

Diane Ravitch's *The Death and Life of the Great American School System* (2010) stands out as exemplary in the policy literature on education is that she reflects on evidence over time and sometimes changes her position on the strategies she had previously advocated as a senior policymaker in education. It is important to be as open to evidence that may contradict our positions as to evidence that supports them. Contrary evidence should be valued because it can help policymakers rethink their positions and reconstruct policies that work better for the public good, economic and social.

### *Types of Research Informing Policy Rationales*

To inform readers about related policy research, we review recent research that meets reasonable quality standards. Our review is not exhaustive, but it is comprehensive. We seek to provide broad evidence about policy links that merit consideration by readers rather than relying only on our own research. The remaining chapters in Part I on preparation, access, and degree attainment include three types of review evidence:

- Reviews of studies using individual data that examined links between policies and outcomes consistent with the ACF model (Figure 3.1) and the balanced access model. We include reviews of some of the reports that stimulated the Advisory Committee on Student Financial Assistance (2010) review of studies, which used multivariate methods.
- Reviews of studies that use financial indicators to examine links between education and finance policies on preparation, access, and degree attainment (studies using fixed-effects regressions).
- Recent studies of preparation, access, and completion meeting contemporary causal standards (e.g., experiments and quasi-experimental designs including hierarchical linear modeling, regression discontinuity, hazard modeling, and regressions with instrumental variables).

In theory, a multivariate study that includes appropriate control variables provides a way of discerning when a policy (e.g., grant aid) is associated with an outcome (e.g., college enrollment). Yet recent debates about the quality of research have focused on limitations of multivariate methods, including problems with omitted variables and heterogeneity (Becker, 2004; Heller, 2004). Since researchers find these problems difficult to address fully, especially omitted variable bias, given the limitations of extant databases, it is important that the limitations be recognized when the findings are interpreted for policy studies. Our review method recognizes the major problems in the discussion without casting blame on researchers. Our intent is to inform the interpretations of research constructed within policy advocacy. Our reviews consider studies of preparation (test scores, courses completed, and graduation rates as intermediate outcomes), access to 2- and 4-year colleges (as thresholds of access related to preparation and affordability), and persistence/degree attainment.

The indicators were developed to examine how state education policies influence preparation, access, and degree attainment. The initial study examined the impact of state grants on enrollment rates using fixed effects regression analyses to control for state differences (St. John et al., 2004). The use of state indicators has been extended to examine other policies and outcomes related to access, preparation, and degree. In addition, a few researchers have used the state indicators in fixed-effects studies (e.g., St. John

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