REL Appalachia Summary of Verified Research Findings

College and Career Readiness
November 2018

Question:

What evidence-based interventions emphasize a climate or culture of high expectations for students?

Response:

Thank you for your request to our REL Reference Desk regarding evidence-based information about interventions that emphasize high expectations for students. To answer this question with rigorous research studies with results that were verified by independent sources, the REL Appalachia research team reviewed information from the What Works Clearinghouse (WWC) and Evidence for ESSA websites. No information about this research question was available from the Evidence for ESSA website. More details about our search process are in the databases and resources section at the end of this memo.

The summary includes hyperlinks to the WWC intervention reports and single study reviews that provide more details of the results and the research studies that support these results (exhibits 1 and 2). It also displays the criteria WWC uses to determine ratings of effectiveness of an intervention and the extent of evidence for an intervention (exhibits 3, 4, and 5).

All studies the WWC reviews must meet WWC group design standards with or without reservations. Group design standards without reservations are those that provide strong evidence for an intervention's effectiveness, such as a well-implemented randomized controlled trial. Studies meeting group design standards with reservations provide weaker evidence for an intervention's effectiveness, such as a quasi-experimental design or a randomized controlled trial with high attrition that has established equivalence of the analytic samples.

The references presented here are not necessarily comprehensive, and other relevant references and resources may exist. Interventions and references appear in alphabetical order, not necessarily in order of relevance.

Exhibit 1. Summary of verified research findings from What Works Clearinghouse intervention reports

Intervention	Outcome domain	Effectiveness rating	Evidence of effectiveness	Citation
First Things First	Staying in school	No discernable effects	Small	U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2008, January).
Green Dot Public Schools	Mathematics achievement	Potentially positive effects	Small	U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2018, January).
	Student progression	Potentially positive effects	Small	
	School attendance	Potentially positive effects	Small	
	English language arts achievement	Potentially positive effects	Small	
Knowledge is Power Program (KIPP)	Mathematics achievement	Positive effects	Medium to large	U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2018, January).
	English language arts achievement	Positive effects	Medium to large	
	Science achievement	Potentially positive effects	Medium to large	
	Social studies achievement	Potentially positive effects	Medium to large	
	Student progression	No discernable effects	Small	
Talent Development High Schools	Progressing in school	Potentially positive effects	Small	U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2007, July).

Intervention descriptions from What Works Clearinghouse intervention reports

From the First Things First intervention report: "First Things First is a reform model intended to transform elementary, middle, and high schools serving significant proportions of economically disadvantaged students. Its three main components are: (1) 'small learning communities' of students and teachers, (2) a family and student advocate system that pairs staff members and students to monitor and support progress and that serves as a bridge

between the school and family, and (3) instructional improvements to make classroom teaching more rigorous and engaging and more closely aligned with state standards and assessments."

From the Green Dot Public Schools intervention report: "Green Dot Public Schools is a nonprofit organization that operates more than 20 public charter middle and high schools in California, Tennessee, and Washington. The Green Dot Public Schools are regulated and monitored by the local school district, but operate outside of the district's direct control. The Green Dot Public Schools model emphasizes high quality teaching, strong school leadership, a curriculum that prepares students for college, and partnerships with the community. Any student may enroll in a Green Dot Public School if there is space available. Many Green Dot Public Schools operate with unionized teachers and staff. Several of the Green Dot Public Schools were chartered in existing public schools which were performing below district or community expectations. Funding for Green Dot Public Schools operations comes through public federal, state, and local finances, while some transformations of existing district-run schools into charter schools have been funded partly by private foundations."

From the Knowledge is Power Program (KIPP) intervention report: "The Knowledge Is Power Program (KIPP) is a nonprofit network of more than 200 public charter schools educating early childhood, elementary, middle, and high school students. Every KIPP school obtains approval to operate from a charter school authorizer. Students, parents, and teachers must sign a commitment to abide by a set of responsibilities, including high behavioral and disciplinary expectations. KIPP also has an active alumni network and set of partnerships with scholarship organizations to help guide former students through college. KIPP schools have an extended school day and an extended school year compared with traditional public schools. When demand for enrollment exceeds enrollment capacity at a KIPP school, student admission is based upon a lottery. Funding for KIPP schools comes primarily through public federal, state, and local finances, along with supplemental funding through charitable donations from foundations and individuals."

From the Talent Development High Schools intervention report: "Talent Development High Schools is a school reform model for restructuring large high schools with persistent attendance and discipline problems, poor student achievement, and high dropout rates. The model includes both structural and curriculum reforms. It calls for schools to reorganize into small 'learning communities'—including ninth-grade academies for first-year students and career academies for students in upper grades—to reduce student isolation and anonymity. It also emphasizes high academic standards and provides all students with a college-preparatory academic sequence."

Exhibit 2. Summary of verified research findings from What Works Clearinghouse individual study reviews

Intervention	Outcome domain	Characterization of findings	Citation
Early College Model	Attainment	Statistically significant positive effects	U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2016, September).
	Attendance (high school)	Statistically significant positive effects	
	College readiness	Statistically significant positive effects	
	Completing school	Statistically significant positive effects	
	General academic achievement (high school)	Statistically significant positive effects	
	Staying in school	Statistically significant positive effects	

Individual studies reviewed by What Works Clearinghouse

Edmunds, J. A., Unlu, F., Glennie, E., Bernstein, L., Fesler, L., Furey, J., & Arshavsky, N. (2017). Smoothing the transition to postsecondary education: The impact of the Early College Model. *Journal of Research on Educational Effectiveness, 10*(2), 297–325. Abstract retrieved from https://eric.ed.gov/?id=EJ1135800

From the abstract: "Developed in response to concerns that too few students were enrolling and succeeding in postsecondary education, early college high schools are small schools that blur the line between high school and college. This article presents results from a longitudinal experimental study comparing outcomes for students accepted to an early college through a lottery process with outcomes for students who were not accepted through the lottery and enrolled in high school elsewhere. Results show that treatment students attained significantly more college credits while in high school, and graduated from high school, enrolled in postsecondary education, and received postsecondary credentials at higher rates. Results for subgroups are included."

Exhibit 3. Criteria used to determine the rating of effectiveness for an intervention (intervention report)

Rating of effectiveness	Criteria
Positive effects	Two or more studies show statistically significant positive effects, at least one of which met WWC group design standards for a strong design, AND no studies show statistically significant or substantively important negative effects.
Potentially positive effects	At least one study shows a statistically significant or substantively important positive effect, AND no studies show a statistically significant or substantively important negative effect AND fewer or the same number of studies show indeterminate effects than show statistically significant or substantively important positive effects.
Mixed effects	At least one study shows a statistically significant or substantively important positive effect AND at least one study shows a statistically significant or substantively important negative effect, but no more such studies than the number showing a statistically significant or substantively important positive effect, OR at least one study shows a statistically significant or substantively important effect AND more studies show an indeterminate effect than show a statistically significant or substantively important effect.
Potentially negative effects	One study shows a statistically significant or substantively important negative effect and no studies show a statistically significant or substantively important positive effect, OR two or more studies show statistically significant or substantively important negative effects, at least one study shows a statistically significant or substantively important positive effect, and more studies show statistically significant or substantively important negative effects than show statistically significant or substantively important positive effects.
Negative effects	Two or more studies show statistically significant negative effects, at least one of which met WWC group design standards for a strong design, AND no studies show statistically significant or substantively important positive effects.
No discernible effects	None of the studies shows a statistically significant or substantively important effect, either positive or negative.

Exhibit 4. Criteria used to determine the extent of evidence for an intervention (intervention report)

Extent of evidence	Criteria
Medium to large	The domain includes more than one study, AND the domain includes more than one school, AND the domain findings are based on a total sample size of at least 350 students, OR, assuming 25 students in a class, a total of at least 14 classrooms across studies.
Small	The domain includes only one study, OR the domain includes only one school, OR the domain findings are based on a total sample size of fewer than 350 students, AND, assuming 25 students in a class, a total of fewer than 14 classrooms across studies.

Exhibit 5. Criteria used to determine the characterization of findings for an intervention (individual study review)

Characterization of findings	Criteria
Statistically significant positive effect	The estimated effect is positive and statistically significant (correcting for clustering when not properly aligned).
Substantively important positive effect	The estimated effect is positive and not statistically significant but is substantively important.
Indeterminate effect	The estimated effect is neither statistically significant nor substantively important.
Substantively important negative effect	The estimated effect is negative and not statistically significant but is substantively important.
Statistically significant negative effect	The estimated effect is negative and statistically significant (correcting for clustering when not properly aligned).

Additional What Works Clearinghouse references

Herman, R., Dawson, P., Dee, T., Greene, J., Maynard, R., Redding, S., and Darwin, M. (2008). *Turning around chronically low-performing schools: A practice guide* (NCEE #2008-4020). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/PracticeGuide/7

Tierney, W. G., Bailey, T., Constantine, J., Finkelstein, N., & Hurd, N. F. (2009). *Helping students navigate the path to college: What high schools can do: A practice guide* (NCEE #2009-4066). Washington, DC: National Center for Education Evaluation and Regional Assistance,

Institute of Education Sciences, U.S. Department of Education. Retrieved from https://ies.ed.gov/ncee/wwc/PracticeGuide/11

Databases and resources

We searched the What Works Clearinghouse (WWC), an IES-sponsored resource that reviews existing research on education programs, products, practices, and policies to provide educators with information to make evidence-based decisions. This search included WWC topics of *Literacy*, *Mathematics*, *Science*, *Charter Schools*, *Kindergarten to 12th Grade*, and *Path to Graduation*. REL AP staff included in this memo available information about school-level interventions.

We also searched the Evidence for ESSA website, a resource provided by the Center for Research and Reform in Education at Johns Hopkins University School of Education, in collaboration with a distinguished Technical Working Group and a Stakeholder Advisory Group.

Resources included in this document were last accessed on November 7, 2018. URLs, descriptions, and content included here were current at that time.

This memorandum is one in a series of quick-turnaround responses to specific questions posed by education stakeholders in the Appalachia region (Kentucky, Tennessee, Virginia, and West Virginia), which is served by the Regional Educational Laboratory Appalachia (REL AP) at SRI International. This memo was prepared by REL AP under Contract ED-IES-17-C-0004 from the U.S. Department of Education, Institute of Education Sciences, administered by SRI International. The content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.