



## Theory of Change

### What is the theory of change, and what comparison will be evaluated?

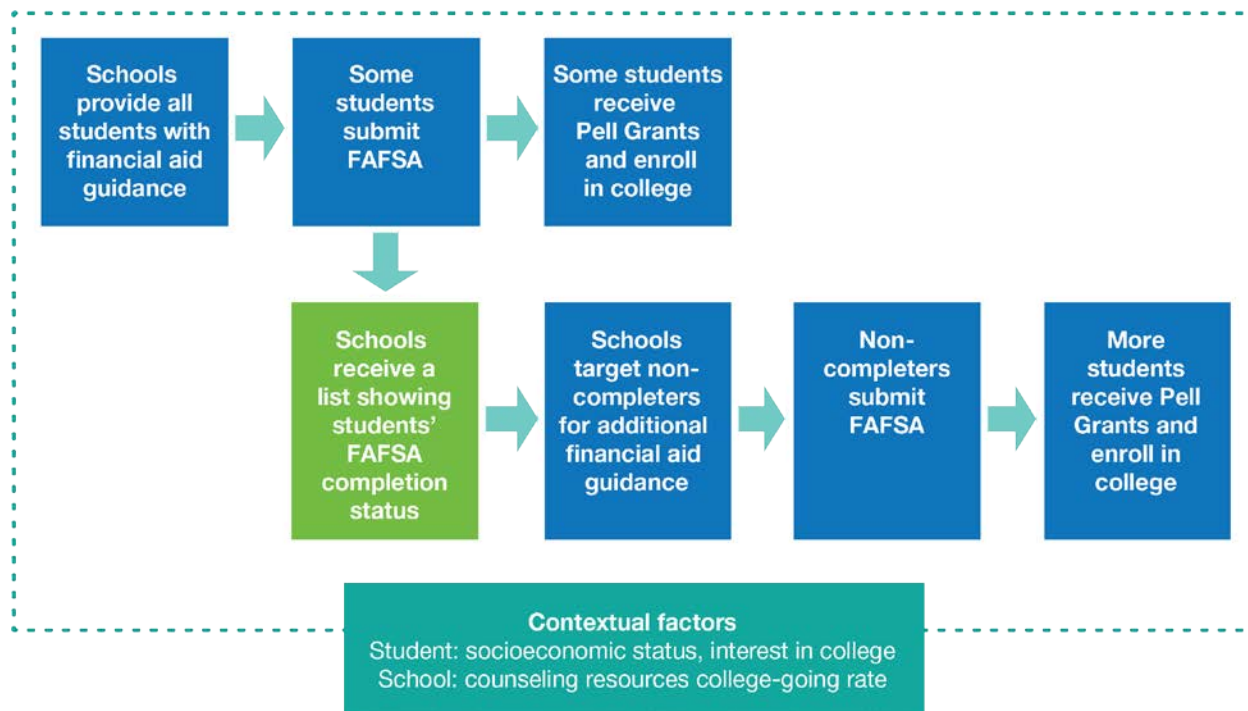
Before designing a research study, we need to understand how an intervention works, consider who it will affect, and identify relevant outcomes. In other words, all evaluations of education interventions should begin with a theory of change. A theory of change describes the causal chain of events that leads from the implementation of the intervention to the desired outcome. In some cases the theory of change is simple—targeted literacy tutoring is expected to directly influence literacy outcomes—but in more complex cases it might help to create a diagram that captures the theory of change. This diagram includes the intervention, intermediate outcomes, and final outcomes, and it illustrates contextual factors that can affect this causal chain. Having a diagram provides structure for thinking about how the intervention affects final outcomes—or what actions or changes in behavior are expected to occur as a result of the intervention. If a theory of change does not exist, it is important to develop one at this step, although the theory need not be a diagram at this stage. Researchers may need to lead development of the theory of change and then solicit feedback from the district.

Excerpted from: Resch, A., Berk, J., & Akers, L. (2014). Recognizing and conducting opportunistic experiments in education: A guide for policymakers and researchers (REL 2014–037). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Analytic Technical Assistance and Development. Retrieved from <http://ies.ed.gov/ncee/edlabs>

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Figure 1 presents a simple theory of change for the Free Application for Federal Student Aid (FAFSA) Completion Project. The top row of blue boxes shows the path of college counseling

Figure 1. The Theory of change for the Free Application for Federal Student Aid Completion Project



FAFSA is Free Application for Federal Student Aid. Source: Authors' compilation.



and student behavior in high schools in the absence of the intervention. Schools provide college counseling to their students, possibly including financial aid guidance. Following the arrows, a subset of grade 12 students submits the FAFSA, attends college, and receives financial aid. The green box in the second row represents the FAFSA Completion Project intervention, which entails providing a set of schools with access to detailed information on which grade 12 students have completed the FAFSA. The remaining boxes in this row show the anticipated results of this intervention: schools are able to target their subsequent counseling to students who have not completed the FAFSA, thereby increasing the chances that those students will complete the FAFSA and enroll in college.

A theory of change should explicitly differentiate between the proposed intervention (to which the treatment group is assigned) and current practice (to which the control group is assigned). In a research study comparing a new program with current practice, the study team refers to current practice as the “counterfactual condition”—that is, what would have happened to members of the treatment group in the absence of the intervention. In figure 1, the top row represents the counterfactual condition. The second row shows the anticipated causal path when the intervention is implemented. A comparison of the two rows illustrates the key research question. In this case, the study examines the impact of the intervention (shown in the green box) on the outcomes in the boxes on the right of each row.