Many Birds with One Stone: A Social Impact Entity for Education, Inclusion, and Data

Dr. Bobbi Kurshan & Dr. Cat McManus 23 January 2018

Summary

In this article we suggest that the ever-rising focus on big data -- from measurement to interpretation to decision making -- can and should be leveraged to tackle equity gaps, drive economic inclusion, and be the rising tide that lifts all boats. Current efforts to achieve this aim fail to take into account important elements of the problem. We propose a model for a social impact company or network of companies that would address these needs by using big data to assess social impact and to build capacity among nonprofits to generate and act on meaningful data, while at the same time creating job opportunities for underserved individuals.

Article

Data have long driven decisions in certain sectors of the economy, yet within the social impact space -- while we want data and want to make decisions grounded in reliable data -- we often struggle to know which data to

collect and how to make sense of them. Furthermore, many knowledgeable and innovative nonprofits do not have sufficient funding to have their own data scientist(s) or data collection systems, undermining the ability to assess impact and prove their worthiness when it comes to funding. While funders may give dollars earmarked for assessment and measurement, many nonprofits still struggle to define their impact, let alone how to measure it. In a related vein, though there is increasing focus on the importance of STEM, data fluency, and computational thinking skills in schools, many students -- particularly girls and women, people of color, and students in under-resourced schools -- do not pursue this path.

Nonprofits (e.g., DataKind) have sprung up to address some of the issues described above by deploying trained data (volunteer) scientists to glean insights from nonprofits' data, and thus to drive decision-making. This is noble, but it is ultimately a stopgap measure for several reasons: it does not solve the underlying problems of nonprofits not having enough money to fund a data position, and of not having enough well-trained people to fill such roles. It also does not address the perpetual problem of what we mean when we say "impact." Finally, it does not address the fact that there is a dearth of trained data scientists that come from underrepresented backgrounds.

Breaking a Vicious Cycle: Harnessing the

Concept of Big Data to Address Assessing Impact

The innovation we propose is to develop a social impact company or network of companies that address each of these shortcomings. It would serve as a bridging organization that would recruit, train, and manage data analysts -- in particular those from underserved backgrounds -- who could eventually become data scientists. As apprentice data scientists, trainees could work on five to 10 nonprofits' data needs at a relatively low (but fair) cost. Such a company would create pathways to employment for individuals who may have traditionally been under-qualified for such jobs and would simultaneously help meet the growing demand for useful impact data from nonprofits. It would also produce well-trained individuals who could fill data scientist roles at nonprofits and early stage companies (or at other types of entities) that can't afford a full-time data scientist. We would also mine for data within the organization itself, for instance searching for patterns in who apprentices are (i.e., what schools or communities they come from; how they score on a range of intake evaluations), that might point the way to improved policy at the local school level, or to patterns in hiring and pay.

This company/network would resolve the perpetual question of what impact means by taking a page from Ashoka, a nonprofit organization that "cultivates a

community of change leaders," and takes an unusual -- and particularly comprehensive -- approach to assessing impact.[1] The organization seeks to change actual social systems, and as such they measure changes in market dynamics and value chains; public policy and industry norms; inclusion and empathy; business-social congruence; and the culture of changemaking. Ashoka's methods and metrics (detailed in this 2013 report)[2] suggest that in order to measure impact, we must set aside that most human of tendencies: impatience. Instead of being satisfied with in-the-moment feel-good purchases, we will have to learn to take the long view, and to consider how the companies whose goods and services we buy contribute to lasting social good.

Initially, the success of this entity could be measured using Ashoka's framework as a guide. Over time, as partnerships and collaborations multiply, several additional metrics could be added, including the extent to which a collective impact approach is taken, that is: entities setting aside individual agendas to work together toward one goal (for more on exactly what Ashoka measures, see their 2013 report). As data are collected and analyzed, impact assessment could evolve, becoming tailored to the location(s) served.

Reaching Farther Than Existing Ideas

Many entities have sprung up to address demand for trained data scientists. These include for-profit

companies that may charge anywhere from $25/month (e.g., DataCamp) to $16,000 for a full program (e.g., Metis, Zipfian, NYC DataScience Bootcamp). Other entities offer substantial fellowships or operate at no cost to participants, but generally -- regardless of how the program is priced -- participants must *already* be highly educated -- possibly even college educated -- at least with respect to statistics and general math.

There are innovative entities working to solve several interrelated problems at once, however, and particularly for underserved groups. Lumen, for instance, is a very early stage startup out of Kenya that won the idea path prize at the recent Reimagine Education conference in Philadelphia.[3] Their work helps NGOs by getting them access to actual -- rather than *extrapolated* -- data that form the basis of private and public sector decision-making, particularly with regard to development. These data are generated by young people in “last mile” communities who have been provided with computer labs where digital literacy is taught through data collection projects. The Youth Data Archive, established at Stanford, is a project that connects various existing data warehouses that have been established in order to track children and interventions within bureaucracies in California.[4] The aim is to bring these data together in order to leverage the power of big data to understand effective policies and practices, particularly for children.

What we propose takes inspiration from each of the ideas

mentioned here. With an explicit focus on underserved groups -- adults in need of retraining, women, people of color, young people with aptitude but no outlet, persons with physical disabilities, those from low-income backgrounds -- this company/network would offer a bold alternative to programs that cater to the already-advantaged. As with The Youth Data Archive, this entity would work toward developing data sharing practices in a specific location across the entities where apprentices are placed. In aiming to suffuse the company with an ethos of data collection, as well as actually collecting data on the company/network itself, however, it moves beyond The Archive's goal of connecting existing entities and existing data to generating and collecting data on itself as a part of a larger ecosystem of organizations. The advantage to what we propose is that the design of this idea is grounded in an explicit aim to produce several kinds of social impact -- learning, job creation, more inclusive economies -- across multiple time horizons, and to engage for profit and nonprofit dollars and partners.

In essence, it would leverage the hunger for information and data to create lasting social impact for individuals, families and communities by generating high-quality learning that leads to sustainable income for the underserved among us. At the same time it would bring lower-cost, data-based insight within reach to nonprofits, startups, and smaller organizations while also creating a pipeline of tech talent.

Funding

Initially, this company could be funded as a startup social enterprise, an incubator service or a boot camp organization such as General Assembly or Galvanize, where the students would do the work described above for nonprofits as practicums during the course. Early revenues could come from subscription fees paid by nonprofits (and other startups) that use the services of individuals trained in the company.

Foundations could also provide grants that are focused on supporting the use of data to drive decision-making; there is increasing interest in this topic. The Ballmer Foundation, for instance, has pledged $60 million to StriveTogether, a nationwide “cradle to career” effort to improve outcomes for children that relies heavily on data fellows throughout its system, as well as on data visualization tools to build capacity, frame conversations, and drive impact.[5]

Corporate partners -- driven by increasing calls for social responsibility across a range of metrics -- might be interested in buying “futures” in a company that helps address inequalities in the workforce even as it trains their future employees. Collaboration with an entity such as the ones described here could represent the “transformational partnerships” that are considered the gold standard in partnership literature.[6]

Such a program should not be entirely free, as a totally

free program can undermine the perception of value. Individual trainee data analysts could be required to pay a portion of their future earnings back using an income-based repayment plan, as with federal loans. Alternatively, this could be structured as an AmeriCorps type program, wherein two years of service as a data scientist for a nonprofit would pay for the cost of educating that person (either by paying back loans or earning dollars for use in accredited programs).

Looking Forward: Scale, Impact

Interest in data-driven decision-making, ever-widening income inequality, and low rates of STEM participation among certain groups are not limited to any one context, city, or region. We believe that while these factors may not always operate identically in different settings, the general approach we propose nonetheless has potential for impact across many venues, and that it is, moreover scalable -- or perhaps “adaptable” -- to many different settings.

But long before scaling, we will need to practice what we preach and collect data on the first iteration of the idea. Success and impact might very well take different forms in different settings; that this approach can be accommodated should be considered a strength of the model, not a drawback. Yet one significant drawback to consider is that not everyone will agree on which metric(s) should be front-and-center in the data collection process,

or when building a network responsive to local concerns. This model will also need to deal with recruitment and selection of students that might require mentoring and remediation to be qualified for the fellowships and to succeed in the courses and the assignments. A balance will need to be struck between one-size-fits-all, assembly-line instruction and the hyper-personalized style dominating educational conversations today.

Companies or networks built using this approach could serve a need in the nonprofit community, feed our appetite for data and for data-driven decision-making, and build a professional pipeline for underserved individuals, even as they adapt to meet our need for increasingly inclusive economies at the local and regional levels.

Author Bios

Dr. Bobbi Kurshan provides executive-level leadership for a series of entrepreneurially-focused programs and efforts, and helps develop new degree and non-degree programs at the Penn Graduate School of Education. She has more than 35 years of experience in education and technology as an education entrepreneur and an expert on how innovation and technology are transforming teaching and learning. Kurshan is Executive Director of Innovation @ Penn GSE, overseeing the nation's first Masters program in education entrepreneurship; the VOLT program for online teaching; EDSi, an incubator and seed

fund for education start-ups, and the Milken-Penn GSE Education Business Plan Competition, the largest education business plan competition in the country.

Dr. Cat McManus has had a lifelong interest in differential educational opportunities and issues of equity. She spent nine years in college admissions, where she had the opportunity to run a partnership with a nonprofit focused on increasing access for low-income students, lead staff training, and contribute to the Opportunity and Access Team. Her research interests include community colleges, college access, educational equity, strategic partnerships, corporate social responsibility and philanthropy, and organizational management. Much of her time as a doctoral student with Dr. Kurshan focused on organizing the yearly conference, helping to develop and socialize new initiatives, and cheerleading the edtech startup community in Philadelphia, her hometown.

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