



Key challenges faced by masons

- Although many of the masons were competent and highly skilled in other trades, such as carpentry, electrical fitting, etc., they lacked proof of their qualification. Only masons with formal qualification are authorized to work in construction sites, and the lack of formal recognition exposed them to harassment and denied them many opportunities.
- Many of these masons were unable to generate business because of a lack of proper communication skills or understanding of how to deal with clients. The lack of formal training also led to incorrect estimations and inaccurate interpretation of drawings.
- Since the masons have no formal qualifications, they cannot be certified by relevant authorities, limiting their opportunities to expand their businesses.

Artisan training to improve housing quality

Introduction

One of the key objectives of the Building Assets, Unlocking Access project was to work with financial service providers to develop a housing microfinance product that included nonfinancial housing support services as value-added services. In doing so, the project hoped to improve the use of the loan and to enhance the quality of construction for clients. The embedded housing support services included a range of activities and strategies, such as construction guidance, assistance in budgeting for the home improvement project, advice on prioritization of home improvements, legal assistance in securing formal recognition of land tenure, and provision of flyers with tips to supervise the quality of construction of some targeted types of home improvements.

As Habitat for Humanity's Terwilliger Center for Innovation in Shelter team engaged with the financial service providers to advise them on the design of the housing microfinance product, it became clear that the financial service providers were reluctant to provide these housing support services directly. Adding these services to the provision of loans was not attractive to them because of the perception of culpability and subsequent legal issues resulting from wrong technical information being offered to clients by the staff of the lending institutions, which could end in growing defaults in the portfolio – a perception that has been observed in other geographies, as well.



Artisans attend a certification ceremony for the training in Kenya.



In the *2016-17 State of Housing Microfinance*, a recent publication by Habitat's Terwilliger Center, less than 50 percent of financial service providers with a housing microfinance portfolio reported that they offer housing support services. The most common reason cited for not offering these services to their borrowers was "insufficient capacity."

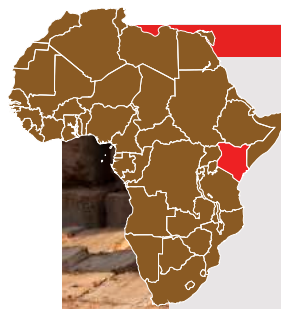
An assessment of 40 houses built or improved with loans from financial service providers was conducted in Kenya as a part of the pilot phase. This assessment revealed that the quality of houses improved as one moved from rural to urban areas, where the homeowners could access more skilled and competent artisans. The research also found that capacity and knowledge gaps among the masons did not help low-income households achieve improvements with the desired quality levels. The majority of the masons involved with the building or improvements were supporting the clients with advice in drafting initial construction plans, developing material lists, approximating costs, and construction. It was found, however, that they learned their trade through informal apprenticeships¹ and received no formal training.

These findings confirmed other studies conducted by the Terwilliger Center in other geographies, which found that a key element in promoting access to quality affordable housing includes access to skilled and affordable labor. This need for skilled labor was also confirmed through the initial market research studies conducted as part of the product development process of the Building Assets, Unlocking Access project, and was further reaffirmed through a market mapping study² implemented in Kenya and Uganda that found low-quality housing standards reflect the skills and quality of the local mason (*fundis*) involved in the construction. Low-income households in both urban and rural areas tend to work with local masons, who influence the material purchase process, budgeting and design. While these local masons are more flexible than professional architects and engineers, their lack of knowledge in building techniques, combined with poor enforcement of building codes, has largely affected their ability to innovate and recommend better building technologies and materials to their low-income clients. This, in effect, increases the cost of construction and the ability to construct decent and safe dwellings.

What did the artisan training include?

Based on the research mentioned above, the Terwilliger Center team decided to develop and implement a program to train masons as a first step toward addressing the skill gap in the market and as a way to provide indirect nonfinancial housing support services to low-

income households accessing housing loans from the project's financial service providers. This program, Artisanal Competency-Based Skills Assessment and Training, was designed to support the assessment and certification of skilled and competent artisans and to train them on soft skills. Given that many of the masons in the market were already skilled, it was important to develop an approach that included formalizing and recognizing these skills and combining them with new knowledge, skills, competencies and lifelong learning. To address the challenges identified for skilled masons, the Terwilliger Center team developed a training curriculum that would leverage the masons' existing knowledge and fill the gap, ultimately providing certification or formal accreditation. The model of the training involved the development of an assessment curriculum and the selection of a training institution to assess the masons' competency on live sites.



Kenya (four counties)

- 140 masons were assessed.
- 112 were certified as competent in various masonry trades.
- 87 of the certified masons went through further soft skills training.

Uganda (two districts)

- 70 masons were assessed.
- 66 were certified as competent.
- 66 attended soft skills training.



The pilot project had two target segments: masons with basic competencies who had not received any formal training, and masons who had received formal training but remained uncertified. For the first group, the project included assessment of skill levels, training, and approval of masons in various construction-related trades in readiness for certification by the relevant national-level construction authority. For the formally trained but uncertified masons, the project focused on the recognition of prior learning so that they could receive the mandatory certification from the national-level construction authority or accredited government institutions (e.g., national polytechnics, accredited technical institutions and universities have the legal authority to issue recognized trade test certificates). All masons underwent a competency-based skills assessment³ and soft skills training.



Competency-based skills assessment

An initial competency-based skills assessment was conducted to establish the knowledge and skills of individual masons. Those with basic skills would be selected for further training on soft skills that would help them improve the quality and level of their services. To conduct these assessments, the project team identified local consultants and technical training partners who could continue to provide training and certification services in their markets. The core technical competencies assessed are the basic skills required of a mason in accordance with industry standards. They include:

- Setting out.
- Brick/block laying.
- Plastering.
- Flooring.

Soft skills training

The competency-based assessment process highlighted that in addition to core technical skills, many of the masons lacked required soft skills that would allow them to build strong work relationships, work more productively and advance their career prospects. In both Kenya and Uganda, Habitat's Terwilliger Center team undertook a systematic soft skills needs assessment for the masons who

already had been assessed for core technical competency. The results of the soft skills training assessment were used to develop a series of training modules to address skills gaps. These modules were delivered in collaboration with the local training partners. The specific training in each country was tailored to the needs of the groups, but the key topics covered included:

- **Personal ethics and traits** – e.g., morals and ethics, empathy, and professionalism in the masonry occupation.
- **Personal abilities** – focusing on general skills and time management.
- **Entrepreneurial skills** – covering negotiation skills, personal selling and marketing skills, teamwork in the masonry occupation, and business and fiscal management.
- **Masonry-specific skills** – estimating material quantities, interpreting architectural drawings, and activity-based costing.
- **Effective communication skills for masons** – verbal and nonverbal communication focusing on how masons talk to and discuss plans with potential clients, communicate with workers at site, and talk with authorities. This also included listening skills, so that masons can understand customers' needs and address challenges on the site; negotiation and problem solving; and decision making.

What are the success factors and challenges of artisan training?

Important lessons have emerged, some of which reflect the success of expanding this type of training and certification process, and others that reflect remaining challenges.

Success factors

- A systematic approach to developing the process for competency assessment and soft skills training, based on the experience of the Terwilliger Center team, ensured that the training was relevant and useful to the participants. The inclusion of soft skills in the training was especially beneficial for masons because the job training does not offer such skills, and the lack of soft skills was seen as a major stumbling block in their ability to get new clients.
- The training curriculum was built to leverage the mason's existing knowledge while filling any knowledge gaps and allowing for the formal recognition of informal learning acquired outside of accredited courses. Through a combination of recognition of prior learning,⁴ formal qualifications and certification of these masons, the training curriculum provides support for increasing the supply of qualified and certified masons who could serve low-income clients.



- Working with local technical training institutions who can continue to offer training in the future will ensure that there is a consistent supply of certified and trained masons for housing microfinance clients.
- Working with the government and the national-level construction authority to certify the masons created wide acceptance of the certification by both the community and the industry, increasing the income potential for masons.

Challenges

- When the pilot was designed, the project team expected the financial institutions to identify skilled masons through referrals from their existing clients. Many clients of the financial institutions, however, saw this as an opportunity to promote their immediate family members to be trained and certified instead of suggesting skilled masons within the community. The project team quickly revised its strategy and had the financial institutions hire local “mobilizers” who were knowledgeable about the community and could identify skilled masons based on the minimum criteria provided by the project team. This revised approach paid off, as most of the selected masons were able to complete the training and be certified.
- When the artisan training strategy was developed, the government of Kenya was promoting a competency-based approach in all technical education, so the project team aligned its strategy with this focus. Initially, the project team identified the Technical University of Kenya, or TUK, which has a number of affiliates across the country and issues certifications, as the ideal partner to deliver the training. The process of creating this partnership was significantly delayed, however, because of the lengthy approval processes within the TUK system. The Terwilliger Center team decided to revise its approach and identified a new partner, National Polytechnic Institute, or NPI, which was very effective. NPI recognized that this project would allow it to comply with the government mandate to promote competency-based education, and thus benefit the institution in the long term. Although TUK would have provided broader coverage in terms of geography, the partnership with NPI allowed the project to pilot the training approach and develop a model that could be scaled in the future.
- Once the masons were trained, they were formally registered with the National Accreditation Authority, and a list of the trained masons for each area was shared with the local branch of the financial institutions so that the staff could share it with housing microfinance clients. This linkage process did not play out as expected, however. Although homeowners say they want competent and trained masons, they place greater value on referrals from friends and family members than on formal accreditation or recommendations from an institution. There is also a perception among clients that an accredited mason is more expensive. In Kenya, the financial institution was unwilling to push clients to use accredited masons, because it did not want to assume liability in case the client was unhappy with the mason's performance. In Uganda, the financial institution was more willing to recommend accredited masons, in part



because the institution is more used to working in partnership with other actors as part of its business strategy. Developing a better understanding of customer behavior and incentives while choosing value-added services can help refine the product offering.

- During the pilot, the average cost to train a mason was estimated at US\$450. This includes the technical competency assessment and soft skills training on incremental building, drawing plans, costing, and communicating with homeowners. When reviewing the pilot, the team looked at potential areas for cost reduction, such as shortening the duration of the competency assessment process, which in turn would bring down the cost of boarding and lodging. Even with these potential adjustments, the training would be unsustainable for the masons and the provider. Additional savings may be achieved if the competency assessment process can be automated using photos of past work or conducting assessments on live sites. Looking at opportunities for leveraging government subsidies for technical and vocational training also could make this a more viable proposition.

What are the considerations for developing a scalable artisan training? Who should be involved in taking this type of training to scale?

Having key government institutions be involved from the beginning of the development of the artisan training curriculum and methodology proved to be a key factor in ensuring the training's success. In both Kenya and Uganda, the local institutional partners were engaged in every step of developing and delivering the competency-based assessment and soft skill training for masons. Partnering with local technical training institutions was an integral part of the strategy.

What were the main differences and similarities between the Kenya and Uganda trainings? Why?

The artisan training pilots were conducted drawing masons from four counties in Kenya and two districts in Uganda. The overall objectives were similar in both countries, but there was some difference in approach based on the context.

Similarities

- **Common objective:** In both Kenya and Uganda, the primary objective of the training was to build the capacity of artisans so that they could offer quality construction work to the housing microfinance clients of financial service providers who participated in the Building Assets, Unlocking Access project. This, in turn, would increase the pool of certified

masons with improved soft skills, who would then provide more efficient and effective services to the clients of financial service providers. The project anticipated that the list of certified and trained masons would be shared with partnering financial service providers in each county. The key outcome expected was high-quality houses built through technical advice and construction services provided by recommended artisans.

- **Curriculum:** The curriculum for both the competency-based assessment and the soft skills building were similar in both Kenya and Uganda. In both countries, the competency-based assessment process focused on core competency skills of masonry that included setting out of works, brick/block laying, plastering, and flooring. Soft skills covered interpretation of building plans, building materials estimation, communication, interpersonal skills and work ethics, labor costing and construction, health and safety, and financial education (spending and savings). In addition, the masons' selection criteria was developed in collaboration with the technical institutions and government authorities responsible for technical and vocational training.
- **Accreditation:** Masons in both Uganda and Kenya who successfully completed the trainings were accredited by national authorities: the NCA in Kenya and the Directorate of Industrial Training, or DIT, in Uganda.

Differences

There was no significant difference between the training in Uganda and Kenya in terms of methodology, process of implementation, or outcomes. The main difference was the regulatory regimes in the two countries with regard to accreditation of masons. Kenya, through the NCA, requires that masons in construction are accredited; Uganda has no such requirement. It was expected that masons would find a great value in certification and subsequent accreditation by the NCA in Kenya, but the evaluation does not provide strong evidence to support this hypothesis. Instead, masons valued the training because it provided them with better opportunities. The other difference was that Kenya already had developed qualification standards for masonry, but Uganda did not have such standards at the time of the training. In order to align with the qualification standards, the Kenya assessment mirrored the standards with the aim of affording the learners with credits when the standards are operationalized. In Kenya, the competency assessment was undertaken by a national polytechnic institution, which is allowed by regulation to develop curriculum, to test and to issue recognized educational certificates. In Uganda, the assessment was conducted by Mamza Consulting, whose certification was sufficient but not nationally recognized.

What is the clients' perceived value of having access to trained artisans? Are they willing to pay for those services because of the perceived added value?

A comprehensive evaluation of the training in both Kenya and Uganda showed that these trainings were highly valued by the masons and had a positive effect on the homeowners and partner training institutions. These external evaluations, conducted in late 2017, gathered information through a qualitative research process, including focus group discussions and in-depth individual interviews with certified masons, homeowners and technical institutions, coupled with a literature review of relevant documentation. Given that these weren't impact evaluations, a convenience sampling

method was used, and the evaluators selected masons and homeowners who were nearby and willing to participate. The table below provides a summary of the responses on the perceived value of the training by the masons and the homeowners.

It is important to note that when asked about the perception of the masons who were certified, the homeowners indicated that they see the value of certification and might be willing to pay for that increased value, but a number of homeowners said they prefer to work with masons who had significant practical experience even without a formal certification. Personal relationships and familiarity with the mason's past work were considered more valuable than certification.

Masons	Homeowners
<ul style="list-style-type: none"> • Able to provide higher quality of service to clients, resulting in improved client satisfaction. • More work through client referrals. • Efficient budgeting resulting in cost savings for clients. • Improved relationship with clients as a result of improved communication. • Partnering and collaborating with other masons and sharing the workload. 	<ul style="list-style-type: none"> • Certification confirms that the mason is competent and serves as proof of their competence. • Trained masons were able to develop better plans and provide cost savings. • Ability to hire local masons who are accredited and known to the community. • Hiring mason for working on commercial premises, as they were now certified.

End notes

¹ Informal apprenticeship, as defined by the International Labor Organization, refers to the system by which a learner (the apprentice) acquires the skills for a trade or craft in a micro- or small-enterprise context, learning and working side by side with an experienced craftsman.

² *Kenya Market Mapping and Value Chain Analysis*. 2013. Habitat for Humanity International. Atlanta, Georgia. <https://www.habitat.org/sites/default/files/mastercard-kenya-housing-market-mapping.pdf>

³ Competence-based skills assessment: Competence is the ability of the learner to put skills and knowledge into action (Humphrey,1992). Masons were assessed on their ability to deliver acceptable standards in setting out, block/brick walling, plastering and flooring.

⁴ "Workplace Learning, Apprenticeships, and Recognition of Prior Learning." International Labour Organization. <https://www.ilo.org/skills/areas/work-based-learning/lang--en/index.htm#banner>

The Building Assets, Unlocking Access project is implemented by Habitat for Humanity International's Terwilliger Center for Innovation in Shelter in partnership with the Mastercard Foundation to develop housing microfinance products and nonfinancial support services for people living on US\$5 to \$10 per day. The aim is to enable these people to secure adequate and affordable housing and improve their living conditions.

To learn more about the partnership between Habitat for Humanity's Terwilliger Center and the Mastercard Foundation, and about the lessons emerging from the Building Assets, Unlocking Access project, visit

[habitat.org/impact/our-work/terwilliger-center-innovation-in-sheltersolutions-for-people-in-sub-saharan-africa](https://www.habitat.org/impact/our-work/terwilliger-center-innovation-in-sheltersolutions-for-people-in-sub-saharan-africa).