TRENDS IN ICTs
for **YOUTH WORKFORCE** DEVELOPMENT

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ABSTRACT

Few analyses are available regarding the benefits and challenges of using ICTs in youth workforce development (ICT4WD) projects. This report contributes to an understanding of current trends in ICT4WD programs, through a literature review and an analysis of 17 workforce development training programs that have incorporated ICTs in implementation. Anticipated benefits of ICT use include extending training to more individuals at lower cost, providing a means to more broadly disseminate replicable and customizable content, providing opportunities for better learning outcomes, and enabling connections among youth and employers. Case study analysis confirmed several of the anticipated benefits, however, several challenges were also identified. The report provides information to enable implementers to better understand the balance of the contributions and challenges that ICTs bring workforce development interventions.

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INTRODUCTION

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Recent reports cite information and communication technologies (ICTs)[1] as promising avenues to tackle the problem of youth unemployment. Training youth to use ICTs and using ICTs for training are seen as ways for youth to acquire skills and jobs, to reach more youth with training, and to provide new ways for youth and potential employers to connect with each other (12, 51).

Despite many uses of ICTs in workforce development (ICT4WD) projects, there is little overarching analysis regarding the use of ICTs in different types of workforce interventions.[2] While it is challenging to assess the specific impact or role of ICTs in development interventions,[3] this report seeks to fill this gap, by examining trends in ICT4WD programs.[4] Through a review of recent reports and an in-depth examination of projects, the paper identifies anticipated benefits as well as the challenges associated with ICT4WD. Based on these sources, the report also identifies types of partnership and sustainability challenges found in ICT4WD programs.

The report begins with a brief presentation of the study methodology, including the criteria for case selection. This section is followed by an introductory discussion of three issues faced by youth workforce development programs: large numbers of youth entering the labor force; the problem of low literacy, numeracy, technology and work skills among youth; and missing connections among different stakeholders in the workforce system.

The report then reviews a number of trends in ICT4WD, relying on reports and studies published within the last five years. Key topics include the role of ICTs in technical and vocational education and training (TVET), a focus on preparing youth for the digital economy, the promise of massive open online courses (MOOCs) to provide training, and noted sources of information that provide key resources for program design. The review of current trends is provided to contextualize the discussion of results from case study analysis. In addition, the report offers a typology of the ways in which ICT supports youth employment interventions.

The final sections present the results from the case study analysis. Although ICTs are seen as strengthening ICT4WD programs to reach more youth with training, to provide training content at lower cost, to improve training outcomes and to address missing connections issues, the presentation identifies a number of challenges that projects encounter. The report concludes with a review of different approaches to partnership and sustainability in using ICTs in workforce development programs.

1 *ICTs for the purposes of this report include computers, mobile phones, video and radio technologies.*

2 *One recent exception is the landscape review of the use of mobiles in workforce development programs by Linda Raftree (40).*

3 *As noted by Heeks and Molla (24) in a comprehensive survey, there are very few impact evaluations that focus on the role of ICTs in development programs. The authors argue that much more needs to be done, given the money spent using ICTs in development programs.*

4 *Workforce development programs are designed to support and improve elements of the workforce ecosystem. This entails skills training, support for mechanisms to understand and meet the evolving needs of employers for trained and ready workers. Activities sponsored by governments and donors (Active Labor Market Programs) can be complemented by efforts from the private sector.*

METHODOLOGY

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Two standard qualitative methods provide complementary research results. The first method is a comparative case study approach. Focal cases are workforce development training programs that use ICTs, provide ICT training or use ICTs to support connections between businesses and job seekers. Restricting the focus to these uses of ICTs contributes to comparability of cases.

The sample was constructed to represent a range of ICTs, including mobile phones, computers, video and radio.

The second method is to conduct expert interviews to gain additional information and perspective about ICT constraints in the environment in which workforce development programs operate. Interview subjects were sought among program implementers and ICT professionals in the field, to assess ICT issues in developing country contexts and to better understand challenges to ICT use.

These methods are appropriate for descriptive research that is focused on discovering initial trends.

CASE SELECTION CRITERIA

Several resources were used to identify cases. These included the recent landscape analysis of workforce development interventions using mobile technology (39), the donor supported online Youth Employment Inventory database, the Center for Education Innovations Programs database, the Youth Economic Opportunities and International Youth Foundation online libraries, a review of current publications such as the UNESCO Education for All Global Monitoring Report 2012, and information provided by the FHI 360 workforce development team.

The sample was constructed to represent a range of ICTs, including mobile phones, computers, video and radio. Cases selected also needed to have sufficient documentation available, in English, to provide enough details for analysis.

OVERVIEW OF CASES

The 17 case studies are either projects that use ICTs to provide training; training in computer skills; or projects that use ICTs to connect employers and job applicants. They reflect a variety of funding types, such as private funding (through business subscriptions or client fees), donor funding, and involvement by NGOs.

Six of the 17 case studies had evaluations, but only the HP LIFE and Entra21 programs evaluated separately the specific impact of ICTs. Where available, existing case studies a were supplemented by published online information, and email communications.

The majority of the cases had two types of target groups: youth who were not able to complete secondary schooling, or those who had completed it and passed. In general, training opportunities for both groups were scarce because of resource constraints in their communities and the overall lack of second chance education opportunities outside the formal education system. Three case studies were included because of their detailed information on challenges to using ICTs (Kenya Nurses Training and the INVEST

programs) or because they had detailed results from an evaluation (Cambodia Farmers Training). Finally, all cases were drawn from developing countries, as opposed to those in developed countries.

As with any non-random approach, bias is possible. This is an initial descriptive study used to identify trends; a second phase of research would include additional cases to test initial findings and analyze programs that do not have a large role for ICTs, for comparative purposes.

Appendix I provides a table with descriptive information, including whether an evaluation was available for review. Appendix II presents more detailed descriptive information on the benefits, challenges and current status of each project.

CORE ISSUES FOR ICT4WD PROGRAMS:
Sheer Numbers, Missing Connections, Weak Skills

ICTs are believed to have the potential to bring a range of benefits to development projects, including reaching larger numbers of beneficiaries for lower cost and bridging communication gaps. For example, radio and television convey information inexpensively to large numbers of individuals. Individuals and organizations increasingly traverse geographic and social distances with social media, accessed via mobile phones and computers. Finally, online resources can bring high-quality content to learning and training environments.

But do these benefits meet the challenges that are the target of workforce development programs? The causes of youth unemployment are complex, and each regional context has specific issues.[5] Three general key challenges are commonly cited, and therefore can be considered as broad challenges for ICT4WD.

THE SHEER NUMBERS
According to the International Labour Organization's latest report (26), the youth unemployment rate has been rising since 2010, and is estimated to be at 12.8 percent by 2018. Currently, youth are estimated to have an unemployment rate almost three times that of adults, and in the regions where it can be measured, the numbers that are neither employed, in education nor training (NEET) have reached historic highs (26).

At the same time, according to UN data, youth account for 40 percent of the working age population in sub-Saharan Africa, and between 23 percent and 33 percent in other developing regions (37). Most countries experienced the peak of a demographic youth bulge[6] in 2005. To keep up with the demand for jobs, one recent analysis states:

> Other things being equal, sub-Saharan economies will need to create around

[5] *For example, in sub-Saharan Africa, youth face underemployment, since most work for informal enterprises. In Latin America youth unemployment is linked to violence or disengagement, while in the MENA region, governments have failed to provide graduates with public sector jobs and universities are not attuned to the needs of private sector employers (private communication from Lara Goldmark).*

[6] *As defined by Ortiz and Cummins, the youth bulge is "a peak in the share of persons aged 15–24 in the population" (36: 6).*

4.6 million jobs per year to absorb the projected increase in the youth population—a 4.2 percent increase in total youth employment each year. In the Middle East and North Africa region as well as South Asia, employment would need to expand by 0.4 and 1.2 percent per year respectively just to employ young workers entering the labor market. (42)

Although the impact of the youth bulge will start to decline in most regions beginning in 2015, it will continue to be a significant factor in sub-Saharan Africa, Pakistan and parts of South Asia (4:8–9).

In addition, countries experience the impact of the youth bulge four years before and after the peak year. Unfortunately for many countries, this window coincided with the recent global economic downturn that started in 2008 (36: 7). Weakening recovery in 2011 and 2012 has put additional pressure on labor markets, both private and public sector opportunities. This has worsened prospects for youth entrants into the labor force (26: 1). According to one study, 54 developing countries have been affected by this intersection of demographic bulge and economic downturn (36: 7).

MISSING CONNECTIONS

Youth unemployment is also affected by missing connections in the workforce system.[7] Aspects of this issue include:

- Weak or missing connections between business communities and education systems, providing few ways for employers to communicate their need for skills.

- The prevalence of informal job searches through family and other personal connections, so that employers do not receive applications from the existing pool of potential applicants, and job seekers do not know about potential openings.

- The inability of youth to access training once they exit the formal education system, because of weak mechanisms for conveying information about opportunities; employers are unable to benefit from a large pool of labor that is willing and able to upgrade its skills.

According to a recent analysis of workforce development studies by Olenik and Fawcett (35), workforce development interventions have increasingly focused on missing-connections problems. Of particular concern has been how to recognize and meet the needs of employers for skilled labor and create workforce interventions that respond to these needs. Olenik and Fawcett found that most countries have put skill development as a priority for education and economic growth policies. For the countries in which USAID has programs, the authors identify a number of specific trends that are related to establishing better connections among different parts of the workforce ecosystem. These include increasing data collection regarding employer needs, policy changes that allow more autonomy for local governments to provide training to meet local needs, partnering with private sector partners in providing training, and diversifying funding for training among private businesses and the government (35:12–14).

WEAK SKILLS

A third issue faced by youth workforce development programs is the need to upgrade literacy, numeracy and basic skills needed to use computers and participate in the digital economy. In many developing countries, youth lack these skills because the quality of education is weak. Compounding problems

include a lack of money to pay school or uniform fees, and the need to leave school to work for periods of time or altogether, which limits the opportunity to complete primary and secondary education. The result is low literacy and numeracy competencies that do not prepare youth to use computers, either as a skill or to learn other skills. In other cases youth may leave their formal education without a sufficient level of technical expertise, work skills or language skills that employers find desirable (25:37).

The lack of schooling is a significant problem in all regions except Asia-Pacific. According to a recent World Bank study, the majority of Central Asian and Latin American youth have a secondary education or lower. The situation is worse in sub-Saharan Africa and the Middle East and North Africa regions,

where it is estimated that 60 percent of youth in the workforce have a primary education or lower. This significantly limits both the ability to find job opportunities, and for businesses to attract investment for more value-added work. (42: 8).

Each of the challenges outlined above— reaching large numbers of individuals who need training, bridging communication gaps and providing training to strengthen literacy, numeracy and computer skills—are issues that workforce development programs address. The next section reviews several trends related workforce development programs for youth, including technical and vocational education and training (TVET), preparing youth for the digital economy, the use of mobiles and ICT guides to help implementers tackle youth unemployment.

Photo Credit: Jessica Scranton

7 *For a comprehensive analysis of the concept of the workforce system and the needed coordination among employers, the formal education system and government policymakers, see Aring and Goldmark (3).*

TRENDS AT THE INTERSECTION OF ICTs AND WORKFORCE DEVELOPMENT

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET)

A traditional area for workforce development is TVET, which many governments provide. UNESCO–UNEVOC has recently focused on the issue of ICT in TVET through a 2013 online conference where participants shared experiences and practices, as well ideas for strategy and policy development. The subsequent online discussion revealed consensus on several aspects of using ICT for TVET.[8]

A flexible, blended learning approach where ICTs complement teacher-moderated instruction was viewed as having the potential to make education more interactive and increase the desire to learn.

The conference report noted that in terms of reaching more students for less cost, participants concurred that ICTs would not replace teachers and trainers. A flexible, blended learning approach where ICTs complement teacher-moderated instruction was viewed as having the potential to make education more interactive and increase the desire to learn. Also, participants noted that students are enthusiastic about technology, and its use could counter negative perceptions of TVET by making it more high tech and high status. However, participants expressed concerns about training teachers to use ICTs effectively and the lack of open educational resources (OERs)[9] that could be adapted to local needs. Without training and resources to lead to full integration, ICTs risked becoming under-utilized add-ons. Other constraints include unreliable electricity supplies and the lack of software and technical support for ICT use.

Other factors constrain integrating ICTs into TVET. Recent research by Richardson on the Francistown Technical College's adoption of ICTs in Botswana noted that many institutional and organizational constraints prevented teachers from incorporating ICTs (101). Also, ICTs may take time to integrate fully into the educational context. The Commonwealth of Learning's INVEST project supports institutions in both adopting ICT and in moving toward more flexibility in providing training for those in the informal sector. INVEST has found, however, that the process of building capacity to integrate educational media and technology for both training and learning is a time-consuming process.

MOBILE DEVICES AND SKILLS DEVELOPMENT

The discussion of mLearning often focuses on mobile phones. This is not surprising, given that mobile phone penetration has reached significant levels in many parts of the developing world. For example, the Groupe Speciale Mobile Association (GSMA) sub-Saharan African Observatory report predicts that mobile devices will be used by more than 80 percent of the population in that region by 2015. Broadband is expected to follow, with a decrease in price as faster connections and a wider variety of services become available. Despite these trends, many youth in developing countries have basic phones with only voice and text capability, and live in areas where electricity supply is uneven.

Given the increasing rates of mobile phone ownership in developing countries, one perspective is that mobile phones are important platforms to provide skills training because of their familiarity, prevalence of ownership and accessibility. Recent research sponsored by the Mastercard Foundation and GSMA found that youth demand for skills training via mobile (mLearning) exists, although youth differ in their beliefs in how much can be learned in this way (22).

Surveys of youth in Ghana, India, Morocco and Uganda found that an average of 63 percent think that mobile phones are a feasible way to engage in learning. Respondents viewed the chance to develop skills to improve their chances of employment or finding better employment as the most important roles of learning using mobile phones.

The study reports that 51 percent of respondents were concerned, however, that mLearning would use videos and other material that they would not be able to access on their basic phones. This concern varied widely among countries, with 88 percent of Moroccans expressing this concern, but only 21 percent of Indian respondents doing so. Concerns were also expressed about how more complex subjects might be taught via mobile phone, as well as whether battery life would be sufficient. Respondents also expressed concerns about cost, but were willing to receive advertisements as a means of making mLearning resources more affordable. Interestingly, severely underserved youth (as opposed to underserved youth) were much less certain of the feasibility of learning on mobile phones by several percentage points in each country. This would seem to indicate that those who have the least see the least benefit from mobile phones.

When the scope broadens to include mobile devices, the picture is more nuanced. The most comprehensive analysis on the use of mobile devices for workforce development is the recently published *Landscape Review: Mobiles for Youth Workforce Development* (40). The study reviewed evaluations of 80 projects that incorporated mobile phones, tablets or other portable hand-held devices. In terms of learning and skill acquisition, the study found that blended learning remains important when using mobile devices, particularly for weaker students. In general however, mobile devices were effective in reinforcing lessons aimed at improving basic skills. In terms of accessing training through mobiles, however, cost remains a significant barrier, and adapting to local language and culture remains a challenge (40: 26–29).

World Bank Senior ICT and Education Advisor Mike Trucano has noted that using mobile phones to provide formal education is not easy, and hurdles such as cost and the lack of bandwidth to support feature phone use must be taken into account.[10] Furthermore, the benefits and learning results when resources are made available via a mobile phone outside of a formal training program need more research to determine the best approaches.

MAKING CONNECTIONS: JOB MATCHING PLATFORMS

Another trend in using ICTs for workforce development interventions is the creation of platforms to connect employers with job seekers through mobile phone applications and Internet portals. Job seekers and employers can access platforms via mobile phones, computers or a combination of these tools. The platforms enable job seekers to find and apply for existing opportunities for which they are qualified, and employers can

8 *Also see: Tackling youth unemployment through TVET: report of the UNESCO–UNEVOC online conference 25 June to 9 July 2013 (99).*

9 *According to the Hewlett Foundation, "Open Educational Resources (OERs) are teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software and any other tools, materials or techniques used to support access to knowledge. See* http://www.hewlett.org/ programs/education/open- educational-resources

10 *Mike Trucano "Bad Practices in Mobile Learning" available from:* http://blogs. worldbank.org/edutech/ worst-practices-mobile- learning

advertise opportunities more broadly, tapping into a pool of applicants they might not reach using traditional advertising methods. In environments where jobs are advertised through personal connections, where many people do not access traditional print media and the cost of failed recruitment is high, job-matching services are important tools to address the missing-connections problems. GSMA has noted that although Internet platforms have more options for job seekers and employers, given the limited access that many have to broadband and the Internet, using mobile phones for these services has significant potential.

Two recent GSMA reports are helpful in understanding the role of mobile phones for employment platforms. The first study reports (14) on the experience of the USAID-funded Rwanda Akazi Kanozi Youth Livelihood Program, which uses a

job matching platform that relies on mobile phones. One of the most valuable aspects of the report is that it defined and analyzed the roles of six different types of contributors, ranging from mobile operators, content and platform providers, implementing NGOs and SMEs and governments. Specifically, each must take certain distinct steps to enable the success of the intervention. Although this report examines a single project, the analysis reveals how the number of contributors creates levels of complexity and coordination costs that have implications for implementation and sustainability.

The second report, focused on questions of cost and sustainability, reviewed 17 different platforms currently being used in India, Brazil, Mexico, sub-Saharan Africa and the Middle East. The study finds that a "freemium" model, where a basic package of services is provided free of charge with other services offered for a supplemental fee, has proven successful. This model is used by Babajob in India, where services are in three tiers that range from a basic free job posting service for employers, to more vetting of CVs and more extensive job postings provided for a fee. The report asserts that value-added services such as credentialing, mentoring and training will build a market for job seekers as well as employers that may be attractive (34: 9). Many of these services reviewed for this study currently offer or plan to assist with CV writing, career advice or other services to improve job search skills.

The report notes the importance of partnering, particularly in financing startup costs for supporting or starting such services. Although some of the services studied are completely private and for profit, others continue to rely on donor funding. What funding is needed may depend on who

the target beneficiaries are. For example, if services focus on serving job seekers at the bottom of the pyramid, more seed funding to meet capital and other expenditures will be needed, since fee collection will be limited. In addition, different stakeholder partners have different funding niches. The report states:

> Donors or corporate social responsibility platforms (CSR) can help with procurement, purchasing/collecting content and promoting the service. Operators can offer marketing to their existing customer base. Alternatively, operators can assist in minimizing OPEX [operating expenses] for mobile employment providers by sponsoring the cost of communication channels like SMS or IVR [interactive voice response]. (34: 17)

The report calls for making available more content services, such as skills training. Yet as noted in the preceding section, there is a need for more research that examines the effectiveness of learning through ICT applications for skill development.

PREPARING FOR THE DIGITAL ECONOMY

Another trend in the ICT4WD sphere involves targeting ways to prepare youth to take advantage of the "digital economy."[11] The digital economy offers new job opportunities related to business offshore processing (BPO), computer repair, computer programming or in other positions where a knowledge of ICTs is needed to perform a job. As evidenced by recent programs and publications from the ITU, the Mastercard Foundation, the Rockefeller Foundation and GSMA, this is an area of significant interest to many who seek to tackle youth unemployment. As succinctly stated in a recent assessment:

> By building the capacities of youth in training in computer literacy, youth can gain access to ICT-based economic activities and employment in such areas as database management, customer care, hardware maintenance and repair, and network management. Technical and life skills can be solutions to challenges youth face in entering the workforce. (27)

In this view, computer literacy becomes the gateway to a wider field of employment opportunities. This view is also expressed in a recent report published by the International Telecommunications Union (ITU). Integration of ICTs into the economy can provide a wide range of new employment opportunities, including microwork, applications development, opportunities for handicapped individuals and jobs in mobile phone repair and computer assembly (12). The list also includes entrepreneurship opportunities that are believed to benefit significantly from the growth of ICTs in an economy. To take advantage of these opportunities, youth increasingly need training not just in basic computer use, but in web design, multimedia creation and content production, as well as skills in communication, problem solving and collaboration (12: 62).

As noted by Garrido, et al (18), the concept of ICT skills contributing to employability, which focuses on individual employee assets, is often seen in the context of highly skilled employees. For those who are lower-skilled workers, "the benefit to employability from additional skills may be muted...demand for particular skills depends on the employer. Thus, day laborers with computer training are only more employable if a potential employer values those skills" (18:20). It is important to understand and assess how

11 *According to the Oxford Digital Economy Collaboration Group, the concept embraces an economy based on digital technologies, and can include e-commerce, e-business and supporting infrastructure. It is also referred to as the New Economy or the Internet Economy, although new applications such as social media are making these boundaries less precise. See http://odec.org.uk/the-concept-of-a-digital-economy/*

How youth perceive the employment possibilities that result from ICT-related training may be a function of imperfect knowledge of employer job requirements, training opportunities and jobs available.

the economies in developing countries are changing, leading to an increased demand for these skills. In addition the opportunities envisioned by the ITU rest on creating enabling conditions, such as improving levels of literacy and numeracy, increasing availability of Internet access and increasing the affordability of broadband services and more sophisticated mobile phones.

Philanthropies such as the Rockefeller and Mastercard Foundations have focused on the promise of digital opportunities for youth. Already these efforts have resulted in important knowledge concerning the value of supporting increased ICT skills for youth. The Results for Development Institute, with support from Rockefeller Foundation, recently published an analysis of ICT training initiatives to find common elements that resulted in successful youth employment outcomes. Several recommendations from the analysis replicate findings from the Entra21 program, notably the importance of post-training job placement assistance, the importance of ensuring that training imparts skills that employers are looking for (demand driven) and the value of imparting a mix of technical and soft skills.

In 2013, Rockefeller also commissioned the International Youth Foundation to assess the potential for youth employment in ICT-enabled jobs in Ghana, South Africa and Kenya (27). The study focused on youth perceptions of ICT-related employment and revealed that youth find ICT-enabled work of value and interest. Although youth saw promising avenues for employment, they remained wary of some sectors such as BPO and retail, which they saw as having long hours for poor advancement prospects (South Africa) or they didn't understand the level of training requirements (Ghana). These

results would seem to indicate that workforce development programs need to educate youth about the benefits of acquiring ICT skills. How youth perceive the employment possibilities that result from ICT-related training may be a function of imperfect knowledge of employer job requirements, training opportunities and jobs available.

Despite country-level differences, there were common gaps between employers and job seekers in terms of their perceptions of the types of ICT and work readiness skills that were needed. Employers valued work readiness skills to a greater degree than youth realized, while youth overestimated the level of ICT skills they needed to be of interest to employers. This echoes the findings from the Results for Development Institute's analysis of ICT skills training programs (28), which notes the importance of including work readiness skills as well as quality technical skills to meet employers' needs.

MASSIVE OPEN ONLINE COURSES

Can workforce development programs and TVET benefit from ICT developments in higher education? Massive open online courses (MOOCs) can be one means to reach more people and supplement scarce teaching resources. Models to support MOOC use for training programs could provide standardized, expert content, which could be developed with input from business and the private sector. The value of MOOCs had been debated, however, in part because the course completion rates to date have been very low. Also, some reviews question the value of MOOCs when the content is provided only by developed-country sources.

At the moment, the debate concerning MOOCs focuses more on higher education,

rather than technical and vocational education. However, there is certain to be further evolution in the way MOOCs are used.[12] MOOCs are traditionally tied to computers and access to the Internet (102). In many developing countries, however, an Internet connection is difficult to access outside of urban areas, and may also be expensive even within urban locations. To be successful and to make an impact in the developing world, Boga and McGreal argue that MOOCs will need to integrate with other types of technology, including mobile phones, which have high rates of penetration, and even radio, which is inexpensive (102: 2).

There is also a question of whether e-Learning is as attractive for youth as more traditional approaches. A recent survey of youth regarding e-Learning in the MENA region, conducted by the Education for Employment, found that youth had widely varying opinions on its effectiveness. A common concern was losing the benefits of interaction and engagement. Also of concern was that certifications for online courses might not be viewed as favorably by employers. The results indicate that careful assessment of youth attributes and the larger environment for e-Learning are important in incorporating e-Learning approaches for skill development (32: 9-10).

Although many questions surround MOOCs, there continue to be new efforts to adapt them for developing country contexts. For example, Facebook recently announced a partnership with edX, Nokia and Airtel to launch SocialEdu. According to the Facebook Newsroom, the initiative, being rolled out in Rwanda, will make MOOC content available via mobile phone (104). The effort includes free locally adapted content, low-cost feature phones and a mobile app that

is integrated with Facebook, but adapted to low-bandwidth environments. In the Middle East, a partnership between edX and the Queen Rania Foundation provides free online courses in Arabic through the Edraak platform (32: 9). Participants receive certification for course completion that can be presented to employers, and employers have the opportunity to create training courses online to meet their needs. ALISON provides yet another model of providing online courses. According to its website, ALISON "caters to people marginalized from basic education and training, especially those in developing world countries". The profits from on-site advertisement, targeted at users in the United States, enables ALISON to provide content for free to all users.

INFORMATION FOR IMPLEMENTATION

A nascent trend concerns how-to information for those wishing to incorporate ICTs into their workforce development programs. With the development of such resources as the Youth Employment Inventory database, the Center for Education Innovations Programs database, the Youth Economic Opportunities and International Youth Foundation online libraries there is a considerable number of resources on projects. As yet, there are still few publications that focus on providing information to enable the integration of ICT into workforce development efforts. Although an increased amount of analytical work is needed that focuses on best practice for implementers, there are some noteworthy examples that have emerged from several sources.

Among the resources available, the Education Development Center's EQUIP3 program (funded by USAID) created a toolkit with a granular perspective on ICT needs for specific

Although many questions surround MOOCs, there continue to be new efforts to adapt them for developing country contexts.

12 *Recent work by Christensen and Weise argues that the next revolution in higher education is not from MOOCs, but the provision of online competency-based education directly linked to employer needs for specific skills (103).*

kinds of training programs, based on its work in Rwanda and Kenya. The toolkit can be used as a template for a wide range of projects that work in different contexts, and provides details about assessing the need for hardware, software and other components of a program that integrates ICT in its implementation (105). It also makes available the assessment methods to determine the needs of local employers that formed the basis for the specific jobs chosen for training activities. Since local assessment and demand-driven training are seen as best practices, this toolkit provides guidance for many elements of program design.

In terms of providing training for ICT employment, the Results for Development Institute, with support of the Rockefeller Foundation, has published a detailed compendium of 20 ICT training programs from Africa and the Middle East (28). Their analysis identified four key components that effective programs share, which include:

- Involving multiple stakeholders to provide better chance for scaling

- Responding to employer needs for skills

- Including other cognitive skills training, such as problem solving and communication skills

- Supporting post-training job placement

All of these elements, when combined, result in positive employment outcomes.

A third resource is an analytical framework that can help practitioners better understand the links between ICT skills training and employability. Researchers affiliated with the Technology and Social Change group

at the University of Washington drew on information from more than 70 NGOs in 30 countries to detail characteristics in NGO program design, individual job seekers and trainees and environmental dynamics that impact employment outcomes. By providing the framework, the authors situate ICT skills within the broader array of factors that either support or impede employment. The framework guides implementers in assessing the variety of elements with which their programs will contend (18).

These resources provide examples of the kinds of information that can help practitioners as they create programs either to provide ICT training, or to use ICTs to achieve the goals of their workforce development programs.

In conclusion, as noted by the author of the recent landscape review of mobile phones in workforce development programs, there is still a need to see the results of evaluations and other rigorous studies "to contribute to an evidence base that supports generalizability" (40: 8). This is true not only for mobile applications, but also for ICT4WD more broadly.

RESULTS:
What Do Case Studies Tell Us?

Photo Credit:
Anil Gulati

Results of the case analysis are presented as a typology in Table I. As noted in the introduction to this paper, the anticipated benefits of ICT use for workforce development interventions fall into four general categories: 1) ICTs can extend training to more individuals; 2) ICTs disseminate replicable and customizable content for lower cost; 3) ICTs can provide improved quality of learning and encourage independent learning; and 4) ICTs can enhance connections among youth and employers. Although the case selection sought to confirm these benefits,

it also revealed common challenges in using ICTs.

Appendix I lists each case and provides a breakdown of their characteristics, and Appendix II gives a brief description of each case, outlining the benefits and challenges of using ICTs.

The typology is used to organize further discussion about the benefits and challenges that ICT4WD programs encounter, which is informed by specific examples found in case studies.

TABLE 1: TYPOLOGY

Anticipated Result	Anticipated Benefit of ICT Use	Challenge (from case study review)
1. Extend Training Outcomes	Trainers reach broader population through use ICTs, which bridge geographic distance, or lack of trained instructors. Training may be interactive without the need for instructors, or can connect to instructors remotely with questions.	Teachers/trainers are still needed to facilitate, but need training to adapt to using ICTs in the classroom. IT support is needed. Cost may be an issue for accessing content where Internet access is less prevalent and mobile users can't afford airtime or text charges.
2. Replicable and Customizable Content	The cost of training resources decreases by digitizing them and making them available online, via mobile applications, or DVDs, videos or other ICTs. Quality content can be adapted to meet specific local context (such as language).	Initial investment costs can be high to create content. Literacy and numeracy are needed to access information on computers. Lack of electricity and Internet access may limit access to content, extra costs may be incurred for generators, higher bandwidth costs and technical support.
3. Enhanced Effectiveness	Effectiveness is increased by producing digital resources that are consistent. ICTs can provide content in attractive ways. Youth become active and independent learners, better prepared for the workforce of the future.	The most widely available platform (basic mobile phones) may not convey more complex content. Youth at lower levels of education may need extra support to use content independently. Informal learning may only serve motivated learners, learning outcomes are inconsistent.
4. Enable Connections	A wider pool of employers and job seekers make connections through a combination of databases, mobile applications and social media. Social media can help to engage youth with each other and the wider employment community.	Job seekers who are not digitally literate require support. Youth may not have easy or low cost access to the ICT needed (computers, mobile phone).

For workforce development training purposes, implementers would like to know how many more youth might be reached via ICTs, particularly in environments where it is difficult for youth to attend training, where trainers may be scarce, geographic distances are significant, or security a concern. It would be helpful to compare costs per trainee, completion rates and skill certification or test results among programs that use face-to-face training, and those that provided varying degrees of ICT content via computers, mobile phones or other means.

Unfortunately, not enough information was available in these cases to enable cost comparisons. This is not a problem specific to this study, or necessarily a bias in case selection. As noted in the recent World Bank study by Robalino et al. (42) and the Results for Development Institute's review of ICT training courses (28), it is very difficult to find enough similarity in cost information to enable these comparisons, and both studies recommend that this information be made more widely available in a form that makes comparison possible.

However, the typology presented above and discussed in more detail below does provide a way of analyzing a variety of programs, to see if the anticipated benefits were found, and what challenges programs encountered. While not providing the rigor of a formal comparison of financial costs and outcomes, it does create a descriptive framework that allows important aspects of project experience to be examined.

EXTEND TRAINING OUTCOMES

Benefits
Reaching the hard to reach: In its review of experiences in youth programming

in 26 countries through the EQUIP3 program, EDC concluded that ICTs were an effective way to reach hard to reach populations. The review of cases analyzed for this report supported this finding. The Somalia Youth Livelihood Program's final evaluation concluded that the use of mobile phones and radios for instruction allowed the program to reach many who would otherwise not be able to participate. This is also true for the FORAS program in Iraq, which is providing online content that job seekers can access to improve skills such as interviewing and resume writing, in addition to its job matching services. In Cambodia, Connected Schools created videos of the best instructors and provided these to rural schools, stretching scarce teaching resources. In another instance, PAJE-Nièta, which works with rural and peri-urban youth, provides reading and writing content in French and Bambara as well as math and work readiness content on Micro SD cards via Java-enabled phones.

Private entities such as IL & FS and Samasource also see the benefits of ICTs in providing training. IL & FS brings its patented K-YAN multimedia device to remote locations. According to McKinsey, K-YAN provides "standardized multimedia content to simulate 'difficult to teach' topics, reduce teacher training time, and increase the number of people who can be trained in a sitting" (106). The K-YAN has a projector, wifi connection capability, and can act as a local area network. With the capacity to run off of different kinds of electricity sources (generators and car batteries), training resources can be brought to remote rural locations. IL&FS has provided training for over 100,000 beneficiaries as of 2012, and hopes to train up to 4 million more individuals in the next decade. Similarly,

According to McKinsey, K-YAN provides "standardized multimedia content to simulate 'difficult to teach' topics, reduce teacher training time, and increase the number of people who can be trained in a sitting" (106).

using its proprietary SamaHub, Samasource provides online training modules to youth and women previously earning a below minimum wage the skills to do specific microwork tasks, as well as English and soft skills. As the employees demonstrate proficiency, they begin work on projects, but also can access training modules to refresh skills or upgrade their skills.

Challenges

The assessment identified two new types of staff skills that were needed to effectively implement the program—helping students with using ICTs, and managing online communities to help both youth and instructors use social media tools effectively.

Hardware and environment: Several common challenges were cited in using ICTs to extend training results. When ICTs didn't work, training could be interrupted. AMREF, which implemented the Kenyan Nurses Training program, found that nurses and trainers needed a week of training in computer use and troubleshooting. Students and trainers would often lose valuable time in trying to resolve simple computer problems because they were unfamiliar with computers. Currently, in its FAQs page, the program notes that students must be patient and wait for computers to boot up, indicating perhaps the degree to which computer familiarity matters. The impact of having trouble with computer use was also found in the Ecuador's Entra 21 program, which noted that the failure to resolve ICT software problems caused some youth to drop out in frustration.

The HP LIFE program evaluation noted that instructors continued to be very important for training programs in sub-Saharan Africa, but the reason cited was that the ICTs were unavailable to provide the content, either because of poor Internet access, or in some cases lack of video projectors. Although the resources were deemed to be very good, these constraints in the training environment limited the number of people who could take full advantage of them.

Lack of prior exposure, skills and support: Another challenge was that some trainees lacked prior exposure to computers. For example, the HP LIFE program evaluation findings from Kenya showed that in many cases participants did not come with a basic level of ICT skills. As a result, they were unable to catch up and complete the program successfully since they needed to spend time familiarizing themselves with computers. One of the recommendations was to make sure that the program established a required level of ICT skills and that those without these skills take a basic training module before starting the entrepreneurship training.

In terms of teacher ability to use ICTs effectively in the classroom, the Entra21 program assessment noted that staff qualifications needed to be re-thought, particularly regarding expertise with social media, online resources and digital tools. The assessment identified two new types of staff skills that were needed to effectively implement the program—helping students with using ICTs, and managing online communities to help both youth and instructors use social media tools effectively.

Staff ability to adapt to using new ICTs also may be hampered by organizational constraints. Richardson's case study of the experience of the Francistown College of Technical and Vocational Education's (FCTVE) adoption of ICTs demonstrates that instructors need support both in training and in incentives.

Recognizing the severe shortage of post-secondary schooling opportunities and increased demand for vocational education, the government of Botswana identified distance learning and e-learning

as strategic elements of its technical education program.

However, policy and administrative systems were not flexible enough to enable instructors to adopt ICT-enhanced learning methods. For example, in distance learning, "writing learning materials is the teaching and should be provided for in the same way as contact hours are in face-to-face teaching" (1O1: 11). However, staff utilization wasn't updated to reflect this concept. In addition, few experts were available to support instructors in technical or pedagogic skills. There was a perception that the use of ICTs would be temporary, given the lack of commitment of support resources, so that ICT use appeared impermanent to staff, leading to a lack of motivation.

In conclusion, using ICTs entails the need for technical support. The costs of making sure support systems are available may not be included in cost calculations. For hard-to-reach populations, however, ICTs can provide important benefits, and workforce development initiatives have used them effectively to extend training.

REPLICABLE AND CUSTOMIZABLE CONTENT

Benefits
ICT-related content promises easier replication, dissemination and customization. Costs for digital content should be lower than hard-copy formats since it can be sent electronically or saved on CDs and thumb drives, is easily copied and downloaded and can be edited online to adapt to local language and contexts. The cases reviewed here did not explicitly note these benefits, with the exception of the ability to adapt content to multiple local languages.

Challenges
The findings provide a somewhat cautionary note to the anticipated ease of creating digital content. The experience of the Kenya Nurses Training program points to the importance of cost in creating digital content. Accenture provided AMREF substantial in-kind technical support to create digital content. The Cambodia Farmers Training project evaluation also noted that substantial costs were incurred to create content. The researchers noted concerns as well about whether the content would continue to be used. If content had only a one-time use, then initial costs of creating content will not be defrayed over time.

Different types of ICTs may have other local costs that need to be taken into account. For example, one option is to create content that can be used on mobile phones. However, implementers need to ask whether the content can be viewed on all phones, or only more sophisticated phones, and whether beneficiaries can pay for air time and texts. If the content is conveyed via the Internet, then data fees also need to be considered as part of the cost. This question becomes more complex when considering that overall smartphone penetration is low to date and band width costs are high in many developing countries.

Adaptation is possible. For the PAJE-Nièta program, EDC supported an application that allowed visual content to be viewed on Java-enabled phones to reinforce literacy, numeracy and other skills. Similarly, Silatech has worked with the Microsoft Foundation to expand the Najja7ni mobile jobs connections platform, and with EduPartage in Tunisia to provide online education resources that can be accessed from different mobile phone types.

More versus less complex information:
Some ICT subject experts expressed concern about the level of information that can actually be provided through a mobile platform, beyond that which reinforces material already being taught, and noted further that trainees often lack the literacy and numeracy skills needed to learn on computers and to use computers effectively.

This trend was reflected in the case studies, which showed that mobile phones were not being used to convey more complex information. Videos were used for demonstration purposes for training, conveyed via computer or projector. Examples included private entities that were working with employers. RuralShores, Samasource and the Kenya Nurses Training

programs were all predicated on using computers, and all of these organizations required their participants to have a certain level of education.[13]

A question these results raised is how training resources and content might be made broadly available for workforce needs. If creating content is costly at the outset, then this might be an area in which workforce development interventions could work with local counterparts to provide low-cost, quality resources.

Content development for ICT platforms may be a valuable endeavor for workforce development interventions, but what type and at what cost depends on several factors. These include ability of local actors to develop digital content, the availability and cost of bandwidth and the prevalence and cost of hardware (computers, phones, video projectors, video cameras). Implementers need to anticipate costs, and be realistic about what can be presented via a mobile phones as opposed to computers, as well as the abilities that beneficiaries have in relation to using ICTs.

ENHANCED EFFECTIVENESS

Benefits
ICTs are assumed to make training more attractive, and to support students who have different abilities, allowing self-paced learning. Reminders and tips can be provided to reinforce concepts via SMS or through online content, and trainees have the ability to go back and review material multiple times if needed. In addition, ICTs are credited with developing independent learning and problem-solving skills as well as confidence.

Better learning: Cases provided some instances of this benefit. Entra21 reported that the use of computers allowed trainers to adjust the pace to accommodate different abilities. In the Kenya Nurses Training program, the ability to repeat material until it was thoroughly understood was seen as a strength. PAJE-Nièta participants can also replay content as often as needed.

Connected Schools in Cambodia reported improved learning outcomes through ICT use. Connected Schools filmed highly effective TVET instructors and used the videos in remote rural areas, where teachers were trained in how to use video resources in the curriculum. According to the internal monitoring results for project performance available from 2012, students liked using videos in the classroom, and thought that the information was more clearly presented. Teachers surveyed also perceived positive impacts on student understanding of the material.

ICTs can also may create a more dynamic training environment. IL & FS uses the K-YAN to provide more a technology enabled training environment for remote areas since it is a multimedia platform. An assessment of the Entra21 program in Ecuador, where students needed remedial basic skills training, showed that because ICTs were already being used, trainers were able to access online math and literacy tools to make this aspect of the training more interesting.

Challenges

Students may be exposed to ICTs and know how to use them, but may not be prepared to take advantage of the self-paced learning environment. In the Entra21 assessment of the role of ICTs, the Colombia program found that some youth objected to using a self-paced, instructional approach because it involved more self-discipline to move forward. Interestingly, the Kenyan Nurses Training program notes on its FAQs page that students must be prepared to be self-motivated, and that some may find it isolating to be outside a classroom environment.

For ICTs to be effective in training, ICTs need to be perceived as having value. The Entra 21 program assessment of ICT use noted that participants found using computers to be attractive, since it connected them to their peers and the broader community. This suggests that, to the extent that Gidimo, Najja7ni and other platforms that provide training resources combine them with the means to connect with other youth, this may lead to additional interest in using ICTs for skill acquisition.

The question of effectiveness is a complex one, since it relates to the ability of youth to use ICTs. Many training programs reviewed here already screen youth to make sure that they have characteristics that will enable them to complete the training. The learning that is a part of such interventions like HP LIFE program may have positive results because they involve motivated individuals.[14] As the Entra21 program noted, it was very important for the technology not to minimize or replace the relationship with program staff and some individuals may need more support to use ICTs effectively.

ENABLE CONNECTIONS

Benefits

Benefits of ICTs may include overcoming barriers in communication that prevent communities from being aware of resources

[13] *There are different microwork approaches, however, the cases chosen here focused more narrowly on BPO efforts. Also, it should be noted that Samasource has its own trademarked Microwork™ approach.*

[14] *Toyama (46, 106) has found that technology rarely changes incentives for behavior, but rather magnifies existing an individual's tendencies in relation to their use of time and resources.*

A benefit in using ICTs was found in giving youth a sense of connection to a wider circle and making youth visible as an important resource.

and opportunities. The case studies demonstrate that online platforms and mobile applications that facilitate matching between employers and job seekers can address this problem. A second benefit in using ICTs was found in giving youth a sense of connection to a wider circle, and making youth visible as an important resource.

For example, the Entra21 assessment noted that youth reported they perceived themselves as part of a wider community. Furthermore, they perceived a value in connecting to the wider world outside of their immediate neighborhoods (82). This may be particularly important for youth who are in communities where perceptions of youth or the community generally are negative.

Employers believed that youth were uninterested in employment opportunities, however, the unexpectedly high turnout in response to a Facebook posting on a job fair provided an alternative perspective.

In the case of the Program to Improve Access to Employment implemented in El Salvador by the Carana Corporation, social media are credited with changing at least some employer perceptions of job seekers. Employers believed that youth were uninterested in employment opportunities, however, the unexpectedly high turnout in response to a Facebook posting on a job fair provided an alternative perspective. The final report concluded that social media was a cost effective tool for outreach and assisted youth with establishing positive peer networks The FORAS program uses Facebook to publicize program events and information, and to foster a sense of awareness among beneficiaries.

This may be particularly important for difficult operating environments where security considerations are important. For example, FORAS provides a free service to support this for job matching between medium-size employers and job seekers,

which otherwise may not be visible beyond word of mouth or personal connections. In an environment where it is challenging to apply in person for positions, the online platform and Facebook provide a means of connection and access to information. The Somali Youth Employment Program (Shaqodoon) final evaluation noted that without the use of ICTs, the program would have been unable to realize its goals.

In a different context, LabourNet in Bangalore registers workers and provides certification for training and other benefits such access to insurance and bank accounts. Workers build an identity in the LabourNet database, which is able to track their qualifications and work experience over time. With records of their qualifications and employment, coupled with notification of job opportunities via mobile phone, the service can connect job seekers and enterprises that need local labor.

Challenges

There is some indication that users may need support to fully use a platform. For example, after noting issues such as submission of incomplete application forms, the FORAS program has recently started to contact individual users of their services to provide assistance. As this process continues, FORAS will be better informed about what prevents full use of their resources. More evaluation is needed to better understand the kinds of support required and how the existing environment might affect outcomes.

The ability of ICTs to make connections is one of its strongest attributes in supporting workforce development interventions. Although employment platforms have been

the focus of recent efforts, these case studies did not reveal as much information about the uses of social media. With more mid-term and final evaluations completed for interventions, this may also emerge as an increasingly important aspect of ICT4WD.

FUNDING AND SUSTAINABILITY

In addition to the findings discussed above, workforce development is an area in which the outcomes rely on ongoing relationships among the business community, local and national governments and in many cases, donors or other philanthropic entities. The range of cases chosen included both traditional development programs funded by donors, private initiatives and social enterprises. The following section briefly discusses common findings related to partnering and sustainability concerns, as revealed by case study analysis and interviews.

Workforce development projects may differ from other types of development interventions, and may see more partnership among the governments, donors and the private sector. In several instances, involvement of one or more foundations or large international organizations was important in supporting the early pilot phases of an intervention. For example, Samasource benefitted from support from the Mastercard Foundation, and still asks for donations from outside sources. LabourNet received a grant from the Bill & Melinda Gates Foundation, which allowed it to receive technical support from CHF in building their employment matching platform. Similarly, the Kenya Nurses Training project cited the importance of an in-kind grant from Accenture to create their digital training resources.

Donor projects, on the other hand, have tapped into the private sector to provide ICT solutions. FORAS and the Somali Youth Employment Program (Shaqodoon) both partnered with private providers that have existing ICT platforms. FHI 360's USAID-funded FORAS program has worked with Silatech and Microsoft to increase the sophistication and capacity of the Ta3mal platform, which connects employers and job seekers and provides training resources. EDC's Somali Youth Livelihood Program partnered with SoukTel, using its mobile platform to reach youth via mobile phone with information about available job opportunities. Currently, Silatech's Najja7ni partners with the NGO EduPartage to provide content, and with Microsoft and local operators for platform development to make its services available on cell networks in Tunisia.

Social enterprises have also developed sustainable business models, based on collecting fees either from businesses, job seekers or both. For example, LabourNet sells training to businesses and charges a small fee to clients—both workers and businesses—for the matching service they provide while RuralShores relies on BPO work, relying on rural areas to provide employees.

There are also private efforts, such as Nigerian Gidi Mobile, that combines the appeal of lifestyle resources and digitized learning content, and is available on any type of mobile phone. As a for-profit entity, Gidi Mobile's Gidimo platform provides resources to help youth compensate for the "severely deficient educational infrastructure" that is experienced by African youth. Currently, Gidi Mobile is in partnership with Diamond Bank, to provide access to test questions that

prepare youth for taking their final secondary school exams. Those who answer a certain number of questions per week are given credits to use the Gidimo interface. Given the issues with secondary school completion, this is an interesting use of providing resources through mobile in partnership with the private sector.
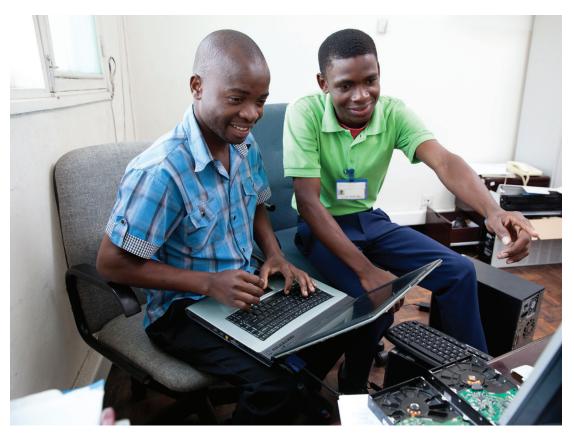
Sustainability is not only predicated on covering costs. Samasource adopted a franchise model, in which it screens applicants and asks for a $25,000 commitment up front. This allows Samasource to vet potential franchisees, while the fee is an indication of financial viability. By adopting this model, Samasource is able to recruit from a narrower band of more highly skilled entrepreneurs and concentrate its support to franchisees in areas such as maintaining quality of production, effectiveness in training, and in selecting a quality workforce (63).

Under IL & FS's model, employers commit to hiring trainees, thus providing an incentive for students to enroll. In its work in rural India, IL & FS has built skill development centers, in partnership with the India's National Skill Development Council. These are then used as training hubs, and IL&FS receives a fee per student for their training. As growth continues, it may need to find other ways to tap into other student subsidies or fees for training.

By adopting this model, Samasource is able to recruit from a narrower band of more highly skilled entrepreneurs and concentrate its support to franchisees in areas such as maintaining quality of production, effectiveness in training, and in selecting a quality workforce (63).

The Kenya Nurses Training project presents a different approach, continuing to depend on fees from trainees with no subsidy because students are currently working. In addition, the program benefits from an unsecured loan program to pay for fees, offered through the local Kenya Women's Microfinance Bank. In a variation of the program, AMREF, Childfund and the Mastercard Foundation have recently announced a rollout of the e-learning nurses training program in Zambia, which anticipates providing full and partial scholarships for up to 1,631 individuals, and training a total of 6,000 nurses in five years.

A theme that emerged from the interviews was the edge that the private sector has in creating viable and sustainable models. Although partnership is the norm, there was some question about the sustainability of partnerships past the end of government or donor funding. As one person noted, ICT firms are not always geared for longevity, and the rate of change can be significant. Although the goal of donor-supported programs is to create local partnerships and systems that will outlast the specific project funding, more assessment needs to be done post-project to determine which elements contribute to sustainability. This is a particularly challenging question in environments that are politically unstable, but even in other contexts creating incentives for partnership is challenging.

CONCLUSION:
ICTs in Workforce Programs and Rapid Change

Photo Credit:
Jessica Scranton

This analysis examined a wide variety of case studies to provide information on how ICTs are being used in workforce development programs, and to identify the anticipated benefits and challenges of such use. The case studies confirm that ICTs can support the ability of workforce programs to reach their beneficiaries in ways that deliver important benefits. Also, the private sector is a vital partner in supporting the use of ICTs.

However, information gaps exist in how much we know about the effectiveness of ICT-enabled training. Training youth to use ICTs to prepare them for the digital economy holds promise, but employers still value other work skills in addition to technical skills. While efforts to provide youth with resources outside of formal learning programs via mobile phones is an emerging trend it is less clear how effective this type of learning can be, and whether youth will become self-directed learners as a result of having free educational content readily available. It is also unclear how much can be conveyed via mobile phones, although as noted innovations continue.

The case studies confirm that ICTs can support the ability of workforce programs to reach their beneficiaries in ways that deliver important benefits.

While mobile has the benefit of being widely available, computer experience is likely to be important in moving youth into more remunerative employment opportunities.

Another finding is that the promise of reaching larger numbers youth for lower cost needs to include an understanding of what underpins quality training, and the challenges of using ICTs for different populations. Training efforts need to continue to support facilitators, trainers and trainees to effectively use ICTs in classrooms and other settings. Making sure that the ICT is suited to the capabilities of beneficiaries is important. While mobile has the benefit of being widely available, computer experience is likely to be important in moving youth into more remunerative employment opportunities. It is clear, however, that the use of ICTs to make connections—whether to employers or to more resources—is benefitting from innovation. While the impact of social media was found seen in a few programs, it may become an increasingly more important tool to enable youth to make connections with each other and with employers in the workforce ecosystem.

As one expert noted in an interview, all work in ICT4WD is highly context specific. Different communities face different constraints and opportunities across several dimensions, including the rate at which the cost of connectivity decreases, the level of existing skills of the potential workforce and the roles and level of partnership between government and the private sector. More research needs to be done to make information available to implementers, so they can apply best practices in their

projects. It would be helpful to have more careful evaluation of costs and benefits, to better understand the role ICTs can play in workforce programs.

Since this report was written from the perspective of those working in ICT, one concluding note that it is unlikely that access to ICTs such as computers, mobiles and to online resources will be evenly distributed within populations and among countries, and that some countries are more responsive to ICT adoption than others (44). Whatever technology is being used today, new applications will improve its use, and opportunities will continue to evolve as technologies diffuse and infrastructure develops to support them. Workforce development programs will need to assess the implications for local economic opportunities, since training needs could change rapidly in response to these developments. Workforce development programs need to assess how much is enough in terms of ICT skills.

In conclusion, it is evident that workforce development practitioners are vital participants within the ICT4D, of which ICT4WD is a part. The value of ICTs in providing training and in gaining employment in changing economies will continue to affect a broad spectrum of public and private efforts to increase youth entry into opportunities for productive work.

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APPENDIX I

Name	Funding	Training Outcomes?	Content?	ICTs = Effectiveness?	Connections?	Completed?	Assessment or Evaluation?
Program to Improve Access to Employment	Donor			x	x	N	Mid-Term
Somalia Youth Livelihoods Program (SYLP)	Donor	x	x	x	x	Y	Final
Entra 21	Donor	x	x	x	x	Y	Final
PAJE-Nièta	Donor	x	x	x		N	Mid-Term
INVEST	Donor		x	x		N	Monitoring Report
Najja7ni	Donor				x	N	No
Farmers Training in Cambodia	Gov	x	x	x		Y	Yes
Francistown College of Tech and Vocational Education	Gov		x	x		N	No
Connected Schools	NGO	x	x	x		N	Internal
Harambee and TaaSisi	NGO		x	x	x	N	No
Kenya Nurses Training	NGO	x	x	x	x	N	No
RuralShores	Social Enterprise	x		x		N	No
IL & FS	Social Enterprise	x	x			N	No
LabourNet	Social Enterprise			x	x	N	No
Samasource	Social Enterprise	x	x	x		N	No
Gidi Mobile Gidimo	Private	x	x		x	N	No
Hewlett-Packard	Private	x	x	x		N	Process

APPENDIX II: *Case Studies*

CASE STUDY 1

TRAINING NURSES IN KENYA

In the mid-2000s, the government of Kenya faced an urgent need to upgrade the qualifications of existing practical nurses, to meet the challenges presented by more complex diseases and large numbers of people relying on nursing for primary care. Approximately 20,000 nurses were eligible for training to upgrade their qualifications, but Kenya could only provide training for 100 per year, using traditional classroom methods. The solution was to create an e-learning program, supported by a required practicum internship and qualifying exams after online training. The program was accredited by the Kenya Council of Nurses and the Government of Kenya.

Funding

Accenture provided $1.7 million donation from its foundation, and $1.2 million of in-kind assistance to create digital content and assist with project management, to the NGO African Medical and Research Foundation (AMREF). AMREF created the AMREF Virtual Nursing School to pilot the e-learning program. Training, nursing council, and exam fees were paid by nurses. Recently, AMREF, Kenya Women Finance Trust (KWFT) and Johnson and Johnson partnered to create an unsecured loan program for nurses needing to borrow to cover these costs.

Benefits

Since 2005, the program has trained over 5000 nurses. The quality of the training resulted in good rates of completion and upgrade to the next level of qualification. The ability of nurses to work while completing training enables them to continue to support their families. Nurses also have their computer skills upgraded through the e-learning program.

Challenges

Rapid qualification of nurses resulted in the need to create more internship opportunities at hospitals, so the program could continue to grow. As noted in the FAQs section of the AMREF site, other issues include students feeling isolated by e-learning, the need to be self-motivated, and the need to solve problems independently, since they will be unsupervised. Students also needed to allow time for the computers to boot up.

Program Status

Variations of the e-learning program have been rolled out to Lesotho, Tanzania, Uganda and Zambia. AMREF turned over the nursing program to stakeholders in 2010, but continues to provide program backstopping and other technical support as needed.

CASE STUDY 2

FORAS   Chronic unemployment and underemployment in the Iraqi labor market contributes to instability and insecurity. FORAS provides employers, employment agencies, and job seekers with the means to connect with each other. Using the Ta3mal online platform, employers and agencies can post jobs, while job seekers can view available openings and get online training to prepare their resumes and learn about other critical aspects of successful job searching.

Funding   USAID/Iraq awarded FHI 360 $46 million for a 30 month project beginning in 2013 and ending in 2015.

Benefits   To date, the program has worked extensively with Silatech in further developing and customizing the Ta3mal platform, enabling a much more specific set of criteria for matching. Job seekers and employers are able to find out about job opportunities without travel, which enhances safety and efficiency, given restrictions due to security concerns. Job seekers can view opportunities outside of their immediate social networks. Small and medium size employers have a free resource that is easy to update with new opportunities, and can access a wider pool of qualified applicants.

Challenges   Users may not understand how to use all of the features. The project has recently hired two dozen staff to contact those with incomplete profiles to assist them in using the platform more effectively. The platform is unavailable to those without a computer, however, a mobile application does send 10 available jobs with contact information to those who call in to a specific number, and respond to an SMS survey that determines job interests and qualifications.

Program Status   The program is ongoing, however, deterioration in the security situation and political unrest may affect job prospects in the future, and use of the platform.

CASE STUDY 3

HP LIFE PROGRAM   Hewlett-Packard (HP) Learning Initiative for Entrepreneurs (LIFE) was launched in 2007 as separate regional programs in Asia, Europe, Middle East and Africa regions. The program is designed to support existing small businesses and students who are thinking of starting a business by teaching entrepreneurship and ICT skills. As of April 2012, the program had partnered with 340 centers in 49 countries, and reached approximately 1.2 million people. Training institutions are selected through competitions, and result in cash and technology grants, curricula and training.

Funding   Hewlett-Packard in conjunction with UNIDO; EDC conducted the evaluation as part of its cost share agreement with USAID for the EQUIP3 program.

Benefits   A process evaluation funded by USAID and published by EDC in 2012 found that participation in the program was positively correlated with a slight to moderate increase in income, as well as other efficiencies from using computer programs including more accurate record keeping and decreased workload. While basic ICT skills were found to be helpful to employed youth and business owners, more advanced skills were not.

Challenges   Participants cited the importance of non-ICT related skills, particularly those related to communication. Also, it was difficult to draw conclusions about the ICT enabled learning, given the difficulty of some programs to have access to needed equipment and problems with electricity and internet access.

Program Status   The program is ongoing, providing participants with an opportunity to join chat rooms and discussion boards for entrepreneurs and trainers, and to upload a marketplace profile to share ideas and services. HP partners with USAID, UNIDO, and EDC.

CASE STUDY 4

GIDIMO	Gidimo is a Nigerian company that provides a mobile platform that can provide learning content to subscribers. Termed a "learning and personal growth platform", Gidimo is intended to help African youth to address deficits in their education that exist as a result of the poor quality of formal education. As described by the Center for Education Innovations, "gidiServer scales digitized learning content instantly with any learner who has a mobile phone of any type."
Funding	The funding is private with equity investment and in kind contributions.
Benefits	The platform can work on any phone, and the app itself is free. There are multiple ways to pay for gidi credits, including Paga, Verve, Mastercard, and QuickTeller. For students that are participating in a sponsored program, such as the Diamond Bank National Challenge, students can earn credits by answering questions designed to prep them for their final secondary school exams.
Challenges	Although the app is free, the minimum gidi purchase is 100 credits (1 credit = 1 NGN). This may be cost-prohibitive for some, as might using airtime to use Gidimo. The learning is also self-directed, and it is not yet known how effective this approach will be in improving skills outside of competitions or other incentives such as free use. Although Gidimo tracks user satisfaction and increased enrollment, these metrics will need to be supplemented by those that track student performance on exams and other skills.
Program Status	For more information: Gidimo website: http://gidimo.com/ ; Center for Education Innovations Profile: http://www.educationinnovations.org/program/gidibrains

CASE STUDY 5

UMMELI AND TAASISI	Ummeli is an employment portal developed to help youth who are not in education, employment or training (NEET) to find jobs, internships, training and other opportunities. Using a mobile platform supported on the Vodafone Young Africa Live mobile platform, youth can by create a profile, connect with other users, and access relevant work readiness content. Recruiters and employers can also become members and post and manage ads for jobs, internships, and scholarships.
Funding	Ummeli receives support from the Praekelt Foundation
Benefits	The platform is free to Vodafone mobile subscribers, and at standard rates for those with other carriers. It has been widely used, with approximately 250,000 subscribers. The platform is available to many stakeholders within the workforce ecosystem, including job seekers, employers, volunteer organizations seeking volunteers and community organizations. The premise of Ummeli is that it reflects Ubuntu, the African cultural value of community, rather than the individualistic job culture. In addition to posting a profile and finding job and volunteer opportunities, the platform offers information to help job seekers and another channel for employers to post available openings.
Challenges	The costs for airtime may not be feasible for youth. It is unknown the degree to which the use of online materials are being evaluated for effectiveness. As reported via news stories in 2013, an impact evaluation found that 18% of users found jobs, and 10% of users had interviews.
Program Status	While Ummeli continues to be supported by the Praekelt Foundation, TaaSisi is a further development that, according to the website, has been developed as the result of more research to better understand youth aspirations and markets in Africa. The goal is to implement a platform that can reach throughout continent. As stated on the website "Using the amalgamation of data, we are working with individuals and partners to recommend specific steps, skills, entrepreneurship or employment opportunities that will provide the highest gains in terms of economic growth, career progression and personal satisfaction." Found at: http://www.taasisi.com/

CASE STUDY 6

SOMALIA YOUTH LIVELIHOODS PROGRAM (SYLP)

The SYLP program was targeted to help youth 15 to 24 years old increase skills and find internships or job placements, or to become self-employed. EDC partnered with approximately 60 Somali organizations to implement training and placement services. In partnership with Silatech, the program connected the trainees with prospective employers. Educational content was delivered via MP3s.

Funding

Funded by USAID, implemented by EDC in a $10.2 million program from March 2008 through December, 2011.

Benefits

According to the program final evaluation, literacy levels are low in Somalia, as a result of an extended period of civil war. To address this issue, entrepreneurship and financial literacy training used MP3s to provide audio instruction. The content was recorded in local languages, and both the content and MP3s were transferred to local Somali entities at the end of the project. Anecdotal evidence provided to evaluators led to the conclusion that these resources would continue to be helpful in years to come. The InfoMatch program provided by Souktel that connected youth to employers was assessed to be extremely effective, and evaluators determined that the program could not have reached as many without use of technology.

Challenges

The program needed to provide phones to the poorest youth. Also the program did suffer from the security threats, and it lost InfoMatch services when a rocket hit in Mogadishu destroyed the internet backbone of the service provider. Youth experienced greater ease in using the service over time, suggesting that programs should account for a learning curve.

Status

Although the program ended in 2011, Shaqodoon continued as a local non-profit organization. Most recently, Silatech, Shaqodoon and the American Refugee Committee have started the Somali Youth Employment and Entrepreneurship Program (SYEEP), which will provide one-stop centers in several communities for employment and business support services. Youth will have access to soft skills training, and job placement. Young entrepreneurs will be able to access business development services and microfinance opportunities. See http://www.silatech.com/home/news-events/silatech-news/silatech-news-details/2014/06/12/-one-stop-shops-to-benefit-close-to-10-000-somali-youth

CASE STUDY 7

IMPROVING ACCESS TO EMPLOYMENT

The Improving Access to Employment Project was implemented in El Salvador from 2009-2013. Implementers were Carana Corporation, with RTI as a sub-contractor. The project sought to change the labor market system in El Salvador, by strengthening training institutions, helping youth prepare for the world of work, increasing the number skilled workers, and creating better mechanisms to articulate and disseminate information about employer's needs.

Funding

The project was a $7.6 million initiative, funded by USAID through the SEGIR Global Trade and Investment II contract.

Benefits

The Facebook page was named the number one NGO Facebook page in El Salvador, with more than 64,000 followers. The final report concluded that social media was a cost effective tool for outreach and assisted youth with establishing positive peers networks. The project also provided training on basic ICT tools to middle school teachers and technology coordinators; created an online internship platform that served 20,000 students and 600 businesses (Joven 360); helped the Ministry of Labor re-design its internet portal for job matching services; and created the first website in El Salvador dedication to providing information about vocational career paths for youth (Elijo mi Futoro).

CASE STUDY 7 *Continued*

Challenges | The final report noted that analytics that provided real time information about areas where youth were disinterested, to track events that generated interest, and which postings received the most clicks. This information was used to re-tool communications. The mid-term evaluation recommended that the employment platform be strengthened with more connections to public sector information systems.

Status | The program ended in 2013, information can be found on the Carana Corporation website project page at: http://www.carana.com/index.php?option=com_content&view=article&id=427&Itemid=65 and on the project website at: http://www.accesoalempleo.org/ (in Spanish)

CASE STUDY 8

CAMBODIA FARMERS TRAINING | The summative evaluation study was designed to determine whether online distance learning (ODL) was as effective as face-to-face training in enabling farmers to expand their knowledge of agricultural techniques. The training was provided to farmers by the Chea Sim University of Kamchaymear in Cambodia, and 44 percent of the participants were between the ages of 18 and 30. The authors of the study collected data on three groups: a first group who received the training face-to-face; a second group who received the training via self-instruction material on DVDs assisted by a facilitator; and a third group who received training as the second group, but with mobile phones to provide student learning support. The mobile phones had Khmer script SMS, camera, and multimedia messaging (MMS) capabilities, which are uncommon features in Cambodia.

Funding | The project was managed by the Pan Asian Distance and Open Resources Access (PANdora) network and supported by the International Development Research Centre (IDRC) of Canada.

Benefits | The study surveyed farmers to determine the extent to different groups adopted the new techniques after training. Overall, the research found that ODL was as effective as face-to-face instruction. The authors note that the course material will be available from PANdora online, and has been made available under a Creative Commons license such that only a small fee for CD burning and distribution will be required. In addition, the authors note that several instructors have been trained to use the material, it was anticipated that the experience gained would diminish the cost of designing and using ODL material in the future.

Challenges | Participants didn't use the MMS capability of the phones, preferring instead to contact lecturers to ask questions about content. While this involved using more lecturer time and involved extra costs, farmers did use the technology to ask questions, in a culture where rote learning and fear of asking questions is the norm. Also, the study was too short to demonstrate whether ODL materials translated to lower costs per user. Follow up study will be needed to better understand the distribution and use of materials and if this increases the number off trainees over time.

Status | The online distance learning materials have been distributed more widely through informal channels, but there has not been funding to track their use. Currently, iReach and Chea Sim University of Kamchaymear agriculture students bring laptops with the ODL material to farmers in their villages, and farmers also visit a model farm developed and maintained by students.

CASE STUDY 9

SAMASOURCE

Samasource is an award-winning social enterprise that specializes in Business Process Outsourcing (BPO). Using its SamaHub platform, the organization breaks down business processes into microwork (with a trademarked Samasource Microwork model). The tasks are then completed by workers in Kenya, Haiti and elsewhere. To make sure that work is performed with sufficient quality and speed, Samasource provides online training and support to its franchisees, with online monitoring of staff performance and other organizational support. By bringing jobs to people in extremely poor areas in developing countries, Samasource engages in Impact Sourcing, where the benefits of outsourcing are made available to a disadvantaged workers. Samasource has benefited from support from Mastercard Foundation, the Rockefeller Foundation and the Cisco Foundation, among others.

Funding

Samasource receives donations, but also has a number of customers. As a social enterprise, revenue from commercial operations is reinvested back into the organization, and local partners are expected to re-invest 40% of profits in training, salaries and community programs.

Benefits

The Cisco Foundation site reports that Samasource workers increased their income by 114% after 5 months, experienced a 61% increase in income stability, and that 75% of workers get a promotion, are hired in the formal sector, or pursue formal education.

Challenges

An analysis of the Samasource Impact Reports for 2013 and the first quarter of 2014 shows variation in employee retention. In 2013 between the third and fourth quarters, total number of employees went from 802 to 661. However, by the first quarter of 2014 the number of employees had rebounded to 951 overall.

Status

For current information on Samasource, see their website at: http://samasource.org/services/why-samasource/why-samasource-for-digital-projects. For their work with Cisco, see http://csr.cisco.com/casestudy/samasource.

CASE STUDY 10

RURALSHORES

RuralShores has been the recipient of multiple awards, including the Edison Award for Social Impact. The organization currently has 17 rural processing centers, where rural youth work in business process outsourcing for a variety of Indian companies. The goal of the organization is to have a center in 500 rural locations, and employ 100,000 rural youth by 2020.

Funding

RuralShores is able to capitalize on the labor cost differential between rural and urban employment. In addition to cheaper labor costs, rural employees tend to be more stable, and less likely to leave for other employment. RuralShores operates as a business entity,

Benefits

RuralShores has created a model that specifically targets the rural workforce, and is able to provide employment to those with minimal qualifications. By providing door-step employment in rural areas, RuralShores seeks to stimulate the infrastructure, improve school attendance rates, support women's employment outside the home, and prevent migration from rural to urban centers. Employees are also engaged per company policy in community uplift activities.

Challenges

Both electricity and telecommunications services can be uncertain in rural areas. In addition to purchasing generators, RuralShores also contracted with two telecommunications providers, to ensure backup. To compensate for differences among different rural areas, RuralShores contracts with a local partner to provide and manage the infrastructure, while remaining responsible for service delivery. Most rural youth needed training in computers, English, and soft work skills. Centers are kept small to avoid increasing management costs. RuralShores has contracted with local training institutes to provide certification, providing 50% of the cost of training up front, which would subsequently be paid back by an employee over time once hired.

Status

Information on RuralShores can be found on their website at: http://ruralshores.com/index.html

CASE STUDY 11

ENTRA21   The Entra 21 program was active from 2001-2011. The program targeted youth in the LAC region between the ages of 16 and 29, to provide them with ICT and life skills to strengthen their chances for employment and to decrease the youth unemployment rate. Phase I provided almost 20,000 urban and rural youth with training, through 35 projects in 18 countries.

Funding   Phase I of the program (2001-2007) was funded by the Inter-American Development Bank (IADB). The organization provided a matching grant of $10 million. This was met and exceeded by the International Youth Foundation, which raised $17 million from a variety of local funders and others including USAID, Nokia, Microsoft and Merrill Lynch, for an overall program total amount of $27 million. Phase II was funded by a matching grant of $10 million from the IDB's Multilateral Investment Fund. Both phases were implemented by the International Youth Foundation (IYF).

Benefits   IYF assessed the role of ICT in programs in Chile, Colombia and Ecuador. The assessment found that youth valued ICTs to connect with their peers and with the larger community. Also, instructors found that ICTs were of value in the classroom, even with students who had not used technology for learning, and who had trouble with literacy. ICTs also helped youth with basic competencies, and allowed flexibility for faster and slower learners. Social media also facilitated placement and job searches for youth.

Challenges   Some youth did not like self-directed learning on computers. Also, the assessment noted that instructors must be careful not to minimize the relationship between youth and staff, as this is an important component of the training program. Also, the assessment noted that different types of skills are needed on staff to make sure the technology works well and to fully incorporate it into training and job search support.

Status   Although the program ended in 2011, it provided many lessons learned and a rich source of experience related to training programs for youth. Many studies, evaluations, assessments and fact sheets are available on the International Youth Foundation site at: http://library.iyfnet.org/search/site/entra%2021

CASE STUDY 12

IL & FS   IL&FS Skills Development Corporation (ISDC) is a joint venture between IL&FS and the Indian National Skill Development Corporation. Its objective is "to build and manage 100 IL&FS Institute of Skills (IIS) across India." According to the website, the long-term goal is to train 4 million people by 2022 through the Skills Programmes for INclusive Growth (SPRING). With its K-YAN multimedia computer device, the organization can create a training environment event in remote locations. IL&FS solves problems related to "...infrastructure deficiencies, poor quality of trainers and trainer absenteeism, and lack of supply-driven curriculum that is not in sync with the industry demands".

Funding   Youth are sponsored for training, with 65 percent sponsored by the government, and another 25 percent by private companies.

Benefits   The K-YAN is described as a community learning device, that has the capabilities of a computer, projector, and can provide other multimedia content to support interactive learning. By providing "standardized multimedia content to simulate 'difficult to teach' topics", the K-YAN "can reduce teacher training time, and increase the number of people who can be trained in a sitting." Most of the trainees are from lower income groups, who have an education level of

Challenges   IL&FS currently relies on sponsors for training, and will need to find other ways to source revenue, such as training fees from students.

Status   IL&FS continues to provide training. More information can be found at their website: http://skillschools.com/ILFSPRODUCTION/index.php?r=StaticHome/Marquee1/id/7

CASE STUDY 13

LABOURNET   Originating in Banglore, India, LabourNet is a social enterprise that provides skills certification, training, access to employment and social protection to individuals in the informal sector. LabourNet works with a wide range of partners, including government, NGOs, and businesses. A multiple award winner, LabourNet has trained more than 100,000 individuals.

Funding   LabourNet is supported by the National Skill Development Corporation of India, as well as support from Accenture, Bosch, CHF, and the Manipal Foundation.

Benefits   Workers receive an identity card, and LabourNet maintains a record of their skills and qualifications. They use mobile to keep in close touch with workers, and also to notify workers of opportunities. With a call center and online portal they collect customer requirements and match them to qualified workers. Also, with support from Accenture India, they have created videos to provide skills training in multiple languages.

Challenges   In a recent interview, LabourNet founder Gayathri Vasudevan noted that it was difficult to reach out to Small and Medium Entreprises (SMEs) across all sectors.

Status   LabourNet received equity investment from Acumen and the Michael and Susan Dell Foundation in December 2013, from the current information can be found on its website: http://labournet.in/

CASE STUDY 14

FRANCISTOWN TECHNICAL AND VOCATIONAL COLLEGE   At the time of the case study, Botswana faced increasing demand for secondary and technical education. The government acknowledged that increasing a skilled workforce was important for economic development, and that there was an imbalance between access to primary education and access to secondary and tertiary education. Botswana developed a technical education program in 2001. Francistown Technical and Vocational College was designated as flagship in this effort.

Funding   The Government of Botswana and the European Union.

Benefits   With support from the EU, the College implemented new teaching modalities, and seminars and workshops introduced } "new concepts in flexible teaching and learning as well as new pedagogic approaches and training in using Moodle".

Challenges   Challenges were related to policy and learning technologies. Although there initial participation in staff development activities, after a few months attendance was problematic. This was attributed to lack of support from college managers, more time needed to prepare content for Moodle, and concerns about risk. There was wide variation in the willingness of departments to embrace flexible learning approaches, there were local counterparts for technical advisors to transfers skills to, and inflexibility in the government teaching system.

Status   For current information see the College webpage at: http://www.ub.bw/content/id/1702/pid/1702/ ac/1/fac/22/List-of-Services-offered-by-the-Division/-Department/

CASE STUDY 15

PAJE-NIETA

This project is designed to assist 10,000 peri-urban and rural youth in Mali in acquiring literacy and numeracy skills; to provide readiness, financial, and business skills training; and to provide links to credit and savings programs to facilitate the purchase of start-up equipment. The program uses

Funding

A $30 million USAID-funded project, starting in October 1, 2010 and ending September 30, 2015. EDC is partnering with Association Jeunesse Action, Catholic Relief Services, and Swisscontact to implement the project.

Benefits

Rural youth can access skills training via mobile phones, with pre-loaded content that reinforces literacy and financial skills. Information is provided in Bambara and French. According to data from the mEducation Alliance site, "fifty-six percent of youth who completed technical training with the PAJE-Nièta project have gone on to successfully start a micro-enterprise".

Challenges

EDC developed the Stepping Stone application, that enabled content to be presented in slides on Java-enabled mobile phones. According to the mEducation Alliance site, phones are pre-loaded with 'Learn to Read' at access kiosks, and new lessons are distributed on MicroSD cards which are available for purchase.

Status

The program is ongoing. Current information can be accessed from the mEducation Alliance site at: http://www.meducationalliance.org/content/paje-ni%C3%A8ta-support-youth-entrepreneurs-project and http://idd.edc.org/projects/mali-support-youth-entrepreneurs-project-paje-nieta

CASE STUDY 16

HARAMBEE AND TAASISI

Starting in 2011, Harambee is a South African "youth employment incubator" that provides 18-28 year old youth, with a matric qualification but less than a year of job experience, with targeted training to improve their literacy, numeracy and analytical skills, as well as teaching them appropriate soft skills for the business environment. Youth apply through a mobile phone application, and must pass an assessment test to see if they will meet the needs of employers participating in the program. Those who do not pass the assessment test are still assisted with a career assessment, job-hunting tips, referrals to other companies, advice on education, links to volunteer organizations, and advice on how to apply for a grant for further training.

Funding

The Harambee program was created by Yellowwoods Ventures Investments, an investment holding company for several South African firms including Hollard, Clientele, Telesure, Direct Axis, and Nandos. The program website asks for donations of funds, expertise, equipment and fees from employers who are seeking entry-level employees. According to its Facebook page, Harambee received funding from the South African government Jobs Fund as well.

Benefits

To date, Harambee has placed over 7000 people in work, and is on target to reach their goal of 75,000 placements by December 2014. It has also done screenings for 75,000 individuals in total, and is operating in nine provinces in South Africa. The benefits for employers according to the Harambee website include "improved performance, improved retention rates, lower HR spend, skilled and motivated employees with the potential to rise to management level".

Challenges

The research was not able to find a current evaluation of the Harambee program.

Status

The Harambee website offers current news at: http://harambee.co.za/harambee/

CASE STUDY 17

INVEST The INVEST Africa project is implemented by the Commonwealth of Learning (CoL). The program builds the capacity of Technical and Vocational Skill Development (TVSD) institutions to use ICTs to provide flexible and open distance learning that can serve the informal sector, improve the quality of skills development, and reach more individuals and communities. Targets include policy development, strategic and capacity planning, organizational development, and ICT infrastructure management. Stakeholders learn through online courses on the COL Moodle Learning Management System (LMS) and connect with colleagues through the INVEST Community Learning Network Community of Practice.

Funding Funding is provided by the Commonwealth of Learning.

Benefits As noted in the most recent monitoring report, the 13 member institutions reached 1799 learners in with new informal sector courses. In addition, a significant number of new courses (65) were either being offered or were in development to target informal sector workers, and 65 new non-formal courses, and all member institutions were using technology components and curriculum, such as social media, email, PowerPoint presentations, websites, video and mobile phones.

Challenges This program is currently involved to demonstrate proof of concept, and so will need to think carefully about how to scale. The most recent M&E analysis found that one challenge was to get substantive involvement key officials, although there has been an increase in involvement by partner institutions.

Status The program is currently developing a new six year plan, and will be holding a meeting with partners in November for review and comment. For more information see: http://www.col.org/progServ/programmes/livelihoods/skillsDev/Pages/FlexibleSkillsAfrica.aspx

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