

Scaling Human Support: From In-Person Coaching to AI-Enabled E-Coaching

Insights from Fifteen Years of Practice and Iteration¹

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Executive Summary

Human coaching has long been recognized as a critical component of effective social programs in contexts of poverty and vulnerability. Trusted relationships—built through sustained, personalized interaction—help people translate information into action, build confidence, and navigate uncertainty. Yet this strength also poses a persistent challenge: intensive human support is costly, difficult to standardize, and hard to scale as programs expand and resources remain constrained.

This article reflects on **fifteen years of experimentation and iteration** at Fundación Capital in integrating technology into coaching models, with the aim of preserving the core value of human support while improving reach, consistency, and cost-efficiency. Drawing on experiences across Latin America and beyond, the paper traces three generations of e-coaching: offline edutainment applications (2010), chatbot-based systems using messaging platforms (2019), and more recent AI-enabled e-coaching tools (2024). Across these stages, the analysis focuses not only on what technologies were introduced, but on how they were deployed, adopted, and embedded within broader program designs.

The article shows that **technology has never replaced human coaching**. Instead, digital tools have progressively reshaped how coaching time is used, which functions can be

¹ Fundación Capital has established a dedicated area responsible for the design of digital solutions, working in close collaboration with thematic and implementation teams. This document reflects the collective work of Fundación Capital as an organization; however, the views expressed—particularly regarding what has worked and what has not—are those of the author, drawing on her experience in the design and implementation of livelihoods initiatives, and do not necessarily represent the official positions of Fundación Capital.

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standardized, and where human judgment remains indispensable. Across these stages, three cross-cutting lessons emerge. First, technology is most effective when it **reinforces—rather than substitutes—human support**, allowing in-person interactions to be spaced out without compromising effectiveness. Second, adoption depends less on technical sophistication than on **deliberate user acquisition strategies**, anchored in trust and human mediation. Coaches and trusted local actors play a decisive role in legitimizing technology and supporting early use. Third, **segmentation is essential**: no single digital channel works equally well for all populations. Solutions must be aligned with users' access to devices, connectivity, literacy, and everyday digital habits.

Looking ahead, the next frontier in e-coaching lies not in delivering more information, but in supporting **everyday business and livelihood practices**. AI-enabled systems can function as practical assistants for small entrepreneurs, helping them organize tasks, anticipate needs, and make decisions. To be effective, these tools should be embedded within trust-based, hybrid models that maintain human oversight and agency.

Artificial intelligence is not presented as an endpoint, but as part of an evolving ecosystem. The central challenge ahead is institutional and ethical: integrating increasingly powerful technologies in ways that remain grounded in dignity, human judgment, and the realities of people living in conditions of high vulnerability.

Introduction: Human Coaching and the Challenge of Scaling Impact

In recent years, artificial intelligence has become firmly embedded in the development discourse and practice. Much of the debate, however, remains abstract: conversations revolve around potential, scalability, and efficiency, with far less attention paid to what happens when these tools are placed in the hands of real people living in conditions of high vulnerability.

This article starts from a different place. It draws on fifteen years of trial and error in pursuit of a single, persistent question: how can we better support people as programs scale and resources remain limited—and what changes when artificial intelligence enters that equation?

Across social initiatives aimed at fostering sustainable change in contexts of poverty and high vulnerability, human support and coaching have proven to be a decisive factor. A peer, a community worker, a coach—ideally someone from the same community—can become a tangible reference that change is possible, that adversity can be confronted and overcome. Their presence is often critical to the success of poverty-reduction initiatives. This role is not ancillary: it involves listening, encouraging, sustaining motivation, and helping people turn information into concrete decisions.

We know this because we have seen it repeatedly in practice. Individuals who previously saved little increase their savings and adopt safer financial mechanisms after a coaching process. Small businesses grow and increase their income when someone helps organize ideas, costs, and priorities. Trust—in oneself, in the future, and in the system—is rarely built through educational content alone.

Yet this same strength has an evident limitation. Intensive human support is costly, difficult to standardize, and complex to scale. As programs grow and resources remain constrained, the tension between quality and reach becomes increasingly visible. For the past fifteen years, our work has been shaped by a persistent and still open question: how can the power of coaching be preserved as programs scale and resources remain limited, and as digital technologies become more powerful and accessible?

This article systematizes lessons drawn from a sustained process of experimentation and iteration. It traces different approaches to e-coaching—from offline edutainment applications, to chatbots, to the recent incorporation of artificial intelligence—and reflects on what worked, what did not, and why.

Artificial intelligence does not appear here as a technological promise, nor as a substitute for human support. Rather, it emerges as a turning point that forces a rethinking of how technology and human support can be combined more effectively and cost-efficiently. This is what we mean by e-coaching: the intentional integration of human support and digital tools to enhance the coaching experience, support action, decision-making, and real-time problem solving, and reduce reliance on intensive in-person visits—thereby lowering implementation costs—while complementing, not replacing, the role of a human coach.

This text is intended for development practitioners, technical teams, and social organizations exploring the use of technology and artificial intelligence who seek concrete examples of how these tools are used in practice, what problems they help solve, and what their real-world limitations are.

In-Person Coaching: Strengths, Costs, and Structural Limits

What In-Person Coaching Does Well

In-person coaching plays a central role in many social initiatives because it enables the construction of trust. Face-to-face interaction facilitates relationship-building, sustains participants' motivation, and enables learning processes that depend as much on interaction as on content.

At Fundación Capital, this relational dimension of coaching is intentionally embedded within broader economic inclusion programs, including Graduation-style approaches. Coaching is not conceived as a stand-alone intervention, but as a connective function that brings together three core elements: (i) mentoring and motivational support to build confidence, trust, and persistence; (ii) practical training in financial management, livelihoods, and small business development; and (iii) facilitation of linkages to financial services, markets, and public programs. Through this combination, coaching helps participants translate technical knowledge and access to services into concrete decisions and sustained action.

In addition, in-person support allows for continuous adaptation to context. Coaches adjust messages, pacing, and approaches based on the specific realities of each individual or household, incorporating cultural, productive, and social elements that are difficult—if not impossible—to anticipate at the program design stage. Learning often occurs through observation and example: seeing someone do something, asking questions, making mistakes, and trying again is a fundamental part of the process.



Traditional coaching: Fundación Capital in Partnership with the Government of Paraguay

Structural Tensions

These same strengths, however, become a source of tension as programs scale. The quality of in-person coaching depends heavily on the individual capabilities of each coach, introducing variability in participants' experiences and making it difficult to ensure consistent standards. As teams grow, the management, supervision, and ongoing support of coaching staff become increasingly complex from an operational standpoint.

Costs further compound these challenges. In many programs, in-person coaching represents a significant share of the total budget, limiting the ability to scale or sustain interventions over time. Finally, the variability in content and messaging—inevitable in highly personalized models—creates additional challenges when programs seek to ensure coherence and quality at scale.

It is at this point that a recurring question emerges in our work: **how can e-coaching systems be designed to reduce costs, standardize certain content and processes, and at the same time remain centered on people?** This question does not stem from a desire to replace human support, but rather from an effort to explore ways to complement and sustain it in contexts of growth and diversity. It was precisely from these tensions inherent

in in-person coaching that the first experiments with e-coaching began at Fundación Capital.

First Generation of E-Coaching (2010): Offline Edutainment

What Did It Involve?

In the early 2010s, Fundación Capital’s initial experiments with e-coaching took place in **Latin America**, across **13 countries** with low-income households participating in financial inclusion, livelihoods, and graduation-style programs.

At that time, the technological context of the populations we served was marked by **structural constraints**. In Latin America, **less than half of the population had regular internet access**, with connectivity gaps particularly pronounced among low-income households and rural areas. Internet connectivity was often intermittent and, in many territories, limited to specific locations such as schools or community centers rather than permanent household access. Levels of digital literacy were low, access to devices was uneven, and when devices were available, they were frequently low-capacity.

This context directly shaped the design decisions behind the first generation of e-coaching tools. Rather than attempting to replicate human coaching interactions digitally, the initial approach focused on **offline or low-connectivity edutainment applications**—digital tools that combine educational content with interactive and game-based dynamics, designed to facilitate learning in contexts of low educational attainment and limited familiarity with digital technologies.



First generation of Edutainment Apps

These applications incorporated key content areas that had traditionally been delivered by coaches through in-person sessions, including basic financial education (LISTA), small business management (AppTitude), and gender equity (IgualdApp). The design prioritized simplicity, intuitive interactions, and adaptability to low-connectivity environments.

Want to Explore Our Edutainment Applications?



AppTitude

Economic Inclusion and Livelihoods for Populations Living in Poverty and Vulnerability

[Explore >](#)



Lista

Financial Education

[Explore >](#)



IgualdApp

Gender Equality

[Explore >](#)

The applications were installed on tablets that rotated within the community. A single tablet was used by multiple participants at different times, following a shared-use logic intended to maximize reach without relying on personal devices.



Women's Groups Using Edutainment Apps

What Worked?

Scale. Through these applications, Fundación Capital reached more than **two million direct users** with financial education content over a fifteen-year period.

The **interactive nature** of the applications proved engaging for participants and helped sustain attention. Because the tools relied primarily on audio rather than text, they were accessible to individuals with low levels of formal education and could be localized into other languages, such as Guaraní or Kiswahili.

Offline functionality was another critical feature. The applications could be used without an internet connection, and whenever a device connected to the network, the data generated was automatically synchronized. This design made it possible to deploy the tools in settings with limited and intermittent connectivity.

In terms of outcomes, this first generation of e-coaching demonstrated measurable positive effects. LISTA, the financial education application, was evaluated through a randomized controlled trial, which found statistically significant impacts on participant learning.

LISTA increased levels of financial knowledge by **10%**, improved saving practices by **5%**—through the opening of savings accounts or the use of organized traditional mechanisms such as savings groups—and strengthened personal financial planning by **7%**.

Participation in LISTA was also associated with increased trust in the formal financial system, greater knowledge of financial services, and higher levels of optimism. Participants were **15 times more likely** to save formally and **12 times more likely** to have clearly defined savings goals. Increased use of savings accounts and ATMs was observed, along with improvements in household expense management and reductions in debt levels.

What Did Not Work?

These applications operated under a largely one-way learning model. While the content was interactive, it was predefined, and participants could not ask questions or explore doubts at the moment they arose. When questions emerged, they had to wait until the next in-person coaching session. Learning, in this sense, remained fundamentally unidirectional.

Over time, additional limitations became evident. The tablet rotation model worked reasonably well in contexts with strong social capital—such as organized rural communities or groups with existing collective dynamics—but proved difficult to implement in more fragmented or urban environments, where clear community structures were absent.

At the end of projects, tablets were often left in the communities, although not all funders allowed for this arrangement. Over time, this led to an accumulation of devices whose

maintenance and management had not always been planned for. Moreover, the need to procure tablets reduced the potential cost savings associated with e-coaching, limiting one of its initial objectives.

Finally, data-related challenges became apparent. Intermittent connectivity meant that part of the information collected was never fully consolidated. In addition, at that time there was neither an internal nor a sector-wide culture of systematic data use for decision-making. As a result, even the data that was available was underutilized, reducing its potential to inform improvements in e-coaching models.

Key Lessons from This Stage

One of the most important lessons from this first generation of e-coaching was that **technical and pedagogical design of the application is not sufficient**. Designing the content, the user interface, and the edutainment experience was only part of the challenge. Equally critical was the deliberate design of **how the technology would be deployed, accessed, and used in practice**.

Because personal devices were not widely available, we had to explicitly design a **deployment and usage model**. This led to the creation of a tablet rotation system anchored in community spaces and existing social networks. In many Latin American contexts at the time, strong community structures—such as women leaders involved in social protection programs—played a central role as facilitators and replicators. The dissemination and use of the applications often relied on these trusted actors, though the specific structure varied by country.

Through this experience, it became clear that **integrating the conditions of use into the design of the technology itself was fundamental**. A well-designed application is of limited value if no equal attention is paid to **how it will reach users, how usability will be promoted, and how people will be supported in learning to use it**. In low-resource contexts, adoption cannot be assumed; it must be actively designed. This insight would later become a recurring theme across subsequent generations of e-coaching: technology only creates value when its deployment model is aligned with the social, institutional, and behavioral realities of the users it intends to serve.

Also, this first experience of e-coaching proved to us that technology made it possible for certain types of content to no longer depend exclusively on the physical presence of a coach. Clear and consistent messages could be designed, replicated uniformly, and made available to a larger number of people, even in low-connectivity environments.

At the same time, the model revealed its limits. Learning remained largely one-directional, questions had to wait, and the operation of the system introduced new logistical complexities alongside weak data management practices. **Content could travel—but sustained coaching and support remained anchored in human interaction**.

Second Generation of E-Coaching (2019): The Use of Chatbots

Changes in the Digital Ecosystem

By the 2020s, the digital ecosystem in Latin America had changed significantly. According to data from the International Telecommunication Union and the World Bank, by 2018–2019 the region recorded more than 100 mobile phone subscriptions per 100 inhabitants—above the global average—reflecting the widespread use of mobile phones, including among low-income households (ITU, 2019; World Bank, 2019). While many of these devices were still basic, in most cases they were personally owned.

At the same time, access to mobile internet began to expand, albeit unevenly. Reports from GSMA Intelligence and analyses by ECLAC show that by 2019 the mobile phone had become the primary point of internet access for large segments of the population, particularly in the lowest income quintiles. In this context, messaging applications such as WhatsApp became part of everyday use, even in low-connectivity environments, functioning with limited data plans and perceived by many users as part of the phone’s “basic” functionality.

These shifts opened new possibilities for rethinking e-coaching systems—no longer centered on providing devices or relying on specific community infrastructure but instead built around technologies that people already used in their daily lives.

What Problem Were We Trying to Solve? And What Did We Do?

In this second stage, the main objective was to address some of the operational limitations of the first generation. We aimed to stop purchasing and managing tablets, leverage the phones that people already owned, and reach participants in a more flexible way—less dependent on specific community spaces and device-rotation schemes. This was particularly important for reaching urban populations, which represent the majority in the region.

We decided to focus on the use of chatbots, designed around content trees that organized information into predefined sequences. Content was broken down into smaller units that could be consumed gradually. These educational “snacks” made it possible to deliver information in a more agile way, better suited to the realities of people with limited time and shorter attention spans. They also facilitated implementation at scale by using platforms already familiar to participants.

At the core of ConHector is the use of short, modular “learning snacks.” These are concise content units designed to be consumed quickly and to respond to immediate needs. Current content areas include:

- Small business management
- Gender and well-being (risk prevention and self-care)
- Health and financial inclusion, including digital payment mechanisms
- Digital marketing

- Online security
- Sources of financing
- Logistics and basic operational management



ConHector – Fundación Capital’s Chatbot

The effectiveness of these learning snacks lies in their simplicity and immediacy. Delivered through WhatsApp—a platform widely used across Latin America—they reduce cognitive and time barriers for participants with limited formal education. Rather than relying on lengthy training sessions, these tools allow users to access practical guidance at the moment a decision is required.

Through **ConHector**, the chatbot developed by Fundación Capital, we have reached more than **62,600 users across six countries**³. As a virtual assistant, ConHector connects people living in poverty and vulnerability, as well as microentrepreneurs, with relevant services, tools, and content through:

- **Specialized information:** verified and tailored content for different population groups, covering topics such as entrepreneurship, financial health, digital literacy, well-being, and gender equality.
- **Multimedia content:** access to videos, infographics, audio materials, and tutorials.

³ The difference in reach between the edutainment applications and the chatbot should not be interpreted as a reflection of their respective scaling potential. In practice, chatbots offer **greater inherent scalability** due to lower marginal costs and the use of widely adopted messaging platforms. The more limited reach of ConHector to date reflects two main factors: first, that the chatbot has been operational for **only the past four years**, compared to **approximately fifteen years** of deployment for the edutainment applications; and second, that its scale depends on the **number and size of Fundación Capital-implemented projects** in which the chatbot is integrated, rather than on technological constraints. As adoption expands across additional programs and partners, the reach of chatbot-based solutions is expected to grow accordingly.

Advantages and Limitations

The use of chatbots made it possible to significantly expand coverage. Because the model did not require the purchase of devices, costs were substantially reduced and the system could scale more easily. In addition, using familiar platforms such as WhatsApp lowered entry barriers and facilitated initial user adoption.

This approach also introduced new constraints. Chatbot use required reading, which limited participation among individuals with low levels of literacy. In addition, while chatbots enabled basic interaction through messaging, they restricted the use of visual elements and richer engagement dynamics—such as animations, color, movement, or gamification mechanisms—that can be incorporated into smartphone applications. This reduced the system’s ability to stimulate attention and learning through more immersive experiences, particularly when compared to the edutainment applications used in earlier stages.

Moreover, system functionality depended on at least some level of connectivity, however minimal, which limited reach in remote communities and highly excluded contexts. In practice, not all users were able to access or benefit from this model in the same way.

Key Lessons from This Stage

This second generation of e-coaching yielded a clear and nuanced insight. The use of chatbots made it possible to significantly expand coverage and reduce operational costs by leveraging devices and platforms already embedded in people’s daily lives. In doing so, e-coaching became more flexible, less dependent on physical infrastructure, and easier to scale—particularly in urban contexts.

However, these gains came with important trade-offs. Compared to the first generation of edutainment applications, chatbots constrained the richness of the learning experience. The format limited the use of visual elements, gamification, and immersive interactions that had previously supported engagement and learning, especially among populations with low levels of formal education.

Moreover, chatbot-based models introduced new forms of exclusion. Participation depended on basic literacy skills, access to a personal device, and at least minimal connectivity. For ultrapoor households—where phones are often shared, SIM cards rotate among family members, or connectivity plans are unaffordable—these requirements reduced consistent access and limited the effectiveness of the intervention. While declining data costs have gradually eased some of these constraints, they have not eliminated them.

In practice, this stage revealed that **no single digital channel serves all populations equally well**. While chatbots represented a clear step forward in scale and efficiency, they also made existing inequalities in digital skills, device access, and connectivity more visible. This reinforced a critical lesson for subsequent generations of e-coaching: technological progress must be accompanied by deliberate choices about channels, formats, and segmentation, aligned with the realities of the populations being served.

E-Coaching, Human Coaching, and the Economics of Scale

As Fundación Capital's experience with e-coaching evolved—from in-person support to offline edutainment tools and later to chatbots—questions of cost, scale, and implementation became increasingly salient. These questions were not driven by abstract efficiency concerns, but by a practical constraint: while intensive human coaching delivers strong results, it is costly, difficult to standardize, and challenging to expand without proportional increases in staff and budgets.

Across iterations, e-coaching did not replace human support. Instead, it gradually reshaped how coaching time was used, what could be standardized, and where human interaction remained indispensable. Understanding the economics of scale in this context therefore requires looking beyond simple cost-per-participant comparisons and focusing instead on how different configurations of human and digital support altered intensity, reach, and the allocation of scarce coaching resources.

Development and Implementation Costs: Practical Boundaries

A first clarification is necessary. At Fundación Capital, the costs of developing digital tools—such as edutainment applications or chatbot infrastructure—have generally been financed separately from program implementation. These tools were designed for reuse across multiple programs and contexts. As a result, at the program level, costs have typically been limited to licensing or usage fees, along with the operational costs associated with deployment.

Similarly, training participants to use e-coaching tools has rarely constituted a separate cost category. In most implementations, coaches introduced and supported the use of technology as part of their regular interactions with participants. Training costs were therefore embedded within existing coaching time rather than treated as an additional line item.

These design choices complicate direct comparisons of implementation costs across different generations of e-coaching. Implementation models varied by country, population, and funder requirements, and were not designed to generate standardized cost data. What can be assessed more credibly are changes in operational dynamics and the evolving division of labor between human and digital support.

What E-Coaching Enabled—and Where Its Limits Persisted

Across generations, e-coaching proved particularly effective for **delivering basic, standardized information at scale**. Digital tools performed well when content could be modularized, repeated, and consumed independently—such as introductory financial concepts, business guidelines, reminders, and step-by-step instructions. In these areas, e-coaching reduced repetition in human interactions, ensured consistency of messaging, and extended support beyond the limits of in-person visits.

However, experience also revealed clear limits. When participants faced more complex or cognitively demanding tasks—such as business planning decisions, cost calculations, or trade-off analysis—digital tools alone were often insufficient. These moments required dialogue, clarification, and iterative problem-solving, particularly for participants with limited formal education or numeracy skills. In such cases, human coaching remained essential.

Box 1: What AI Does Well and Doesn't (So far)

<p>What AI Does Well </p> <ul style="list-style-type: none">• Provides guidance between in-person visits• Answers routine questions — on demand• Supports everyday financial & business decisions• Credit calculator: Helps simulate risks before acting	<p>What Humans Still Do Best </p> <ul style="list-style-type: none">• Build trust & emotional safety• Motivate and encourage• Support behavior change• Handle complex, sensitive, or crisis situations	<p>What This Means for Programs </p> <ul style="list-style-type: none">• Coaches could focus on higher-value conversations• In-person time becomes more strategic — not more frequent.• Participants gain greater autonomy and confidence• Help reducing digital gap
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In practice, this led to a gradual reallocation of effort: **e-coaching absorbed functions that could be standardized and delivered at low marginal cost, while human coaching concentrated on tasks that benefited most from interaction, judgment, and trust-building.**

Implications for Scale and Coaching Intensity

These shifts had direct implications for scale. In several programs, the introduction of e-coaching made it possible to reduce the frequency of in-person visits without eliminating human support altogether. In some cases, household visits were reduced while digital tools sustained engagement between interactions.

As a result, **coaches were able to support larger caseloads. In some implementations, the number of households supported by a single coach increased substantially —from approximately 50 families to closer to 90—** while maintaining program continuity. These adjustments were not implemented uniformly across programs and therefore limit direct comparability, but they illustrate a consistent pattern: **scale was achieved not by replacing human labor, but by using human time more strategically.**

Rather than repeatedly delivering basic information, coaches could focus their limited in-person time on diagnosing problems, supporting complex decisions, and accompanying moments of uncertainty or transition.

A Reconfigured Division of Labor—and What It Made Possible

By the end of the second generation of e-coaching, a clearer division of labor had emerged. **Digital tools were effective at reinforcing key messages and supporting routine actions at scale, while human coaching remained central for interpretation, confidence-building, and complex decision-making.**

This reconfiguration did not resolve all constraints related to cost and scale. However, it created the conditions for a more sustainable model—one in which human coaching could be preserved where it mattered most, while digital tools absorbed functions that could be standardized.

It is against this backdrop—of partial efficiency gains, persistent human complexity, and remaining limits to scale—that the incorporation of artificial intelligence represents a qualitatively new stage in the evolution of e-coaching systems.

Third Generation (2024): AI-Enabled E-Coaching

The Turning Point

In 2024, the rapid expansion of everyday artificial intelligence tools introduced a new question into our work: **what would happen if these technologies could be put at the service of the people we work with?** Not as an abstract promise or a technological experiment, but as a practical tool to address real problems in their daily lives.

Unlike previous stages, the incorporation of artificial intelligence marked a qualitative shift in e-coaching systems. The **focus moved beyond the transmission of information and toward enabling concrete actions:** creating, calculating, comparing, and making decisions in real time.

In practice, this involved integrating AI functionalities into chatbots such as **ConHector**. Through these systems, users began to address tasks that previously required in-person coaching, including creating marketing materials to promote products or services, estimating costs, assessing credit options, and translating loosely defined ideas into operational decisions.

This shift can be understood through three key transitions:

The first transition is the **move from training alone to combining instruction with tools for concrete problem solving.** In earlier stages, digital coaching focused primarily on delivering predefined content. With the incorporation of artificial intelligence, users are now able not only to access information, but also to produce outputs—saving time in the process—such as promotional messages, cost simulations, financial estimates, and other operational inputs that can be applied immediately to the management of their productive activities. Knowledge ceases to be an end in itself and becomes a resource for action, decision-making, and tangible results.

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50%
La tienda

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Sombreros artesanales hechos totalmente por las manos de mujeres artesanas tejedoras.

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- Una obra de arte llena de tradiciones y saberes que cruzan generaciones.

Decorados a mano y personalizados

Pocillos esmaltados, pocillos en porcelanas, portacelulares, llaveros, magnetos.

El Llano plasmado en un pocillo
Para un Café con estilo

573133872559
San Agustín Huila
@lasombrereria

573105863989
Samu Artesanía

La Bendición 135
03Yopal

Marketing Materials Created Directly by Women’s Users with AI support

The **second transition relates to interaction formats**. In earlier versions, ConHector only supported text-based interactions. With the integration of artificial intelligence, audio functionality was introduced: users can now send voice messages and receive responses in the same format. This feature significantly expands access by enabling participation from individuals with low literacy levels and reducing one of the most persistent barriers to the use of digital tools in highly vulnerable contexts.

The **third transition** is the shift from closed, one-way interactions to more open and adaptive conversations—without relying on the open internet as a source of information. In Fundación Capital’s system, users ask questions and receive contextualized responses drawn exclusively from a curated, predefined, and verified internal knowledge base. By grounding AI outputs in high-quality programmatic data rather than the broader web, the model significantly reduces the risk of hallucinations and factual inaccuracies. This design **expands conversational flexibility while preserving strict control over data integrity, coherence, and the relevance of the information** provided to participants.

Emerging Use Cases

At this stage, several use cases with high levels of user adoption have begun to consolidate. Among the most prominent are the creation of flyers and communication materials for social media and messaging platforms, as well as cost calculations and credit estimations.

Fundación Capital is expanding the system to support more advanced functionalities. These new features are informed by ongoing user feedback and qualitative research with

users. They include a **logo generator**—enabled by recent advances in accessible generative AI that allow higher-quality visual outputs; an **invoice generator** that supports business growth and formalization; and a **product catalog generator**, a recurring request across programs.

These use cases were not defined exclusively during the initial system design. Instead, they emerged through interaction with users and in response to their own demands. This process marked a shift in how e-coaching is being used within Fundación Capital: the system moved from being an occasional consultation channel to becoming more regularly embedded in the day-to-day management of small businesses. As a result, higher levels of use, appropriation, and return engagement with the chatbot are observed.

Limits of AI in Practice

This third generation also brings the limits of AI into sharper focus. One current area of experimentation is the use of AI to support résumé (CV) development within jobs and livelihoods programs—a particularly complex application in low-income contexts. Many participants lack formal employment records, standardized educational credentials, or supporting documentation, making it difficult to translate lived experience into conventional labor-market formats.

Challenges related to informal work trajectories, low literacy levels, uneven digital access, and highly segmented labor markets further complicate this use case. While AI can assist with structuring information, drafting language, and proposing formats, it cannot independently reconstruct employment histories or make nuanced judgments about how experiences should be represented.

These cases underscore the current boundaries of artificial intelligence and reinforce the importance of hybrid models. Processes such as reconstructing personal trajectories, validating information, and supporting critical decision-making continue to require human judgment, reflection, and trust—elements that remain central to effective coaching and cannot yet be automated.

Key Lessons from This Stage

The incorporation of artificial intelligence marks a clear inflection point in e-coaching systems. For the first time, it becomes possible to complement content delivery with direct problem solving in real time, grounded in concrete needs. AI enables accumulated knowledge to be translated into immediate action —supporting tasks such as creating materials, performing calculations, comparing options, and informing decisions.

At the same time, this expanded capacity makes important limits visible. The effectiveness of AI is not automatic; it depends on users' familiarity with digital platforms such as WhatsApp. While edutainment-style applications are often intuitive, chatbots with more advanced functionalities require higher levels of digital literacy, introducing new barriers for certain groups.

Experience with AI-enabled coaching has also reinforced the need for differentiated delivery strategies. Although mobile phone penetration in Latin America is high, a non-negligible share of people living in extreme vulnerability lack reliable access to personal devices. In some households, phones are shared among family members or SIM cards are changed frequently, complicating continuity and sustained engagement.

Finally, variations in literacy and numeracy mean that not all participants benefit equally from the same digital interfaces. Taken together, these findings underscore that AI-enabled e-coaching cannot operate as a one-size-fits-all solution. Instead, it must be embedded within broader program designs that combine digital tools with human facilitation and alternative delivery modalities, tailored to participant characteristics and context.

Conclusions: Insights and the Next Frontier in E-Coaching

Over the course of successive implementation stages, a set of recurring lessons became increasingly clear.

Rather than revisiting earlier findings, this section distills three overarching insights that cut across contexts and iterations, and that may be particularly relevant for governments and implementers considering e-coaching systems.

A first and clear lesson emerging from our experience is that **technology does not replace people**. In the contexts in which we work, e-coaching is most effective when it **reinforces human support rather than substitutes for it**. Digital tools make it possible to space out in-person visits, extend support between interactions, and use teams' time more efficiently. As participants become more familiar with digital tools and more confident in their use, the need for intensive face-to-face interaction decreases—**without compromising effectiveness**. Importantly, this shift does not reflect a withdrawal of human support, but rather its reconfiguration.

A second fundamental insight concerns **adoption**, or what is often referred to in the technology field as **user acquisition**. While the design of digital tools is important, our experience shows that **it is even more critical to design how people first encounter technology, how they begin using it, and how they continue to engage over time**. User acquisition, in this sense, is not simply about access to a tool; it is about creating the conditions under which people feel willing and able to take a first step and continue using the technology over time. Across all implementations, a consistent pattern emerged: the adoption of e-coaching tools increases significantly when a coach, case manager, or trusted local figure introduces the technology, legitimizes its use, and accompanies participants in early interactions.

A third key insight is that **one technology does not fit all populations**. People living in poverty and vulnerability are highly heterogeneous in their access to devices, connectivity, literacy, and digital confidence. As a result, segmentation of digital **solutions must be intentional and grounded in users' access, habits and capacities**. A one-size-fits-all approach inevitably limits both reach and impact.

Not all populations experience technology in the same way. Importantly, segmentation should not be understood as a fixed classification of people, but as a design principle that recognizes different entry points into digital engagement. For some participants—particularly those in ultra-poverty with limited or shared device access—edutainment applications on shared devices have proven effective as a first step into digital and business learning. For others, messaging-based tools such as WhatsApp offer a familiar and accessible channel for ongoing support. In Latin America, where WhatsApp penetration often reaches 75–90% of adults in key markets, it functions not just as a communication tool but as a trusted digital ecosystem embedded in daily life.

Within this landscape, AI-enhanced experiences can add significant value by making support more responsive and tailored. However, they also require more stable connectivity and higher levels of digital comfort. This reinforces that segmentation is not only about device access, but also about digital literacy, confidence, and meaningful user experience.

Experience suggests that digital engagement often evolves over time. As people gain skills, familiarity, and business complexity, they may transition across channels. In this sense, segmentation is not about limiting options, but about creating appropriate pathways that allow participants to build confidence and capability progressively. The question is not which tool is best, but which tool is best for whom, at what moment, and for what purpose.

Box 2. E-Coaching Tools for Different Starting Points and Pathways

Edutainment Applications	Chatbot-Based Coaching	AI-Enabled Coaching
Often most effective for: <ul style="list-style-type: none"> • People living in extreme poverty • Low literacy populations • Rural or low-connectivity settings • Users with limited digital experience • Contexts with high social cohesion and it could be possible to use shared devices • Very small or subsistence businesses focused on local markets 	Often most effective for: <ul style="list-style-type: none"> • Populations with basic literacy • Users familiar with mobile phones and messaging • Contexts with at least intermittent connectivity • Microentrepreneurs managing small but active businesses • Participants needing reminders, short guidance, or quick answers 	Often most effective for: <ul style="list-style-type: none"> • Users with regular phone access and stable connectivity • Microentrepreneurs seeking to grow or diversify their businesses • Participants with higher digital comfort • Urban and peri-urban businesses where digital visibility matters • Businesses that benefit from marketing, customer communication, or content creation
These tools support visual, audio-based, and low-cognitive-load learning, and	These systems work well for modular “learning snacks,” follow-up support, and	AI tools can function as practical assistants for tasks such as drafting promotional

Edutainment Applications	Chatbot-Based Coaching	AI-Enabled Coaching
can serve as a first entry point into both digital and business skills.	reinforcing business practices.	materials or exploring financial options. However, they still benefit from human mediation and oversight.

Thoughtful segmentation therefore does more than match tools to current conditions—it can help create pathways for gradual digital inclusion. When solutions are aligned with people’s real access, habits, and preferences, digital tools become more than content delivery mechanisms. They become supportive environments where users can build confidence, test new practices, and develop digital and business capabilities at their own pace. Over time, this contributes not only to better program uptake but also to stronger self-efficacy and decision-making capacity in contexts of high vulnerability.

Next Frontier and Final Reflections

Predicting the trajectory of technological change is increasingly difficult—not only because the pace at which digital tools, and artificial intelligence in particular, are evolving has exceeded most expectations, often reshaping practice faster than policy, evidence, or institutional frameworks can adapt, but also because adoption in real-world social programs follows uneven and context-specific paths.

Looking ahead, the next frontier of e-coaching within social programs is likely to move beyond the delivery of useful information toward supporting everyday business practices in a more personalized way. Rather than functioning solely as informational tools, digital systems have the potential to operate as practical business assistants for people running small and informal enterprises—helping them organize tasks, make decisions, and sustain daily operations.

This personalization goes beyond simply tailoring content to user profiles. The emerging frontier is context-aware support that responds to the realities of each specific business—its cash-flow cycles, customer patterns, inventory constraints, and household pressures. In this sense, AI-enabled coaching can begin to resemble a knowledgeable advisor who “remembers” past decisions, learns from patterns over time, and offers guidance grounded in the entrepreneur’s actual situation rather than in generic best practices.

In this context, AI agents open new possibilities. When thoughtfully designed, they can provide timely suggestions, help anticipate needs, and support simple but consequential decisions—such as identifying when inputs may need to be replenished or proposing simple marketing actions. Yet their value does not lie in autonomy, but in how well they are integrated into human-centered systems. These capabilities must be embedded in trust-based models and clear governance arrangements—including safeguards on data use, transparency in AI responses, and human oversight—so that automation strengthens rather than displaces human judgment and agency.

Artificial intelligence should therefore not be seen as an endpoint, nor as a solution in itself. It is one component of a broader support ecosystem that includes people,

institutions, and social relationships. When thoughtfully designed and responsibly deployed, AI can expand people's capacity to act, decide, and create in contexts of high vulnerability.

The challenge ahead is not only technological, but institutional and ethical: to integrate increasingly powerful tools in ways that remain anchored in human support, dignity, and the lived realities of people facing vulnerability. Ultimately, the question is not how far technology can go, but how well it can serve people's own goals, aspirations, and capacity to shape their futures.

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