

Blockchain for good: how disruptive technology is lowering barriers for disadvantaged women entrepreneurs in Pakistan

by Andrew Thompson

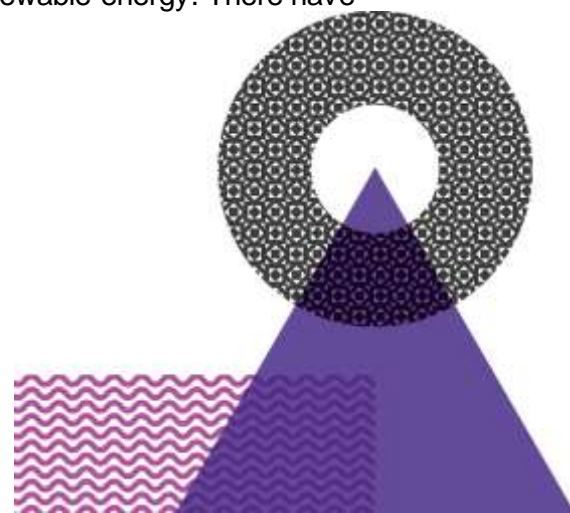
Technology can go in surprising directions. Take blockchain in Pakistan. The story of this software already reads like something from a particularly wild work of fiction. It was originally created to allow decentralised trading in crypto currencies such as Bitcoin. It was launched in 2008 by person or persons unknown, using the pseudonym Satoshi Nakamoto: although many people have since claimed that they are the “real” Satoshi, the identity of the developer or developers remains shrouded in mystery. The software is revolutionary in a number of ways. It is a decentralised, distributed record or “ledger” of transactions, stored in a time-stamped, nearly inalterable or tamper-proof way, using cryptographic techniques. It is a peer-to-peer system not controlled by any single -central authority. It was designed to allow reliable rules-based trading in currencies or tokens by individuals anywhere in the world, many of whom might want to remain completely anonymous. The Economist has called blockchain a “trust machine”.



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Originally championed by a heterogenous group of financial speculators, teenage computer nerds, libertarians, and privacy campaigners, the technology has been shown to have a multitude of other different and potentially transformative applications over the past decade. Many international banks and a new wave of financial start-ups have been experimenting with blockchain as the platform for all kinds of payments systems. As the world moves into the era of the digital revolution the potential for blockchain seems to be widening. It is being championed as the platform to allow peer-to-peer trading in renewable energy. There have been blockchain trials in fields as diverse as music copyright, land ownership records and supply-chain and logistics management.

Participants gather around for a brainstorming session before working on their business models – Skardu, Pakistan



Two organisations began looking together at possibilities for an innovative education-related blockchain application in Pakistan. On the one hand was [DEMO](#), an Islamabad-based consultancy which specialises in training for entrepreneurship, skill development, technology and communications. Chief executive Muhammad Bin Masood says, “our forte is capacity building, training, and programme development.” On the other was [Manchester Digital Laboratory](#) (known as [MadLab](#)), which describes itself as a not for profit, grassroots digital innovation organisation focused on science, technology, arts and culture. Rachael Turner, MadLab director, says that because of its willingness to experiment, MadLab has been described as an “anti-disciplinarian organisation”. Both clearly enjoy working with each other and value the ability to be both flexible, quick to react, and ambitious.

Supported by the British Council’s DICE Fund, they have come up with a massively ambitious programme, that seeks to do no less than four separate things, all at the same time.

The first of these – the core of the programme - is delivering a three- day training boot camp for women social entrepreneurs in four Pakistani cities. Deliberately, the team chose some of the harder-to-reach cities where internet connections are less secure. The cities are Hunza, Skardu, Swat and Abbottabad.

Since the cities were hard to reach and their inhabitants spoke different dialects and had their own specific business training requirements, the second element of the programme was to identify four community partners to adapt the training to local needs, to link up to local stakeholders, and to provide the women with tailored advice. This meant that 152 women were trained and contact was made with over 600 organisations and stakeholders. Muhammad describes the project as “an amazing roller coaster ride” that has thrown up all sorts of challenges, but also opened up more doors than they ever imagined. The aim is to take this second objective further, eventually building up a national social enterprise training network.

Blockchain comes into play for the third element of the programme. The women are being issued with certificates of course completion. These are valuable documents, since they attest to the skills acquired and will be useful for subsequent business and career development. The idea is to make these certificates available on a secure, blockchain based platform, and, in time, to offer this service to other informal and formal education providers.

Why is this important? Rachael gives an example: in Baluchistan, Pakistan’s largest state, there is only one place where you can collect your college or university certificate or degree. To do so, you have to attend in person, as the authorities will not send documents out in the post. That means that to collect their degrees some people have to travel as much as three days at their own expense. The team has been working with the idea that a single, efficient, fast, and trustworthy blockchain-based platform for accessing and validating both informal and formal educational qualifications in Pakistan would represent a major step forward for the entire training and education sector in the country.

DEMO and MadLab have been using the boot camp graduates as a test group for a certification pilot. Asa Calow, Turner’s fellow MadLab director, explains that each certificate will be like a webpage, whose authenticity can be easily verified with the issuing organisation. “It is something that will be very lightweight so that you can share it though WhatsApp, you can send it by email, you can print it out and show it to



someone, and there will be a serial number on it so it can be cross-checked against the web. It is quite a low-fi technology which uses blockchain like the grease on the wheels to make it run smoothly.”

The pilot has helped detect obstacles that need to be surmounted. One is that, in a conservative cultural context in which women are often expected to stay at home, many do not have the ID cards that are needed to confirm their identity. The team has sought to explain that getting ID cards will help develop their businesses. It has also had to deal with ways to track people through their mobile phone numbers, and the problem posed by students who do not use their second names. This has, in fact, become the fourth key aspect of the project: after a joint learning process, to create and incubate a new standalone social enterprise that will approach Pakistan’s formal and non-formal education and training providers to offer them a one-stop certification verification system.

