K4D | Knowledge, evidence and learning for development

'Lean startup' or 'Agile working' for improved development programme delivery

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Question

What is the available evidence on whether Lean Startup (Build, Measure, Learn/Test, Learn, Adapt) methodology or Agile ways of working can lead to improved programme delivery and results in development settings?

Contents

1. Overview

The idea of Lean Startups comes from tech companies and is very new. The approach provides the promise of greater efficiency and is beginning to be proposed in the area of development but use of and impact measurement are distant. Within the short time frame for undertaking this review it was not possible to find high-quality evidence on improved development programme delivery with use of the Lean Startup approach or Agile ways of working. Some informal stories were identified. Experts consulted were of the consensus that impact in this area is non-existent. The concept is itself philosophical and intangible so difficult to teach and evaluate. It is hard to incorporate as it is fundamentally a behaviour change.

There is some anecdotal evidence but not solid research. Anecdotes of where this approach may have failed tend to be less likely to be reported so caution should be exercised in basing decisions on narrative success stories. However, with acclaim from the business world it would be of service to the development world for DFID to explore and record results on using these ideas to share and teach others.

Information on lean and Agile for improving results in development settings largely comes from grey literature and blogs (detailed in section 3). Relevant findings include:

- A conference paper on Agile was identified on a software industry in Ethiopia, so a development setting but not a development project. Qualitative research suggests that Agile methods were used but the reality was that work was often carried out for the government and this required fixed procedures and schedules.
- Getting rapid feedback is promoted within lean and agile thinking. The mTrac platform in Uganda surveys local health workers to gather information on disease outbreaks and medicine stockouts.
- Practical positive experience from Rwanda of lean startup for successful portable LED light design, production and distribution.
- Bidhaa Sasa in Kenya are using lean start-up to run a successful service providing credit to clients in rural areas to purchase household goods.
- A Fair Trade software project has used an Agile working approach to create new business in Africa.
- Adaptive management in Uganda's Growth, Health, and Governance Program succeeded in growing a network of retailers and attracting a top quality supplier.
- Problem driven iterative adaptation (PDIA) is highly related to lean and agile. An online course run from Harvard has had positive feedback from participants including those working for donors, governments, consulting firms, private sector firms and NGOs.

2. Understanding and contextualising Lean Startup and Agile working

Lean Startup and Agile working is a philosophy without clear definition. It has emerged from the economic sector and the focus is on experimentation rather than planning. Blank (2013) outlines three key principles in the Harvard Business Review: 1) Set out hypotheses instead of months of planning; 2) Potential users are asked for feedback on all elements of the business model. Prototypes are made quickly and revised based on customer feedback; 3) Practice Agile

development – producing iteratively and incrementally. Minimal viable products are created to test. The emphasis here is on entrepreneurial product development.

The broad level application of this approach for development is trying small scale, getting feedback and using data to expand what works. 'Build, measure, learn' rather than 'plan, fund, do' (Rao, 2016). Starting small and growing what works through experimentation and iteration; eliminating uncertainty as laid out in theleanstartup.com/principles.[1]

An experienced NGO consultant and proponent of Agile Working blogs an interesting view on the way development programmes currently work: responding to a proposal means creating a work-plan and timeline which is random, guessed and invented.[2] This suggests the sensibility of adaptable plans.

Agile ways of working have emerged from software development, for example *The Manifesto for Agile Software Development*.[3] Value is placed on customer collaboration and responding to change. Strict processes, documentation and plans are surrendered. Mitchell Toomey, Director of the Sustainable Development Goals Action Campaign at the United Nations, comments that, "The exponential speed of value-generation seen in the software industry can and should be replicated in the business of international human development."[4] This would increase the success and relevance of development work while reducing the risk of failure. Chris Vein, Senior Manager of the World Bank's ICT unit, (Vein & Goldstein, 2013) notes the key to Agile is responsive and that technology allows responsiveness and user-centred design.

The thrust of Agile working and Lean Startup are essentially similar. Matt Andrews, Associate Professor of Public Policy at Harvard's Kennedy School emphasises flexible teams and constant review for Agile development.[5]

Katell Le Goulven, Chief Policy planner at UNICEF, writes a commentary on how development organisations should become more Agile in the context of constant change (Le Goulven, 2015). She describes three trends to be considered for guidance:

1) Complexity theory, new ways of framing development problems help to make sense of 'how systems adapt to their environment and cope with uncertainty' with analysing and modelling.

2) New information technologies enable quick feedback loops. They can be used to collect citizens' voices and feedback and integrate them in programme design.

3) Global network engagement. New coalitions and movements are being created as the number of development actors increases. For example the Scaling Up Nutrition (SUN)[6] initiative. She views the coming together of these as powerful.

Twelve leading development organisations at the Financing Development Conference put together 'a call for innovation in international development' (R4D, 2015) and identified six principles of innovation, one of which is 'fail fast and iterate'. There is an emphasis here on

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[1] http://theleanstartup.com/principles
[2] https://anahiayala.com/2012/08/27/the-donors-battle-and-why-most-ict4d-projects-are-not-meant-to-work/
[3] http://Agilemanifesto.org/
[4] http://www.ictworks.org/2012/02/13/Agile-development-international-development-learning-software-development/
[5] http://matthewandrews.typepad.com/mattandrews/2013/10/Agile-theory-and-governance-reform.html
[6] http://scalingupnutrition.org/

embracing failure as an opportunity for learning. Allana (2014) embraces emergent practice over 'best practice' and fostering a culture of peer-review, respectful dissent, and creative tension.

Related to Lean Startup and Agile working, development discourse is emerging on 'adaptive development' which has the same underlying principles. The allowance to be adaptive is linked to autonomy. Empirical analysis of aid effectiveness finds programmes with greater autonomy on the ground lead to greater success (Honig, 2014).

A report from a workshop on 'Building Adaptive Management as a Core Competency in Development Practice' provides some interesting insight on how to adapt (Ramalingam, 2016). The damage of reinforcing linear results agenda is noted. Workshop participants discuss adaptive responses they have used. This is what is not picked up in formal literature but is experience people are carrying around. One example that comes up of where adaptive practices have been used is managing tensions. The difficulty in demonstrating the benefits of adaptive management was also noted in the workshop. Approaches are being used but are not necessarily being labelled as 'Lean', 'Agile', or 'adaptive'.

3. Case studies

A study carried out in Ethiopia investigated Agile working within information systems development by software firms (Regassa et al., 2017). Managers interviewed in the Ethiopian companies claimed Agile methods were used. However, companies tended to be contracted by the government and were therefore required to provide paper work and were subjected to approval procedures and predefined schedules.

Uganda provides a case study of using citizen feedback. mTrac (a Ugandan platform supported by UNICEF, WHO and DFID) surveys local health workers via mobile phone text messaging and then alerts national public health officials about malaria outbreaks and medicine stock situations to anticipate and resolve shortages. Thanks to the system, the share of health facilities that have run out of malaria treatments has fallen from 80% to 15% (Le Goulvren, 2015).

Two DFID-funded projects LASER (Legal Assistance for Economic Reform) and SAVI (State Accountability and Voice Initiative, Nigeria) are taking what is described as an adaptive approach to delivering development support and are reported to be achieving results (Derbyshire & Donovan, 2016). Findings include: designing, contracting and implementing adaptive programming is time consuming and challenging; flexibility and accountability do not always go hand in hand; technical leadership is needed for appropriate adaptation and staff capable to support; and systems must be strong for on-going contextual analysis. Essentially, systems with workplans and budgets mandating delivery 'closes down the space and flexibility required for adaptive planning' (Derbyshire & Donovan, 2016: 3). Suggestions for incorporating flexibility into accountability are made in the report.

In the Harvard Business review (Nettesine & Popoescu, 2014) describe a clean water project in Africa which did not work well and blames fixed plan. They go on to describe the for-profit social enterprise, Nuru energy in Rwanda. Nuru create portable LED lights to reduce use of kerosene which is costly, dangerous and unhealthy. Different solutions were tried and when problems were identified ideas moved on until a lasting solution was found. POWERCycles (bicycles which generate power) were proposed to help but practicalities and costs had to be worked out by experimenting with distribution and financing structures such as partnering with micro-finance organisations and micro-franchising. To get the correct incentive and trade-offs between take-up

and margin for micro-franchisees also required experimentation to optimise. Experiments were being done at the time of publishing the article to increase adoption of the product. The article recommends that money should be allocated to small-scale experiments and studying the results before providing further support.

Bidhaa Sasa in Kenya are a company which delivers household goods clients in rural areas, providing in-house credit to make modern products accessible and affordable (Bidhaa Sasa, 2015). They employ lean thinking and validated learning to achieve their vision and deal with the uncertainty of being a start-up. In their experience they say that 'abstracting the principles while not being a high tech company based in Silicon Valley requires imagination'.[7]

A Fair Trade Software project in the Netherlands and Kenya, CodePamoja, uses virtual teams with members in developing countries (Haxby & Lekhi, 2017). The project is for new graduates to gain work experience. Project management is described as Agile, specifically Scrum management – a lightweight process framework using iterative and incremental practices. It was found difficult to teach the management technique to new teams and that individuals needed to be immersed in teams already using the technique - which is why cross-border virtual teams were established. Companies involved in the project were found to be successful in creating new business.

A case of technology improving adaptability: Water point mapping technology is one important input to effective delivery. Water experts receive real-time data about who has access to water and what patterns are associated with persistent failure (Vein & Goldstein, 2013).

Adaptive management is used in a Mercy Corps programme: Uganda's Growth, Health, and Governance Program (GHG) (Allana, 2014). Initiatives are 'designed and integrated intelligently around broader-systems change goals' (ibid: 5). Operating principles are to be strategic and largely facilitative; hyper-sensitive to markets and incentives, taking care not to distort them; and being experimental and opportunistic. Successes noted are growth of a commercial network of retailers and attracting a top-quality supplier. The team were able to act fluidly and creatively when financial challenges arose, brokering a relationship with a telecommunications provider to support mobile money services. When food storage facility problems occurred, agro-processing businesses were added as an intervention area in their most recent results chain. When the strategy to strengthen the network of animal health workers was not working, it was adjusted to include existing drug shops – this entailed major changes to the results chain.

Evaluation of a Problem Driven Iterative Adaption (PDIA) Harvard online course found that 85% of participants had achieved something by doing PDIA; participants included people who work for donors, governments, consulting firms, private sector firms and NGOs (Samji, 2017). Positive comments were published from those on the course.

A youtube presentation[8] describes how Lean Startup has produced results for the NGO 'Balls for Africa'. The approach is said to have helped the UK charity become a self-sustaining business based in Africa.

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[7] http://www.bidhaa.co.ke/the-lean-startup-methodology-and-what-it-means-for-us-in-rural-kenya/

[8]
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4. Views from the field

A small number of key experts and practitioners emerged during this research who could comment on the availability of evidence of Lean Startup or Agile working in development. The consensus was clear: rigorous evidence is lacking. The ideas are intangible and only newly being incorporated into development.

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About this report

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