

Mapping UNSW Impact Global Development

Primary SDG	1: NO POVERTY
Broad theme	Microfinance, gamifying learning
Research	Providing microfinance loans to farmers, inserting gamification programs into high school programs to encourage students to learn more
Impact region	Global
Faculty	Business School
School/Institute	Economics
Academic	Associate Professor Alberto Motta
Project partners	West Bengal: US AID, AUS AID, UK AID - \$1 million in funding until 2013, Hong Kong University, Boston University, Melbourne University, Delhi University
	STEP: Associate Professor Loretti Isabella Dobescu (UNSW)
Related SDGs	1: Quality Education
	10: Zero Hunger
	15: Life on Land

Elevator pitch

To help financially constrained West Bengali farmers, Alberto was part of a team that provided friendly loans which resulted in production increases of 27%, transforming lives. To encourage disadvantaged kids to learn more and attend university, Alberto is gamifying learning in core subjects with encouraging results.

The Challenge: Farming production constrained by a lack of capital, kids are missing out on university

In West Bengal, people do not have enough money to invest in farms and produce crops. Microfinance arrangements have been attempted but have been unsuccessful because repayment schedules are too tight. Also, farming in the region is weather-dependent and risky for people who have little or no land. Potatoes are a preferred cash crop but there is plenty of risk involved in farming them. How can those with limited funds farm the land and create a sustainable livelihood?

Kids from disadvantaged areas and high schools in Australia and around the world are not fulfilling their potential and are missing out on the chance to go to university. Rigid and bland curricular mean kids are not engaged as they could be and are promised rewards for progress. Massive open online courses (MOOCs) are a great option but the completion rate is low. How can we encourage these kids to learn more and continue to study after high school?

UNSW's solution: Provide helpful loans, and games that encourage students to learn

With the help of local government and senior leaders, Alberto and his team first identified credit worthy people in West Bengal and provided loans to over 2,000 households to stimulate agricultural production. Repayments commenced three months after the loan was provided (as opposed to a couple of weeks). If farmers repaid after three months, they could access further money. Almost everybody repaid. Farmers were typically leasing land from landowners, and they mainly focussed on farming potatoes and sesame. Alberto and his colleagues compared production results against a control group over a three-year period. The group provided with loans were 27% more productive than the control group. Alberto and his team are in discussions with the Central Bank of India to scale up the project.

Currently, Alberto and Isabella Dobescu are working on a practical, research project that gamifies learning in areas like economics, renewable energy, and medicine with the ultimate goal of encouraging kids to go to university. STEP (Smart Technology Education Program) is initially targeting kids from disadvantaged areas and high schools in Australia. A pilot was run at UNSW, where gamifying 10% of the course led to a 9.05% increase in final exam grades. Students who played the game also took more courses on economics subjects. STEP is also being used at Adelaide University and the Queensland University of Technology. Alberto and Isabella are now looking to establish STEP in 20-30 high schools in disadvantaged areas in NSW. STEP could also be suitable for disadvantaged kids in India and around the world. Alberto is currently seeking funding and partners for the project.

In another project, Alberto is investigating corruption among governments and NGOs around the world (India and South America in particular) and what cheap but effective solutions are available to fight it. These include legalising illegal goods such as drugs, self-reporting with lower fines and penalties, redistributing power in organisational structures, and giving voice to workers via an appeal system.

The Impact: Increase production and quality of life, improve kids' results and thirst for learning

Through the provision of tailored loans, West Bengali farmers are producing more and earning more. This has encouraged them to become entrepreneurs, provide more food for the family, and better satisfy everyday expenses, like education and clothing for their children.

The STEP project has proven to lift kids' confidence and learning capacity. Kids feel smarter and are more familiar with the content, ready to apply their knowledge. This not only boosts their results but gives them a thirst for learning and increases their interest in studying at university.

Researcher

Alberto Motta is Associate Professor in the School of Economics at the UNSW Business School. His current work focuses on designing and evaluating organisational solutions for microfinance institutions, for-profit and not-for-profit firms, enforcement agencies and media outlets. He is also developing the first educational software platform able to create Massive Interactive Immersive Courses (MIICs). In doing so, he is leading several evaluation studies that will provide insights into what drives 'good education' and the role of experiential learning in online environments.

Ben Falkenmire 09.05.18