How do we know what works to promote educational equity

Fernando Reimers
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How is knowledge useful to action?

What knowledge is useful to act?

How do we generate that knowledge?

How do we use it?
How do we know that flossing our teeth increases the health of our gums?

How do we know that if we open a parachute in mid air it will slow down our free fall from an airplane and maybe even help us avoid a fatal crash upon landing?

How do we know that investing our savings in stocks is better than keeping them under a mattress?

How do we know that political leaders elected democratically do a better job for their constituents than unelected leaders?
Knowledge about our ability to predict future events based on our study of past events is limited, incomplete and provisional. We can only make predictions about the future based on multiple assumptions about the regularities of the systems we are studying.

Knowledge about the probability that an action will produce a result is subject to assumptions about the constancy of other conditions that can also influence those results.

In some systems the proportion of variation explained by our models is greater than in others.
Imperfect as the knowledge that allows us to answer those questions is, most of us would agree that this knowledge is sufficient to inform action, at least most of the times, when we have a choice about the matter and when we are not distracted by other events.

We act based on imperfect knowledge. Bounded rationality of the travelling salesman.
With these limitations in mind, what knowledge, albeit limited, is sufficient to help us act in expanding educational opportunity?

The knowledge that permits us to create the instructional programs, and to implement them on a large scale, so that all children can develop competencies that help them become self-authoring individuals and caring and contributing members of their communities and societies.
But here too we must, as the traveling salesman, be content with knowledge that is incomplete and imperfect. Our knowledge to predict the future individual or social value of particular competencies based on their present or past value is very limited indeed.

From these fragments of knowledge we make leaps of inference on the value of investing sizable social resources to develop:

- specific cognitive skills, literacy, numeracy or scientific reasoning,
- some of us claim that there is value in promoting the capacity for independent and critical reasoning,
- or in developing compassion and citizenship skills to actively participate in local and national politics,
- or in the capacity for moral reasoning to contribute to sustain a society governed by basic human rights and values,
- or in the capacity to understand the environmental consequences of our actions in order to create more ecologically sustainable forms of human-environmental interaction.
- We make even further leaps of inference when we invest most of these resources in these specialized institutions of relatively recent invention we call schools.
The knowledge that is helpful to advance social equity clearly needs to be robust in terms of external validity, of being applicable to the real world in all its complexity, as well as in terms of internal validity. Furthermore, the knowledge that is helpful to advance social equity needs to be relevant to addressing social equity challenges as they exist in the world.
Our knowledge of the social value of various competencies is insufficient to help us discern the long term effects of emphasizing math and science over humanities or liberal arts, of technical knowledge over ethical reasoning or of formal education over entrepreneurship training through non-formal programs.

Research based knowledge cannot solve normative preferences and in democratic societies those are best sorted out in the deliberative process that is part of life in a democracy.
What role can then research-based knowledge play in sustaining educational practices to advance equality of educational opportunity?

The role of helping to inform the consideration of alternative ways to achieve education objectives, once those objectives, and possible tradeoffs between objectives, have been established through the political process.

Research-based knowledge can also inform the political deliberations about education making visible problems that may be out of sight and mind of elites or of the most active participants in the political process.

Education research can then help the process of agenda setting, as well as policy and program design. Educational evaluation of programs and policies can further help advance the theories on which interventions are based to contribute to program improvement.
These programs in turn must first of all be relevant to the addressing the challenges of equity.

The answer to the question of what works then must go beyond research, it must integrate research results and theory into the creation and design of practical and scalable approaches to helping students learn, approaches that focus particularly on serving those students who are currently most excluded from the opportunities to develop the competencies that enable them to be self-authoring individuals.
What do we then need to know to promote educational equity and how can research contribute to creating that knowledge?

- First knowledge of the relationship of educational institutions to social institutions
- Second knowledge of how educational institutions function
- Third knowledge about the intended and unintended results of programs of instructional improvement
- Fourth knowledge about the contributions of leadership to educational innovation and reform.
The knowledge in these four broad categories should include in depth study of national and subnational education systems, historical research, ethnographic studies of schools, classrooms, students and communities, school effectiveness research, program evaluation as well as comparative knowledge of these topics across countries.

Multidimensional and multimethods, helping to inform a systemic view of educational institutions and of how they change.

While this knowledge will be helpful to inform the design and innovation necessary to support action, such design will need to draw on other forms of knowledge and developments.
First, we need to know how educational institutions relate to other social institutions. This includes understanding how a society and various groups within the society value education, what the continuities and discontinuities are between how schools conduct their work and the values, expectations and norms of families and communities, and understanding what groups of the population participate in educational institutions and with what consequences for those who participate as well as for those who are excluded.
Second, we also need to know how educational institutions function and what is learned in them. Who teaches, in what way, with what technology, with what pedagogy, with what organization and governance, what is taught, to what students, at what cost and who pays. We need to know also what is the effectiveness of schools at developing cognitive, social and emotional competencies.

We also need to know what are learning environments like, how are students treated by their peers, by teachers by others in the school. How do children engage with schools and the process of school learning. How does school learning fit with other aspects of students’ lives and what keeps students engaged with learning or causes them to disengage.
Third, based on a good understanding of the relationship of educational institutions to their social context and of their functioning and effectiveness, we need to know the impact of interventions deliberately designed to improve the effectiveness of schools, as well as the intended and unintended impact of policies designed to improve educational opportunity. The goal of this form of evaluation should be more than establishing program impact, treating schools or programs as black boxes, but it should be to contribute to the development of program theory.
Fourth, we need knowledge about the process of change itself, and about the role of leadership and professional development in initiating and sustaining change. Educational change to foster inclusion and reduce inequity does not automatically follow knowledge of the facts. Programs are designed, implemented and scaled up because there are leaders who make this happen. If we are to transform educational institutions we cannot just hope for good leadership but we need to study it so we can plan it, develop it and sustain it.
The knowledge that can help us close equity gaps in education is knowledge that is relevant to clear purposes, and that reflects clear thinking about the relationship of educational institutions to social institutions and about the way in which the development of cognitive, emotional and social competencies allows people to become self-authoring individuals and contributing members of their communities.

This knowledge should focus on
- The relationship of educational institutions to their context,
- The functioning of educational institutions,
- Examining the impact of educational programs and
- The process of educational innovation and change and the role of educational leadership in that process.
- That knowledge should draw on multiple disciplinary and methodological traditions and provide the foundation for a process of design and implementation of interventions that will go beyond the automatic adaptation of these research findings.