

Linking Learning to Employment: An Answer to the Global Search for Education Quality and Relevance?

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Photo: Save the Children and Dar Al-Kalima College in Bethlehem

In fall 2015, the global community will gather at the United Nations in New York to agree-on a new set of global development goals—to be named the Sustainable Development Goals (SDGs). Following on the Millennium Development Goals (MDGs) set in 2000, the SDGs will take ambitious next steps in the global movement to improve lives, lift nations, and protect the planet. Understandably, the high-stakes process for debating and agreeing on the SDGs has attracted the concerted and prolonged attention of governments and civil society organizations worldwide.

Key Policy Implications

- Current approaches to secondary school are producing high numbers of dropouts and low numbers of students well prepared for college and careers.
- Given the likelihood that the post-2015 global development agenda will focus on education quality and relevance, with an emphasis on applied skills for work, a successful reform movement in the United States that blends rigorous academic learning, applied technical study, and work-based learning may be of global interest.
- Transporting a successful approach from one country to another must be carefully considered and implemented, paying attention to variables in local political economies and education systems.
- RTI International is developing approaches for adapting the successful U.S.-based approach, called Linked Learning, to other countries' contexts.

For the education sector, this process represents an opportunity to reframe the field and move beyond the MDGs' substantial, although qualified, success in promoting access to primary education. With millions of children in school but showing limited learning and large youth cohorts unemployed, this reframing will likely take on the challenging issues of education quality and relevance.^{1,*} When it does, educational and political leaders around the world will search for approaches that work at scale. This policy brief explores one such approach in the United States—Linked Learning—that blends rigorous academic studies and serious, applied vocational training in a single track to produce college- and career-ready graduates across the board.

Education for What?

Indicating the influence that global development goals can have, school enrollment rates have skyrocketed since the MDGs targeted access to education. From 1999 to 2014, the number of out-of-school children was cut in half and primary enrollment rates improved 10 percentage points to 90%.² At the secondary level, a staggering 33 million more students will pass through school doors in 2015 than did in 2000.² However, UNESCO (the United Nations Educational, Scientific and Cultural Organization)³ reports that more than 250 million school-aged children are not learning even the basics, and the World Bank⁴ estimates that more than 600 million young people are un- or underemployed. In response, a growing chorus of stakeholders seek to move beyond simple access to schooling and address deeper issues of education quality and relevance.⁵

The separate but related goals of *quality* and *relevance* are perhaps most acute at the secondary school level. Secondary education occupies a critical juncture in the education system for consolidating foundational learning, pursuing advanced academic skills, gaining critical soft skills, and developing applied work place competencies. With the average student attending school for 10.5 years worldwide, secondary school is the terminal educational experience for most youths and their point of departure for the work world.² For other youths, it is a gateway to tertiary education and a career shortly down the road.

Growing evidence suggests that secondary school is not serving either of these groups well, because young people are not being well prepared for either college or careers.^{6–8} Systems that rigidly track some students into academic paths that offer limited applied learning and other students into vocational paths absent of academic rigor are particularly troubling; these systems limit both groups of students and impede educational and career mobility.

One response to these challenges, called Linked Learning, is gaining traction in the United States and may merit consideration for careful adaptation elsewhere.

Linked Learning

For the past 40 years, school reformers in the United States have pushed models that seek to improve education quality and relevance by organizing education around themes (magnet schools, charter schools) and that infuse traditional learning with applied and work-based learning (Expeditionary Learning, Big-Picture Learning, High-Tech High). In 2010, the Hewlett Foundation coined the term “deeper learning” to describe these and other related efforts.⁹ While largely thought to be successful, these models often exist at the margins of the system, sometimes as schools within schools, or as niche academies driven by a visionary leader or group of parents for a limited number of students.^{10,11} Called “discrete” efforts, these reforms are not designed to scale, with specialization and customization apart from the larger system forming a central part of their ethos.¹⁰

Starting in 2005, the Linked Learning movement sought to embrace the best elements of these efforts and implant them firmly within the full system, making them available to a large number of students. Itself an umbrella of aligned “pathway programs,” Linked Learning encompasses efforts such as the District Initiative in California, the California Partnership Academies, and the National Academy Foundation schools, among other similar schools.¹⁰ Most prevalent in California—where Linked Learning now covers 300 high schools—the movement is also gaining in Michigan, Texas, and New York, reaching 65 school districts nationwide.¹² Over the past 2 years, the California legislature has set aside \$500 million in grant money for local education authorities to further promote career pathway-based education, setting the stage for state-wide adoption in the country's most populous state.

* Throughout this brief, “quality and relevant education” is used to refer to the quality and relevance of educational inputs (teacher qualifications, curriculum, physical space, etc.), the quality and relevance of education outputs (skills needed in the economy, skills needed to succeed in postsecondary education—or “college and career readiness”), and outcomes (further education attainment, employment). While “college- and career-ready” is a uniquely American turn of phrase, it is used here to refer to preparation for all sorts of postsecondary education, and a wide variety of careers loosely defined.

Organized around broadly defined “career pathways,” Linked Learning seeks to transform high schools by integrating (a) rigorous academics, (b) career-based classroom learning, (c) real-world workplace experience, and (d) personalized student support services (Figure 1). Linked Learning is designed to be for any student, no matter their prior academic achievement or future career aspiration; it is not a further tracking mechanism for the non-elite.

Typically driven by district leadership and with strong support from parents, teachers, and community businesses, Linked Learning is an approach flexible enough to take different shapes and forms, even within the same district. Examples include the School of Digital Media and Design in San Diego; Arthur Benjamin Health Professions High School in Sacramento; the Architecture, Construction, and Engineering Academy in Long Beach; the Academy of Business and Finance in the Central Valley; and the Law Academy at Richmond High School. At these schools and hundreds of others, students take their subjects as an integrated whole under the career pathway context. For example, students at the Health Professions High School might do a group project across subjects called “Catch the Fever,” which explores the spread of infectious disease. As part of this project, students might read *Hot Zone* by Richard Preston, which is about the spread of hemorrhagic viral fevers, in English class; study the epidemiology of diseases in biology; calculate case scenarios of disease expansion using trigonometric equations in math; and learn about treatment strategies in health class. In addition to coursework, students might spend time in hospitals drawing blood to test patients for infection, learning how to practically avoid the spread of disease, and exploring medical ethics and health policy.

Linked Learning proponents, including its leading implementer ConnectEd: The California Center for College and Career, are quick to note that enrollment in a career pathway is not designed to shoehorn students into certain jobs or a single industry. On the contrary, Linked Learning is meant to broaden options and help students develop transferable

Figure 1. Linked Learning career pathways



skills that may be applied in multiple fields of interest. The career overlay of Linked Learning is intended to answer the question of relevance—or as many students ask, “Why do I need know this?” or “Education for what?”—while providing the scaffolding for course integration and also imparting useful applied skills, transferable credits, and industry-recognized certifications. Early evidence indicates that it is working.

The Evidence Base

The career pathway academies in California have been rigorously studied. One evaluation is an ongoing longitudinal, randomized control trial that aims to isolate and assess the impact of academies over time. Based on this study and a series of other studies, the evidence suggests that academy students attend class more frequently, are more motivated in doing so, achieve more academically, complete school in greater numbers, enroll in postsecondary education in higher number, and earn more money in their early careers than those not enrolled in such academies.

Specifically, career academy students outperform statewide averages:

- on the 10th grade California High School Exit Exam (74% vs. 62% pass rate);
- in graduation rates (95% vs. 85%);
- in meeting California university course admission requirements (57% vs. 36%);
- in attending 4-year postsecondary education (9% higher enrollment); and
- in post-graduate salary, earning as much as \$10,000 more within 4 years of high school graduation.[†]

This is all achieved while working in a diverse range of districts, including populous, underserved urban districts such as Los Angeles, Sacramento, and San Diego.

The theory of change that underpins these outcomes is that students are simply more motivated to learn when they see and value the relevance of course content. Almost 75% of students in Linked Learning pathways claim that they “know a lot about college and career planning.” In the areas of collaboration (“work to achieve shared goals,” “work well with other people”) and professionalism (“know how to create a resume,” “know expectations for behavior”), Linked Learning students self-report to be 20 percentage points higher on these perception measures than their comparison group peers. In mindset, Linked Learning students report to “set goals for school success” (8 percentage points higher), “can learn hard content” (16 points higher), and “can reach goals” (10 points higher) at higher levels than controls.¹⁶

These studies are ongoing and too few in number. More rigorous studies are needed to examine longer term outcomes and impacts of these early signs that pathway participants are more motivated, better skilled, and higher credentialed than nonparticipants. Of particular interest are questions of equity—exploring the effects that neighborhoods, parental influence, gender, and peers have on pathways selection and on performance. Studies also need better clarity on the evidence surrounding longer-term academic achievement and postsecondary success. Further, several case studies make clear that these reforms are large, difficult undertakings that require

the right constellation of education actors, a good amount of political will, and a supportive business community; more qualitative studies that elucidate change mechanics would be useful.

Data on how these processes unfold; how they can be improved; and how, why, and where they sustain will be critical to long-term viability of Linked Learning and its expansion elsewhere.

Can This Approach Travel?

In the wake of the expected agreement in fall 2015 on the SDGs, might an approach like Linked Learning be a viable option for education reformers seeking to improve the quality and relevance of secondary schools around the world? Or is Linked Learning somehow a unique approach that is only successful because of contextual factors in the United States rarely found elsewhere?

Even the casual observer of development knows that approach (or model) transport is highly fraught and succeeds only with careful contextual adaptation and attention to local political economy. In their seminal piece on education policy borrowing, Halpin and Troyna¹⁷ suggest that educational transport is most likely to be successful when there is some synchrony between the respective education systems involved and the dominant political ideologies surrounding them, including the impetus for reform. Philips and Ochs¹⁸ suggested an analytic model for assessing the process of “policy borrowing” and the potential that a borrowed education reform has for success. The model considers the internal “impulses” of the receiving country (i.e., the motivations behind reform) and the “externalizing potential” of its system (i.e., the political-economic and educational system variables) critical to the way the reform will be received and implemented.

Given Linked Learning’s first-order emphasis on motivating students around market-relevant education, the model is likely to be attractive to systems facing severe secondary school noncompletion, youth unemployment, university unpreparedness, and/or employer dissatisfaction. On the system variables side, the unique characteristics of the US educational system where Linked Learning is flourishing include the relatively high levels of decentralized decision making, the professional cadre of teachers, and the willingness of communities and businesses to support schools. Are these system variables shared by other systems external to the United States? To what extent must they be the same or similar for an approach such as Linked Learning to work? How might a different set of education and community factors impact the

[†] Some of the evidence surrounding Linked Learning is based on the larger career academies movement, and some of it is based on the more specific Linked Learning approach. Not all data are based on randomized impact evaluations but rather consider self-selected group performance and do not account for student motivation or other confounding variables. All evidence is summarized at James Irvine Foundation,¹³ including Kemple,¹⁴ Saunders and Rogers,¹⁵ and Visher and Stern.¹⁰

implementation and success of a blended academic-vocational approach such as Linked Learning?

Policy Implications

RTI International, a leading independent research organization with extensive education and workforce development experience in the United States and developing countries, has accounted for these analytic considerations and developed a Linked Learning feasibility assessment tool. The tool helps assess a country's "readiness" for an approach such as Linked Learning and probes factors that might determine necessary flexibilities in its application. The rubric collects and records data in the areas of political will, enabling environment and policy framework, political-economic climate, business-community readiness, curriculum, school leadership, teaching and learning, and general receptivity to Linked Learning principles by key stakeholders.

During the summer and fall of 2015, RTI will assess Linked Learning "readiness" in Morocco, Kenya, Indonesia, and the Dominican Republic—countries chosen based on initial reviews of education and economic data for more than a dozen countries. In each location, RTI is interviewing key stakeholders and reviewing secondary data to complete the assessment rubric. This work will then inform selection of sites for further capacity assessments and eventual pilots of Linked Learning.

In the wake of the forthcoming announcement of SDGs, the world will search for new ways to reach ambitious global targets. How will we ensure quality, relevant learning for all? How will we reimagine secondary schools and avoid simple linear expansion of the current system? How can we give all students, no matter their backgrounds, an opportunity to pursue college and meaningful careers? Linked Learning may provide answers to these questions, but its feasibility and the possibility of adaptation in other contexts needs to be assessed carefully first.

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