



Embedded Education:

Lessons Learned from Three Branchless Banking Projects

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INTRODUCTION

The delivery of a financial service involves three critical elements: the consumer, the service provider’s operations, and the financial product.

They meet at various touch points in the consumer’s journey from first contact to uptake to regular use. Retail financial service providers (FSPs) live and die by what happens at those touch points. In partnership with The MasterCard Foundation, Microfinance Opportunities conducted three pilot studies that examined what would happen to customer behavior if consumer education was *embedded* in the touch points between a consumer and their FSP who was serving them through a branchless banking network. Would there be a change in consumer knowledge and skills? How would consumers act on those changes both in their interactions with the FSP providing the education and in other parts of their financial lives? And what could we learn, operationally, from the process of building three different embedded education programs in three very different settings?

Figure 1: CEBB Partners



This paper synthesizes the lessons we have learned from this 4-year project on **Consumer Education for Branchless Banking** (CEBB) in the Philippines, India, and Zambia. The lessons fall into four categories: the development of new, or the refinement of existing, conceptual frameworks that provide practical insights and guides to action; the operational challenges of embedding consumer education in financial service touch points; the importance of confidence, trust, and risk in extending BB services; and the impact of consumer education on

financial capability not only of consumers but also of front-line staff. The key lessons we learned were:

- **Conceptual Frameworks.** Conceptualizing and accounting for all the factors that affect the interaction between an FSP and a consumer is a complex task that can be broken down into a number of different useful frameworks:
 - The touch point as the intersection of operations, product, and consumer;
 - The consumer’s journey from first contact, to uptake, to regular use;
 - The consumer’s education journey from awareness, to understanding, to trial, to regular use;
 - The determinants of consumer financial capability and behavior that include knowledge and skills, attitudes and self-efficacy, and the social structure of their environment.
- **Risk, trust, and confidence.** These play key roles in the customer’s journey and in the design of a consumer education program, specifically:
 - Branchless Banking (BB) services are asking consumers to take a risk when they “leap frog” from informal financial services to a formal service that also incorporates a new technology component. As a result...
 - BB services need to build trust, which can be tested in a number of different ways, from customers’ expectations that they will receive a paper receipt to the look of agents’ shops where customers perform transactions;
 - Consumers need to be made to feel confident that they can use the service properly, and that they will know what to do when a transaction goes wrong.
- **Operational Challenges.** The number of different factors that need to be in place for a branchless banking operation to work successfully is very large.
 - Embedding consumer education into that operation can add to this complexity, but it also brings a tremendous benefit: a laser-like focus on the needs of the customer around which an effective branchless banking service can be built.
 - Furthermore, because the education is embedded, there are plenty of opportunities for customers to practice what they learn through their financial interactions with the FSP.
 - As a result, we are convinced that there is a business case for embedded consumer education.
- **Impact on Financial Capabilities.** Despite operational challenges, the pilots produced clear evidence of:
 - A change in knowledge and skills on the part of consumers and front-line staff.
 - A change in attitudes towards branchless banking and in customers’ and front-line staff’s sense of self-efficacy.
 - Significant behavior change, towards a more strategic approach to debt management, amongst VisionFund, Zambia customers exposed to consumer education.

The rest of this paper documents these lessons in more detail.

CONCEPTUAL FRAMEWORKS

The MFO team working on the CEBB project had to make sense of considerable amounts of information throughout the life of the project.

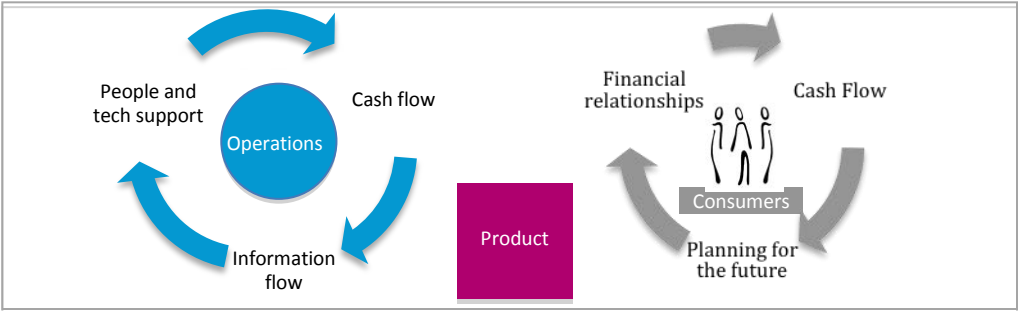
To do so, we adopted and adapted conceptual frameworks from the existing literature and created a number of new frameworks. These enabled us to make sense of the information we were receiving and to act on it. We think these frameworks are useful tools for those interested in implementing an embedded education program in a BB setting and in other settings.

CONSUMER, OPERATIONS, AND PRODUCT

A customer of a BB service wants to withdraw cash from her bank account using her smart card so she can pay her child’s school fees. To do so she meets with the local agent of the bank who is carrying a point-of-transaction (POT) device, through which he swipes the card to verify the identity of the customer and her account balance, and to generate a record of the transaction. Depending on the product, the bank might charge a fee for the withdrawal, or refuse the withdrawal without the payment of a penalty if it is a time deposit account. As a result, the point at which the consumer “touches” the FSP is informed by a wide variety of factors, that can be helpfully organized in terms of:

- The money management concerns of the consumer;
- The operational infrastructure and practices of the branchless banking (BB) service; and
- The parameters of the financial product the consumer is using.

Figure 2: Consumers, Operations, Product



The first two elements are dynamic. The consumer is always in the process of: a) managing their day-to-day cash flows, b) planning for the future, whether it is to mitigate risk or accumulate assets, and c) managing all their other financial relationships. In the case of the

operations of the BB service, there are a number of moving parts: a) the deployment of and support for the people and technology that enable the service to be delivered day in and day out; b) the movement of money into and out of the hands of the agents, both through interactions with customers and in interactions with the bank for which they are an agent; and finally, c) the movement of information from, in this case, the smart card to the point of sale device and then, at some point, to the bank. The last element, the product, is largely static but can undergo changes based on what happens at all the touch points at which consumers use the product.

The usefulness of this framework will become apparent when we discuss the role of an embedded consumer education approach in aligning the consumer with the operations of the BB service and the product it is offering.

CONSUMER JOURNEY AND THE LEARNING PROCESS

A consumer who becomes a regular user of a BB service has been on a journey. It starts when the BB service reaches out to the consumer directly through its marketing personnel, or the consumer becomes aware of the service through advertising or word of mouth. The next stage of the journey is the account opening process (uptake), which can take a myriad of forms and involve one or many steps depending on the product and the organization of the BB service's operations. Once the consumer has an account they perform their first transaction, which is critical, and then, if that goes well, they perform more transactions (use). Finally, if the customer and the BB service remain connected, the latter may try to cross-sell other financial products to the former (Figure 3).

Figure 3: Consumer to Customer Journey



All of the stages of the journey involve touch points, and each one has to be managed within the context of the dynamics of the consumer's money management practices and the operations of the BB service.

A BB service offering embedded education aims to provide education at each of the touch points along the consumer journey, to help the consumer decide whether they should continue the journey or not. Education can do this in two ways. First, by providing education regarding good basic money management practices, such as tracking income and expenses, strategies for saving, or effective debt management, a BB service can help a consumer become better informed about how the service on offer can help them manage their money more effectively. Second, the BB service can provide education on how to access and use the

service, something that is likely to be necessary where a new technology is being used at the customer interface. It may seem that the latter is just good basic marketing – any service provider will ensure that their customers know how to use it. But the CEBB pilot studies revealed that this basic marketing was not happening effectively and that there was considerable room to improve the capacity of front-line staff’s ability to explain the service they were trying to get their customers to use. Across all three pilots, this was a consistent message from front-line staff.

In thinking about the role of education in the consumer’s journey from adoption to regular use, the project adapted Everett Rogers’ Diffusion of Innovation model (Figure 4).

Figure 4: Consumer Education Journey

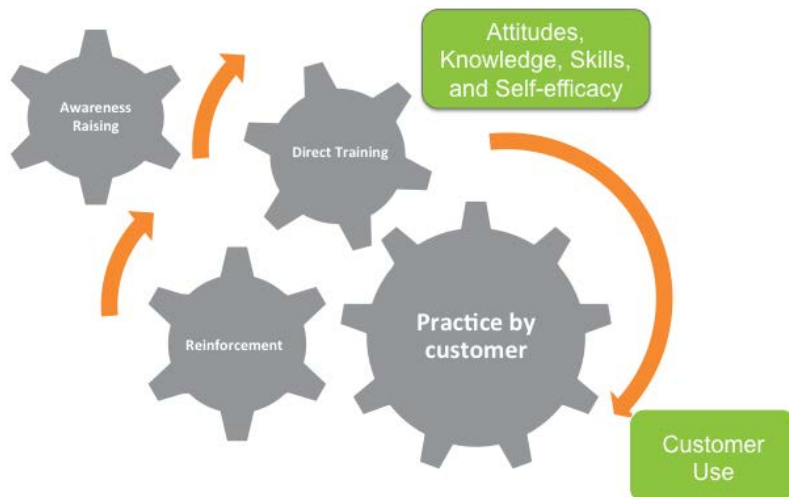


Adapted from Rogers (2003)

In this model, awareness is when the consumer becomes familiar with the financial service and what the various BB products can do. Understanding is when he or she comprehends the potential advantages and disadvantages of the financial service and then considers if they should use the BB service or not. Trial is when the customer decides to try the financial service to determine whether the BB experience matches their expectations. Regular use is when the customer realizes the benefits of the financial service and makes use of the BB products on a regular basis

One goal of MFO’s consumer education pilots was to ensure that education happened at the appropriate times in the consumer to customer journey. The aim was to achieve understanding before uptake and to educate consumers that enabled them both to give the service a fair trial and be equipped to evaluate it. When it came to regular use, the expectation was that customers could practice the money management lessons they learned through their interactions with agents of the BB service (Figure 5).

Figure 5: Financial Capability Development Model



FINANCIAL CAPABILITY AND DETERMINANTS OF CONSUMER BEHAVIOR

Another goal was to educate consumers within the context of a BB service and to see whether that education resulted in a change in knowledge, skills, attitude, self-efficacy, and, as a result, behavior. MFO did not aim to determine exactly how consumers were to behave but, rather, provide them with educational resources they could use to make their own choices. In the process, we refined our definition of financial capability, and developed a model for understanding the drivers of consumer behavior.

MFO staff began the CEBB project with a focus on financial literacy – financial knowledge and skills. But the interest in understanding behavior change soon led to a focus on financial capability, which includes a consumer’s willingness and ability to act. Though the project had a working definition of financial capability and used it to inform the development of the curricula in each country, the definition underwent refinement. Box 1 includes MFO’s current definition of financial capability. The thinking behind this definition is explained further on MFO’s web site at:

Box 1: Definition

FINANCIAL CAPABILITY
...is the combination of **KNOWLEDGE, SKILLS** and **SELF-EFFICACY** needed to **MAKE** and **EXERCISE** money management decisions that **BEST FIT** the circumstances of **ONE’S LIFE**, within an **ENABLING ENVIRONMENT** that includes, but is not limited to, **ACCESS** to **APPROPRIATE** financial services.

<http://www.microfinanceopportunities.org/mfo-news/news/what-is-financial-capability/>

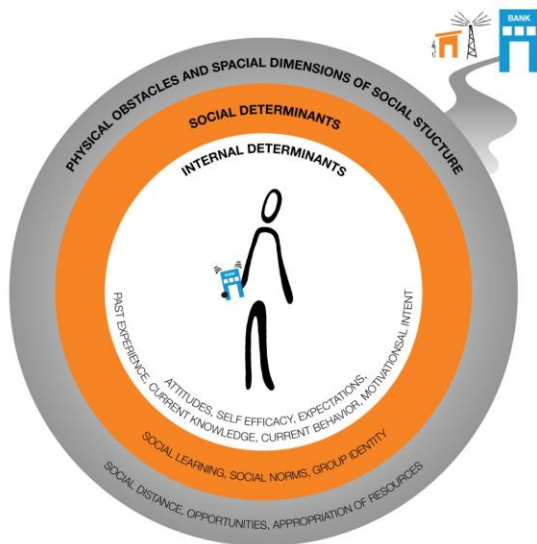
Determinants of Consumer Behavior

An important insight coming out of the work MFO did on defining financial capability was an understanding of the multi-faceted nature of the determinants of consumer behavior. There is increasing acknowledgement within the literature on economic development and consumer behavior that the “rational actor” model, in which consumers know their own preferences well, have full information, and can rationally choose the best option for themselves based on these two sets of data, is not useful for understanding consumer behavior and as the basis for forming policies designed to promote economic development. This rejection of the “rational actor” model had already occurred in a number of academic fields (sociology and anthropology, for example), but given the dominance of economics in the development field, it has taken the behavioral revolution in economics to achieve the full displacement of the old model.

Unfortunately, behavioral economics models of human behavior are often one-dimensional, leaving no room for the idea that humans exercise reason and that social context affects behavior. There is no doubt that humans have cognitive biases and act on impulse. But they

also reason and think, and education clearly has an impact on the ability of humans to do those things. On the other hand, how humans reason and think varies considerably depending on the context in which they are embedded, and how they act depends extensively on the expectations that others have of them. What we need is a model that acknowledges the multi-faceted nature of the determinants of human behavior: from the impulses we get from certain hormones and design stimuli, to our ability to think and reason, to the opportunities and constraints that society imposes on us in terms of what we know, how we think, and how we act (Figure 6).

Figure 6: Behavioral Determinants



This matters to a practitioner working on consumer education in the context of a BB service because they need to work out what is going on with the consumer to generate the best results for the consumer and for the BB service over the long-term.

RISK, TRUST, AND CONFIDENCE

A striking example of the importance of understanding the multi-faceted determinants of human behavior is the finding from the initial market research MFO conducted in all three countries regarding the extent to

which trust in the BB service and confidence in their ability to use the service drove use.

This is documented extensively in Lee and Jaramillo (2013) and in Cohen (2013). For example, physical location had a great deal of impact on whether consumers trusted the service or not. In the case of FINO PayTech (henceforth referred to as FINO), consumers noted that *bandhus* (agents) had no physical location, but “roamed” throughout the village, and this raised questions in the minds of consumers as to what might happen to their money. In Zambia, consumers noted that the agents’ locations were often very ordinary, informal shops and this raised questions in their minds about the viability of the agents. As a result, MFO included in its education materials information about the relationship between agents and the organizations they represented as a way to address such issues.

In terms of confidence, consumers expressed a number of concerns about the way the BB technologies they encountered worked and whether a service based on such technologies was right for them. This was especially true in the Philippines and Zambia where the BB service was built on a mobile phone platform. For example, consumers indicated that they were not confident in using their PIN code for authorizing a monetary transaction from the phone, and they would give their PIN to the agents and have them perform the transactions for them -- something that increased the risk the BB service posed to them. As a result, MFO built into the education program information about how to memorize your PIN and why it is important to keep it to yourself.

Behind these concerns about trust and confidence is the fundamental issue of risk. BB services are asking low-income consumers to take a considerable risk whenever they ask them to part with their money to make a loan repayment or a savings deposit or whenever they ask a consumer to receive money through a BB channel, such as a loan disbursement or G2P payment. As Cohen (2013) points out, BB services are asking consumers to “leap frog” from the use of informal financial services, such as deposit collectors and money lenders, to a formal system that they will access through a new technology. In other words, they are being asked to make two major changes in the way they manage their money at the same time. Furthermore, the stakes they are playing with are not trivial. As noted above, cash flow management is a constant worry for low-income consumers, so they cannot afford even small mistakes in how they manage their cash. And loan disbursements inject a significant amount of liquidity into the life of the borrower and so having to trust a new technology to deliver the money can be nerve-racking.

As a result, it is very important for a BB service to understand the perceived and real risks their low-income consumers face when they take up and use the BB service. The BB service should be looking to mitigate those risks as far as possible to gain their customers’ trust.

OPERATIONAL CHALLENGES

Embedding education requires an understanding of the consumer, the operations of the FSP, and the financial product the FSP is offering.

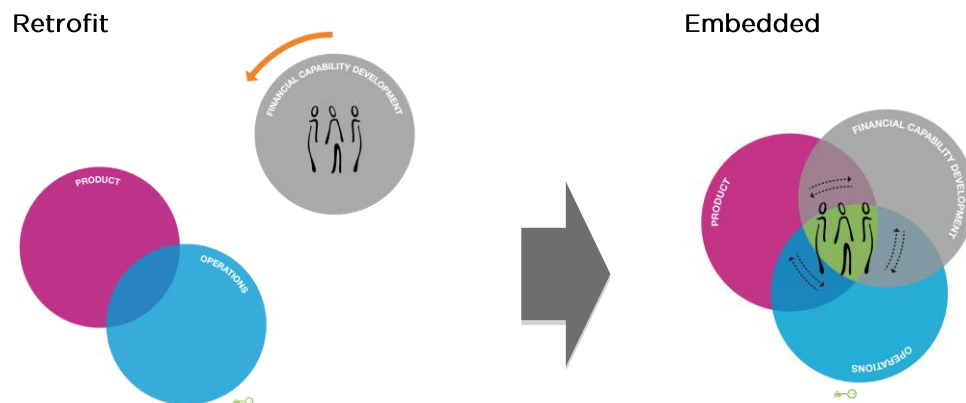
MFO has a long history of research and practice in understanding the financial needs of consumers. It is the founding ethos of the organization. What we learned during this project is how this focus on the consumer in the context of trying to embed consumer education in the operations of an FSP delivering a particular financial product can raise serious questions about the latter two elements – product and operations. Time and again, MFO staff, on the ground or through the analysis of data gathered from the field, identified situations in which operational challenges were throwing up barriers not only to effective education but effective financial service delivery.

In each country the challenges were unique and were contingent on the specific configuration of the BB network. But our experience suggests that there are three different categories of challenges:

- Internal performance challenges
 - In a distributed system that relies on agents, especially mobile ones, it is very easy to lose track of your agents and/or experience high turnover. These challenges are common in branchless banking initiatives and have the undesired effect of undermining consumers' trust in the system.
- Integration and partnership challenges
 - Branchless banking initiatives often involve a partnership between an FSP and a mobile money platform or some other operator. In the pilot projects partners did not share critical operational information with each other. For example, a mobile money platform did not send notifications to the credit officers of the FSP when a client had received a loan disbursement or made a payment.
 - Partnership issues were of sufficient concern that the partnership dissolved in two of the three pilots.
- Environmental challenges
 - Branchless banking, when working well, can extend the reach of an FSP into areas where it does not have branches through agents or banking correspondents. But that assumes that there are appropriately located and capable agents in areas where there are no branches, and that it will be more convenient for people to visit them than to visit branches, in the course of doing other business.

As a result, a key lesson from the three pilots is that it is very difficult to retrofit a concern with the consumer and the development of their financial capability after building a service delivery system (operations) and designing the product (Figure 7, left side). It is much easier to start with the consumer and their financial capability and build systems and products around them to ensure that all three elements critical to successful customer interactions are present and aligned from the start (Figure 7, right side).

Figure 7: Consumer Centered Approach



This has implications for the strategic role of consumer education and financial capability development: it should not be an afterthought, brought into to put a “band aid” on a failing operation; rather it should be a key consideration in the design of the delivery system and the financial product. All consumer education programs start with the question: what are the current financial capabilities of our customers or target market? A well-designed branchless banking service should start with the same question. Only then can an FSP work out what needs it can meet with a specific financial product, a specific delivery system, and a specific education program to develop the target market’s capabilities where necessary.

IMPACT ON FINANCIAL CAPABILITIES

Part of our confidence in the idea that there is a business case for consumer education embedded within a BB service is the very consistent message we got from the qualitative data that front-line staff found having the materials, content, and training for the

education program helped them perform their job more effectively in a number of different ways.

For example:

- Explaining the BB service to customers:

Consumer Education tools helped a lot in explaining to [my customers] about the mag-CellBank! services. Through these tools, I am able to explain what the services are all about and also able to tell them the steps in the use of these services. (Merchant, Philippines)

- Building customers' trust in the BB services

When we use to tell them [about the service] they trusted it very little, but because of training they completely trust FINO. (Bhandu, India)

- Improving customers' loan repayment performance:

I can give an example of a group in Ngwerere Compound north of Lusaka. I believe that the good repayment in this group can be attributed (to the) consumer education. (Credit Officer, Zambia)

This suggests that it is possible to recruit frontline staff into a consumer education program on the basis of it being good for how they do their job and that the time spent on going over education materials with customers is worth it. It is also possible that middle managers, who are often in charge of recruiting and training front-line staff, could see the value in consumer education for how they do their work. In particular, if an FE program can help reduce staff turnover, it would not only be a huge boon to managers, but it would also improve the quality of the education as front-line staff got more used to providing it to customers. Unfortunately we have no data on the question of staff turnover.

In terms of impacts on consumer financial capabilities, the qualitative data suggests that people who were exposed to consumer education experienced a change in their capabilities, on a variety of dimensions, for example:

- Seeing the value of the BB service:

The story in the flipbook is a familiar experience among us. We can relate to the stress associated with going to the bank to make transaction. What caught our attention is the fact that we do not have to close the store to make banking transactions. (Customer, Philippines)

- Managing their business and their debt:

The training was good for me because it opened up my mind. I used to just carry on the business like I (would) order goods for K50 or K60. When I sell I just use the money. When I want to order again I find that I am short of money and I have to borrow money to order because I have used part of my capital. But now after training I changed my system I use only profit for expenses and reinvest some profit in the business and my business has grown. (Customer, Zambia)

What the [credit officer] trained [us in] that we liked was the advantages and disadvantages of the loan. Some people get the loan without knowing what to do with it, and they buy lounge suites and television sets instead of investing in their business. We were also advised against borrowing from different sources which causes problems in servicing the debt. (Customer, Zambia)

But it was also clear that consumer education could not do the job of improving customers' financial capability on its own:

It [the training] is useful. But no one came [to conduct transactions]. (Customer, India)

Yes, I try to save some money for future but the bandhu doesn't come. (Customer, India)

In all three pilots the quantitative data showed some behavior change that was unlikely to be the product of chance. Though the number of people involved was very small, the data from the Philippines suggest that consumers exposed to the education program increased their use of BB services more generally than they might have otherwise. In India, because of operational challenges, there was no indication that the education program had an impact on the use of the FINO card, but the Diaries data suggest that women who received consumer education may have become more effective money managers. In the weeks immediately after the education, they showed an increase in remittance receipts, which they then used to decrease their debt obligations.

The data from Zambia are most clear-cut. Surveys testing the knowledge of VisionFund customers on money management issues and the use of the Zoono system before and after receiving the consumer education showed an improvement in test scores on 11 of the 12 money management questions, of which six (6) were statistically significant. In addition, the qualitative data prompted us to test three hypotheses regarding the behavior of consumers: that they a) became more strategic about the debt they took on; b) were more likely to repay their loans on time; and c) increased their use of other Zoono services after receiving

consumer education. An analysis of the data to test the first hypothesis suggests that, in fact, customers exposed to consumer education asked for smaller increases in their loan requests after being exposed to consumer education. The second hypothesis was tested using branch level portfolio-at-risk data. The data showed that average monthly 1-day and 30-day PAR were lower for branches that provided consumer education to their clients than for branches that did not provide consumer education to their clients. However, we found no evidence that education made a difference to the extent to which customers used Zoono services, though, generally, everyone, regardless of education exposure, increased their use of other services.

CONCLUSION

The three CEBB pilot projects have generated many lessons learned.

Many of those lessons stem from the challenges the projects faced at many different stages. But a central lesson from those challenges is that they might have been less severe, or not even have existed, if the BB services had incorporated consumer education into their operational build out and product design from the start. This is the case for the very simple reason that a focus on consumer education naturally requires a focus on the consumer, and that should be the starting point for any operational build out and product design. As a result, there is a business case to be made for incorporating consumer education into the development of a BB service from the start.

Starting with the consumer is not a new message, but it bears repeating given that there is plenty of evidence that many BB deployments are not starting with the consumer. Furthermore, we are recommending a particular way to “start with the consumer” - by working out what their capabilities are and working out what educational messages will best help them take advantage of a BB service built, as far as possible, to meet the consumer where they are. In other words, it is clear that it is never possible to build the perfect operations and design the perfect product, but a consumer-centered approach that seeks to embed education into the touch points with the consumer will make for better operations and a better design and also help mitigate the inevitable flaws.

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Additional Resources

Field Insight Series: The Role of Consumer Education in Adoption

1. *Uncovering Barriers to Branchless Banking A Synthesis of Consumer Capability Research in India, Malawi, Philippines, and Zambia*
2. *From Insights to Action: Building Client Trust and Confidence in Branchless Banking*
3. *Mobile Banking in the Philippines*
4. *Smart Cards in India*
5. *Microfinance and E-Payments in Zambia*
6. *Embedded Education Lessons Learned from Three Branchless Banking Projects*

Videos: Consumer Education for Branchless Banking Series

The Power of Agents: Smart Cards in India

Changing the Way We Look at Success: Mobile Banking in the Philippines

The Customer Focused Approach: Microfinance and E-Payments in Zambia

Why Consumer Education Matters for Branchless Banking

How Embedding Consumer Education is Easier to Implement than You Think

Outcomes Assessment Report Series

RBAP-MABS, Philippines

FINO PayTech, India

Zoono and VisionFund, Zambia

Consumer Education for Branchless Banking (CEBB) Online Course

<http://microfinanceopportunities.org/?p=2159>

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