introduced trainees to time management principles and helped them become better prepared to address technical problems that might arise during the course.

During orientation, trainees were introduced to Tablet, Slack, Google Classroom, Google Drive, and common applications used for the course. A majority of the IDP trainees reported that the introduction of time management and productivity tools early on helped them overcome procrastination and plan ahead to save money to travel for in-person sessions.

"When we had the orientation, I listened when Mr. Attie and Mrs. Sam [Program Delivery Partners from ESIH] spoke to us and I heard the determination is their voice to help us. Here is an opportunity we are not even paying for and I saw that they were dedicated. This inspirred me to dedicate myself to the program."

TRAINER TRAINING

Given the positive reactions to the orientation session, ESIH expressed a desire to have more time before orientation dedicated to training the trainers. Some activities clashed with the orientation day activities resulting in need for more time during Training Round 2. For example, it took a lot of time to set up (test, verify, configure, and customize) and distribute the tablets to 102 IDP trainees, a process that negatively impacted time available for other activities such as orientation, specifically the training of the trainers.

Partners involved in the selection committee also noted that the time schedule for the selection process was tight in Training Round 1. Only one week was provided to screen the applications and conduct the selection interviews, whereas two to three weeks were provided in the Training Rounds 2 and 3 to complete the candidate selection process.

TRAINER-TRAINEE RATIOS

The program met its benchmark for engaging and training qualified trainers at a ratio of 1:25 for the trainees of all courses: Internet and Data Practitioner, Network Management, and Security. For the IDP course, three trainers were selected in Training Round 1, achieving a trainer-to-trainee ratio of 1:17. The targeted ratio decreased when only one additional trainer was engaged for double the number of trainees, achieving a trainer-to-trainee ratio of 1:26. The slightly higher trainer-to-trainee ratio made a negative impact with most trainees expressing the need for more trainers. The training of trainers could also not be conducted in a satisfactory manner because priority had to be given to configuration (testing, verifying, configuring and customizing) and distribution of the tablets to 102 IDP trainees at the time of the orientation

Two additional trainers were selected and trained for Training Round 3, equaling a total of six trainers to 164 trainees to achieve a ratio of 1:27. More structured

training workshops were conducted for the trainers, including the introduction of new tools and techniques to enable more systematic facilitation of the online cohorts. Trainees did not express a need for more trainers. The two NM&S trainers selected in Training Round 1 continued to be the facilitators for Training Rounds 2 and 3, achieving a trainer-to-trainee ratio of 1:26 in Training Round 2 and 1:32 in Training Round 3. Each trainer was instructed to provide 12 hours of online facilitation to be distributed amongst online facilitation trainees who attended the practical sessions by Zoom and in person facilitation session trainees who attended the practical sessions at ESIH Labs. In addition, four hours of in-person facilitation per week were provided to trainees who attended the practical sessions at ESIH Labs.

Program Performance Highlights for the IDP Course

925 APPLICANTS APPLIED FOR THE PROGRAM

316 IDP TRAINEES SELECTED FOR THE PROGRAM

9 IDP TRAINEES DROPPED FROM THE PROGRAM

257 IDP TRAINEES GRADUATED FROM THE PROGRAM

Source: End-Term Partner Reports, Training Round 1-3

ATTRITION AND GRADUATION

The program targeted an initial attrition rate between 25% and 50% and a graduation rate between 60% and 75%, based on a study of similar programs. The attrition rate was assumed to be in the higher range for trainees who would only receive online facilitation. Of the total 316 IDP trainees that registered for the program, nine trainees dropped out of the program and 257 trainees graduated, resulting in an average attrition rate of 2.85% and graduation rate of 83.71%.

The attrition rate was also low for NM&S trainees, as only 11 trainees dropped out, resulting in an average attrition rate of 6.63%. However, the graduation rate for NM&S trainees was comparatively low; only 81 NM&S trainees graduated from the program, resulting in an average graduation rate of 52.26%. The low graduation rate was mostly attributed to the inability of the many trainees to appear on the final day of the exam due to pre-existing conflicts.

APPLICATION OF SKILLS

The majority of the IDP graduates valued learning about productivity tools, data management tools, and net etiquette. Moreover, they developed skills related to social networking, the internet generally, time management, and security. These skills are broadly applicable in the personal and professional lives of graduates and stand to help make work and life more effective and secure for most of the IDP graduates.

Data Management and Processing: Many IDP trainees and graduates gained the ability to clean data and create their own databases. They felt more comfortable with data entry and processing, applying skills for both personal budgets and business work.

Social Media: IDP trainees and graduates were able to utilize knowledge of social networks, search engine optimization, and online advertising on Facebook and Instagram to promote their businesses

and ongoing communication with their audiences. Some IDP graduates desired taking advanced courses in digital marketing to build upon the knowledge gained from the IDP course. The graduates also valued learning about LinkedIn which helped them in job search.

Netiquette: Learning the social code of conduct related to online communication was considered valuable by most of the graduates. The graduates mentioned that the difference in their conduct online was also noticed and mentioned by family and friends.

Security: IDP trainees and graduates felt more comfortable using the internet after learning that they have control over their privacy and that their passwords were secure. They also valued knowing the difference between secured and unsecured sites.

Internet surfing: Trainees valued knowledge of internet surfing to be able to explore more learning materials and

Program Performance Highlights for the NM&S Course

804 APPLICANTS
APPLIED FOR
THE PROGRAM

166 NM&S TRAINEES
SELECTED FOR
THE PROGRAM

11 NM&S TRAINEES
DROPPED FROM
THE PROGRAM

81 NM&S TRAINEES
GRADUATED FROM
THE PROGRAM

Source: End-Term Partner Reports, Training Round 1-3

---

work opportunities. Many mentioned that it widened their horizon and increased their knowledge.

Productivity Tools: The use of tools such as Google Tasks and Google Calendar helped them avoid procrastination and manage their workload. The use of Google Docs, Google Sheets, and Google Slides helped them visualize data and content better. The graduates felt better equipped to work remotely in a collaborative manner and manage their tasks.

Time Management: IDP graduates perceived time management as an important skill they gained from the program that enabled them to bring discipline and planning into their lives.

Most of the NM&S graduates felt that they had increased their knowledge in the field of Network Management and Security. While it translated in better salary and promotion only for few graduates, the most impact was in the graduates sharing their skills with peers at their workplace (21%).

PROGRAM SCALING

The inability of the program to meet target employment goals halted LACNIC's additional outreach efforts to funders and partners for scaling the program. Instead, LACNIC shifted its entire focus to make the employment activities successful and continuing prior discussions and leads with funders. COI and Slashroots Foundation sought and obtained a USD $500,000 grant from Google—partners of the AGG program—to train 1,500 young people (40% women) in seven to nine countries in Central America and the Caribbean region.

COI and Slashroots are developing the program and using the learnings from the evaluation activities to meet some barriers and gaps early on, specifically the employment program. In addition, LACNIC also launched a Spanish language version of the NS&M courses at their campus this year. Lessons learned from Training Rounds 1 and 2 were applied to this iteration of the course.

CONCLUSION

The program made adjustments to increase the graduation rate of NM&S trainees in Training Round 3 by providing multiple dates to take exam, ensuring that one of the dates fall on a weekend. This helped maintain the graduation rate above 50% despite the stress created due to the political unrest. The IDP graduation rate was also affected by the political unrest, falling from 86% in Training Round 1 and 93% in Training Round 2 to 77% in Training Round 3. But ESIH showed flexibility, rescheduling exams so they do not conflict with the exam schedule of universities in Port-au-Prince and provided multiple dates to take the exam. The positive impacts ranged from producing better digital citizens to supporting new businesses created by the graduates. The findings and ability to raise funds and implement iterations in other parts of the Latin and Caribbean region demonstrate the program's capability to scale and contribute to the effort of increasing the capability of youth to join digital economy in other regions.

06

Gender Perceptions Transformation

The findings of Training Rounds 1 and 2 indicated that the deep-seated gender perceptions and restrictive gender norms in Haiti contribute to Haitian women's inequitable access to education and employment opportunities in the digital field. The evaluation study therefore took a gender transformative approach in Training Round 3, examining gender roles, norms, and interpersonal relations of the trainees.

The gender transformation approach moved beyond the study of the application of skills in the personal and professional lives of the trainees to an assessment of changes in women's self-esteem, aspirations, and efficacy and the change in perceptions of friends and family. The goal was to understand how gender perceptions transformation can increase access to learning and employment opportunities and redress the gender norms that serve to reinforce gendered inequalities.

RESTRICTIVE GENDER NORMS

The survey and interview responses of the IDP trainees revealed deep-seated perceptions of the relative roles and values of the men and women. Three main themes emerged:

Son Bias: The analysis revealed that IDP trainees frequently experienced a general perception among their parents that investment in education for male children would more likely bring better financial returns to the family.

As such, men were often encouraged to study for longer periods and were provided with resources such as digital devices to support their learning. In contrast, there were lower aspirations as related to women's futures among their parents.

The women were more often encouraged to enroll in short-term vocational trainings that could quickly return gains to the family before the women marry and effectively join another household.

Gender Ideologies: Engaging with a digital device in a public space was considered a generally unacceptable behavior for women, as a woman seen doing so in public is commonly believed to be conversing, or flirting, with men.

These situations often inspire teasing and even verbal harassment of women by men. As a result of these prejudices, the IDP trainee's effective access to public hot spots and regular visits to internet cafes for work were significantly reduced.

Women also faced limit on mobility in the evenings. Parents considered it unsafe for women to travel to internet cafes and public space in the evening, further limiting the number of hours trainees spent on pursuing educational and employment opportunities.

Eighty-one percent of the IDP trainees in Training Round 3 reported that they had more household responsibilities than the men in their respective households. The NM&S trainees also reported doing the majority of the

> "Even as a child you are repeatedly told girls are responsible for cleaning dishes, girls are responsible for sweeping and mopping. This stays in your memory and reinforces itself mentally. This means that even if you are in a house with a little girl and a little boy you are more likely to assign these tasks to the girl. You always think the boys are more suited for studying or doing very specific things but all the household responsibilities fall on the girl."

domestic work which was especially difficult if the woman was also working a full-time job and pursuing education. The higher burden of chores made them less free to fulfill their potential.

Limited awareness of opportunities: Women frequently communicated that, compared to men, they lacked awareness about opportunities in digital domains and a clear understanding of the distinct categories of engagement. frequently communicated that, compared to men, they lacked awareness about opportunities in digital domains and a clear understanding of the distinct categories of engagement.

CHANGE IN PERCEPTIONS

The analysis suggests that the graduates experienced gradual changes in their sense of confidence, identity, and self-efficacy as well as their relationship with family and friends. Changes included:

Increased Confidence Engaging with Digital Media: Graduates expressed an increase confidence in their ability to navigate the online world to access resources for professional growth such as access to tutorials on digital skills and job opportunities on online platforms.

Higher Sense of Self–Efficacy: The trainees reported an increase in the frequency at which friends and family asked them for technical support, a sign that helped them feel validated in their increased education. They also felt that there was a greater acceptance of their work roles and reduced expectations for the graduates to do household work at home.

Strengthened Social Connections: Trainees reported taking more leadership roles including mentoring and sharing knowledge with younger siblings, friends, and youth in similar programs. The program also helped the trainees build meaningful connections with their diverse cohort of peers by providing them with a supportive learning environment.

Many IDP graduates remained connected with each other through WhatsApp groups and shared information on job and learning opportunities with each other.

Increased Critical Perspective on Gender Norms: The Gender Workshop conducted by LACNIC following the completion of the course instilled awareness of gender rights and focused on unpacking prevailing gender norms. Graduates explained that they gained knowledge of their value in the workplace and greater sense of agency to challenge accepted norms and practices.

> " The KASIK introduction to gender training workshop allowed me to know my true value as a woman in society. After this training, I learned not to limit myself, not to let myself be abused or suffer any kind of violence by anyone. I know now as a woman that I must enjoy the same rights as man and I have my role to play in our society, I have my place. So, I must continue to support the movement for equity between gender to banish this kind of issue. "

Increased access to digital devices:
The change in perception among trainees' family members led to greater support of their learning and employment opportunities. Parents perceived their daughters to have more promising futures and in return were more willing to invest in their education. Sixty percent of IDP trainees acquired a digital device such as a laptop, router, or modem during the course of training.

CONCLUSION

These findings indicate that the digital training and the gender workshop enabled IDP graduates to challenge gender inequalities and exercise transformative agency. The trainees experienced a gradual change in knowledge, self-perceptions, behavior, gender roles, and relationships with friends and family members over the course of the program.

The trainees stayed connected with their peers through WhatsApp groups formed at the time of the program and gained an educational community where they could share new sources of knowledge and opportunities. These changes were positive and led to increased use of skills and knowledge gained from the program and greater participation in educational and employment activities.

7A

Lessons Learned

Several factors contributed to the successful enrollment and participation of trainees in the AGG program. Both IDP and NM&S trainees expected to gain the necessary skills to prepare for the workplace market, increase their digital proficiency, and discover new learning and work opportunities. The program aimed to reduce barriers to participation in the digital economy. For the most part, the program successfully met the expectations of the trainees and the performance benchmarks set in the impact evaluation framework.

This section discusses the lessons learned from the program and provides detailed programmatic recommendations built upon the main findings to support and accentuate the successful elements of the program while suggesting refinements and additions to the elements that desired improvement. The recommendations are divided into five subsections: (a) enrollment, (b) orientation, (c) course design and delivery, (d) socio-economic and infrastructural factors, and (e) employability factors.

1. ENROLLMENT

ESIH successfully conducted outreach and enrollment within a short period of time for all the training rounds by establishing a Memorandum of Understanding (MOU) with strategic partners with whom they had existing relationships (i.e., non-governmental organizations [NGOs] and community-based organizations [CBOs]). These partnerships enabled ESIH to leverage the partners' existing networks and reach to target more diverse and difficult to reach target applicants. The partnerships also helped facilitate internet connection for the submission of the applications by providing applicants the option of submitting from partner offices, which were located in different parts of Port-au-Prince.

A call for volunteer interviewers helped ESIH conduct in-person interviews with a large applicant base and gave opportunities for applicants to connect with each other, even if not selected for the program. ESIH should continue its existing efforts to develop these strategic partnerships for future iterations of the AGG program as well as the potential expansion of the program with the Google

Fund secured by COI and Slashroots. The admission window had to be prolonged from two weeks to one month because of political unrest and street riots. The resulting delay in selections could have led to a large number of online applicants dropping their applications, but ESIH's consistent communication and follow-ups with candidates ensured the appearance of most of the selected applicants for interview. The research validated the trainee personas and the pathways that the trainees determine post-graduation from the program.

Trainees who were part-time students, unemployed, or home-based had higher levels of engagement with the employment component of the AGG program, but the majority of the AGG students were university students. The program's objective is to reduce barriers of participating in the digital workforce, and the trainee personas should be a consideration while selecting applicants to meet that objective.

The admission window had to be prolonged from two weeks to one month because of political unrest and street riots. The resulting delay in selections could have led to a

large number of online applicants dropping their applications, but ESIH's consistent communication and follow-ups with candidates ensured the appearance of most of the selected applicants for interview. The research validated the trainee personas and the pathways that the trainees determine post-graduation from the program.

Trainees who were part-time students, unemployed, or home-based had higher levels of engagement with the employment component of the AGG program, but the majority of the AGG trainees were university students. The program's objective is to reduce barriers of participating in the digital workforce, and the trainee personas should be a consideration while selecting applicants to meet that objective.

Recommendations

Leverage existing CBO relationships
- Continue leveraging existing relations with NGOs and CBOs to garner support for enrollment activities and better achieve the target profile set for the program, specifically more participation from IDP candidates

who only had tertiary education and increased female participation for the NM&S course.

Continue setting clear expectations for the NM&S course
- It should be clear to candidates during the interview process that the NM&S courses are mostly theoretical and do not offer internship opportunities following program completion.
- For NM&S candidates who do not have to travel frequently outside Port-au-Prince should be prioritized.
- The availability of applicants should be interrogated and expected hours of commitment required for the course clearly communicated during the selection process.

Prioritize language and Internet access
- Continue considering the trainee personas while selecting candidates. The base profile of the IDP candidates should prioritize English language skills, more than in the past two training rounds.

2. ORIENTATION

The positive impact of the orientation session was validated in all the three training rounds. This session provided trainees with an opportunity to get to know the program partners and trainers in-person. The time management activity added to the benefit of the orientation day and helped set positive momentum for the rest of the course.

The trainees planned their study time in advance and saved money for transportation to in-person sessions. They also received an opportunity to experience a walkthrough of the online platform and an introduction to the communication channels and applications, which facilitated their interaction with course materials and the trainers.

Some orientation activities clashed with the time allocated to train the trainers in Training Round 2, but the schedule was adjusted to ensure proper training of trainers during Training Round 3.

> "During the interviews they screened people who said that their other obligations would prohibit them from completing the work. This makes sense because you would be too tired and lack the mental capacity to do the work. – NM&S trainee"
>
> "I remember that from the first integration session. A trainer said that we have to start keeping and managing a schedule. - IDP trainee"

Recommendations

Continue time management activity for IDP and NM&S trainees

- The time management session on orientation day appears potentially integral to subsequent trainee engagement with the program, so it should be continued.

Separate time management activity for male and female NM&S trainees

- For both male and female NM&S trainees, the time management activity should focus on how to handle competing responsibilities that emerge while completing the program: the balance of work, university course load, and family. However, time NM&S management activities should include a separate gender-sensitive training for women that takes into account the particular work-life balance pressures they often face.

Provide adequate time for training of trainers

- Dedicate time prior to the orientation day for training the trainers and configuration of the tablets that would be distributed to the IDP trainees on orientation day to prevent a clash of different activities and to ensure that the trainers are adequately trained and set for the course.

Continue other orientation day activities

- Continue providing instructions on the management of online courses and resources, applications used in the AGG program, and a walk-through of the digital platform so that trainees face fewer technical issues at the start of the course and can jump start their interaction with course materials.

3. COURSE DESIGN AND DELIVERY

The IDP and NM&S trainees appreciated the course content for providing new knowledge and novel content. NM&S trainees also appreciated the addition of the video tutorials and provision of practice sessions. They appreciated that the modules and quizzes were always available on time and trainers were dedicated and ready to help. NM&S trainees provided feedback about lack of applicable content and the need to break down the modules further and provide more quizzes.

The type of facilitation, either online or in-person, had different impacts on IDP and NM&S trainees. While the IDP trainees with online facilitation performed on-par with the trainees with in-person facilitation and a majority preferred online facilitation if given the choice, the NM&S trainees that accessed the practice sessions online did not perform well and the majority of them preferred in-person sessions if given the choice, a dynamic driven largely by a lack of reliable internet and power supply.

> "I would have liked to learn more about the protocols, especially the new advancements. Take for instance cloud computing, we passed so quickly through those materials. I would have liked some real-life experience like deployments and attacks. – NM&S trainee"

Recommendations

Strategize facilitation preferences

- Training Round 3 showed that the IDP trainees can perform well with both online-only and online and in-person facilitation despite the 50:50 split and large number of trainees. This shows that the program can be scaled with only online facilitation, provided trainees have in-person orientation sessions and at least one practice session.

- Google Classroom emerged as a good communication channel to facilitate and moderate conversations between trainers and trainees, administer quizzes, integrate productivity tools, and distribute grades. The use of the Google Classroom should be retained for future iterations of the program.

- Multiple exam dates, including a weekend date to allow for trainees that work full time jobs, was helpful in training round 3 and should be retained.

Close gaps in course content and quizzes

- Scenario-based exercises should be developed to stimulate the environment of remote jobs for IDP trainees. Bidding on platform, negotiating with clients, and professional conduct while communicating with clients should be part of the training. Trainers should also encourage trainees to access the course in multiple languages offered by the ADAPT platform and include additional resources in dual languages to encourage familiarity with English.

- The NM&S course modules should be broken up further with more quizzes in the middle of the modules to ground concepts at the moment of learning rather than test all of the concepts at the end of each module. The NM&S courses should look at the possibility of adding practice sessions to the course that provide simulation exercises on deployment and attack under cybersecurity and network management.

4. SOCIO-ECONOMIC AND INFRASTRUCTURE

A strong relation continued to be seen between trainee socio-cultural and economic backgrounds and the barriers they faced, especially with regard to infrastructure. Trainees with low-income backgrounds had less access to power backup systems, high-speed internet, and private vehicle ownership. The market does not offer affordable options for power, internet, and transportation that could work efficiently for the trainees.

These barriers present a significant challenge for greater impact and scaling of the program. In Training Round 3, the political insecurity exacerbated all pre-existing infrastructural barriers. The program should determine strategies to address the unstable environment of Haiti for future iterations of the program.

> "My expectations were not that they would have work lined up for us. When I thought of online jobs I thought that there were positions that a person (the coordinator) was aware of and would help us apply for. Should we meet the criteria we (the individual woman) would be selected and ultimately hired - IDP graduate"

Recommendations

Facilitate infrastructural access

- Trainees need to practice course materials more and save time lost due to lack of internet connectivity and power.

- ESIH to maintain same hours as before to use computer lab. IDP trainees receiving only online facilitation should also be allowed to come to use the computer lab and/or the internet connection (availability to be shared with all trainees).

- ESIH to secure agreements with institutional partners with the availability to provide further support to trainees including access to facilities for power, connectivity and access to computer labs to practice using desktops, and other forms of coaching support.

- A dedicated lab space with reliable power back up and internet access should be provided to overcome infrastructural barriers and encourage peer interactions.

Reduce transportation costs

- Transportation costs remained a challenge for IDP trainees.

- COI and ESIH should maintain the circulation of activities scheduled at the orientation to enable trainees to plan ahead and save money for transportation to ESIH.

- Partnerships with community-based organizations or local NGOs could be considered for providing facilities for weekly practice through Port-Au-Prince areas.

Provide flexible quiz and exam dates

- Flexibility provided by ESIH in administering quizzes and exams prevented high percentage of dropouts from the program and should be maintained if the program is ever scaled in similar context.

5. EMPLOYABILITY FACTORS

IDP graduates reported that the online platform was an effective means to find learning and employment opportunities and were satisfied with the role of the employment coordinator. However, several challenges emerged related to access and use of online talent platform, including:

- lack of understanding of the payment system;
- lack of referrals to establish credibility and improving visibility on the platforms;
- lack of access to infrastructure (i.e., internet, power, and device);
- language barriers because of a low number of platforms offering French interface;
- low digital proficiency while operating a desktop; and
- low pay-scale and competitive environment created due to bidding system on the platform among others.

" I can say that in the beginning I did not have a grand perception of what it meant to work online and the online job market. I know what it meant to evolve online as I am familiar with Amazon and Alibaba. But I now know that it is very different when I compare my experience with what is offered. But, I still find that it is a good opportunity. - IDP trainee "

Recommendations

Provide an information session on the payment system

- A workshop should be provided to mitigate negative perceptions related to payment systems.

- Alternative solutions should be developed and communicated to graduates to increase engagement level in employment activities and resolve financial barriers.

Present bidding strategies

- A workshop should be provided by a coach who has experience of successfully bidding online. Strategies to build a user profile and successfully bid on, and negotiate, gigs should be shared with graduates.

Continue the mentorship program

- Continue mentorship activities to increase access to more employment opportunities in the domestic market and gain support and confidence.

Provide graduation /completion certifications and referrals

- Graduates should be provided with certificates from the program immediately post-graduation.

- Workshop on how to gain referrals and testimonials online should be provided so they can build upon the work they do on online platforms.

Engage pre-graduation in service agreement outreach

- The outreach work should begin prior to graduation of trainees to secure service agreements with companies and absorb a large number of graduates.

Conduct parallel outreach to domestic markets

- Domestic markets should also be targeted for internship and employment. For future iterations of the program in a more politically stable environment, this component is extremely important.

Build an alumni community

- The program can invest in building an alumni community to encourage a sense of community and increase the chances of referrals, job opportunities, mentorship, and peer support.

7B   Conclusion

Automation and digitization of industries are changing the fundamental nature of work, resulting in a growing polarization of the global labor market. Available opportunities are increasingly split between high- and low-skill jobs, leaving those not aligned with available opportunities at risk of unemployment, underemployment, and exacerbated income inequality.[12]

Almost 75 million youth are officially unemployed, and women represent the largest pool of untapped labor (McKinsey&Company, 2017). These disparities are more widespread in fragile states, such as Haiti, that are experiencing political unrest and are still in the process of developing policies for the digital industry. The AGG program was intended to remove the barriers faced by Haitian women to joining the digital workforce.

A key assumption of the program was that online platforms could provide a surplus of jobs and that disparities and digital divides could be reduced by addressing infrastructural challenges and up-gradation of skills and education among young people. The AGG program delivered trainings to help female youth become employable. Several programmatic and pedagogical strategies kept the training completion rate high. However, efforts to secure employment prospects in the domestic market and on the online platform achieved only limited success.

Haiti's resource-strapped and unstable political environment led to a collapse in talks initiated with the domestic service providers. These service providers could have managed services agreements with companies that have the capacity to offer a large volume of micro engagements to serve as initial employment opportunities to trainees and graduates.

NM&S trainees also encountered some limitations with regard to gaining employable skills. The trainees' aspiration to engage in simulated practice sessions and visitations was not met. The graduates felt they did not have the necessary experience required to apply the skills they learned in their jobs.

The graduates faced uncertainty and stress due to political unrest and saturated domestic market. The complex environment of a fragile economy means that focus on one solution to strengthen the connection between education and employment would not work. It is more about intertwined processes and interconnected factors. To secure their livelihood, the trainees did not engage in one professional activity but a range of learning and employment activities. Ignoring this reality would be self-defeating for a program. Engaging in mixed livelihoods is not just a coping mechanism for the trainees but a proactive employment strategy.

It is important that the trainees are able to engage in a range of flexible and evolving set of employment services. An effective strategy for IDP trainees could be to support market immersion and upward mobility through mentorship activities, one-on-one guidance, and securing contracts both in international and domestic markets to overcome the high barrier created by the work-trade environment and reverse auction bidding system.

The post digital training program could have two-parts. The first part would be focused on providing career counseling, similar to one-on-one engagements that occurred in the AGG program between the employment coordinator and the IDP graduates. The counseling can start at the middle of the digital trainings and can identify the different career pathways that the trainees can take after graduation. Based on the choice of career pathway, the trainees could be paired with mentors for support and guidance.

The second part of the post digital training program could focus on

securing contracts for those who choose to work independently, ensuring the income levels are maintained through a stipend while they gradually gain experience and train themselves in the remote work environment.

The NM&S course can be adjusted to integrate apprenticeships, visitations to companies, and monthly coding events that can provide multiple pathways to bid referrals and strengthen the community of advanced ICT professionals. The trainees could also be proactively engaged in continuing learning, creating multiple opportunities for knowledge sharing (such as the events and opportunities posed in the current WhatsApp groups).

This complexity can create challenges for reporting program impact to donors because of the complex narrative of different changes and often difficult to quantify. Such programs could also be difficult on the operational side. A simple metric that measures frequency of learning opportunity, income, and/or trainee's satisfaction

in the opportunity could be a framework to begin with. A program that allows space and flexibility to measure the mixed income approach can also strengthened clarity in navigating programs with mixed income approach.

Endnotes

1 Schwab, Klaus. The Global Competitiveness Report 2016-2017: Insight Report. Geneva: World Economic Forum, 2016.

2 ICT Statistics. (n.d.). Retrieved December 18, 2019, from https://www.itu.int/ITU-D/ict/statistics/ict/index.html

3 Shaw, S. M., Barbour, N. S., Ph.D, P. D., Freehling-Burton, K., & Nichols, J. (2018). Women's Lives around the World: A Global Encyclopedia [4 volumes]. ABC-CLIO.

4 Gender Inequality Index (GII) | Human Development Reports. (n.d.). Retrieved December 16, 2019, from http://hdr.undp.org/en/faq-page/gender-inequality-index-gii#t294n2918

5 Gender Inequality Index (GII) | Human Development Reports. (n.d.). Retrieved December 16, 2019, from http://hdr.undp.org/en/faq-page/gender-inequality-index-gii#t294n2918

6 The Fund For Peace (FFP). (2019). Fragile states index: Annual report 2019. The Fund for Peace (FFP). Retrieved from www.fragilestatesindex.org. The FSI assesses the fragility of a country using 12 social, economic, cohesion and political indicators. Each country is given a score out of ten for each indicator. Overall scores are then tallied to obtain a global view of fragility across pre-conflict, conflict, and post-conflict countries. These are then added to calculate a country's overall fragility. In other words, the index measures each state's instability and how vulnerable it is to collapse.

7 Haiti has experienced growing instability during the administration of President Jovenel Moïse. Moïse's decision in mid-2018 to end oil subsidies, which would increase prices dramatically, sparked massive protests. Government instability has increased since May 2019, when a report alleged Moïse had embezzled millions of dollars. Mass demonstrations have continued, calling for an end to corruption, provision of government services, and Moïse's resignation.

8 Central America :: Haiti — The World Factbook - Central Intelligence Agency. (n.d.). Retrieved December 18, 2019, from https://www.cia.gov/library/publications/the-world-factbook/geos/ha.html

9 World Bank Group. (2015, May). Haiti: Towards a new narrrative. Retrieved from http://documents.worldbank.org/curated/en/319651467986293030/pdf/97341-SCD-P150705-IDA-SecM2015-0130-IFC-SecM2015-0071-MIGA-SecM2015-0046-Box391466B-OUO-9.pdf

10 Coalition of Caribbean Urbanists. (2010). Report for Discussion : Workshop on the Reconstruction of Port au Prince, Haiti. p. 17. Retrieved January 9, 2011 from http://haiti- patrimoine.org/?p=345

11 Julio Arauz (2013). Self-Organizing Evolving Education. Procedia Computer Science, Volume 20, Pages 535-540

12 McKinsey&Company. (2017, February). Technology, jobs, and the future of work. Retrieved from https://www.mckinsey.com/~/media/mckinsey/featured%20insights/employment%20and%20growth/technology%20jobs%20and%20the%20future%20of%20work/technology-jobs-and-the-future-of-work.ashx

For more information visit

3x3.co