

Evidence-Based Claims

A Helpful Guide to Understanding ESSA



Introduction

History of ESSA



What is ESSA?

ESSA is a bipartisan measure that reauthorized the 50-year-old Elementary and Secondary Education Act (ESEA), the nation's national education law and long-standing commitment to equal opportunity for all students.



The Every Student Succeeds Act (ESSA) was signed by President Obama on December 10, 2015.



The current law leverages progress made in key areas over recent years.



In 1965, President Lyndon B. Johnson signed into law The Elementary and Secondary Education Act (ESEA). ESEA, often referred to as a civil rights law, provided new funding to districts serving low-income students, offered funding for education centers and included scholarships for low-income college students. Funding was also provided to state educational agencies to support improved quality of elementary and secondary education.

For many years, the Elementary and Secondary Education Act (ESEA) has included requirements to implement research-based interventions. Under No Child Left Behind (NCLB), districts and schools were called to use programs and interventions defined as “scientifically-based research”. Under the Every Student Succeeds Act (ESSA), **evidence-based interventions** are required.

The transition to evidence-based research is intended to strengthen the impact of educational investments by ensuring interventions have proven effectiveness in meeting identified outcomes. Under ESSA, many programs encourage prioritizing evidence-based interventions, strategies, or approaches in state and local application(s) for funding.

Voyager Sopris Learning has created this guide to help educators understand how **evidence-based interventions** must align with ESSA to be compliant.

Definition of Evidence-Based

ESSA's definition of “evidence-based” includes four tiers or levels of evidence that create a framework to develop an increasingly rigorous evidence base.

Summary of Evidence Levels			
1	Strong Evidence	Demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes	Based on at least one well-designed and well-implemented experimental study.
2	Moderate Evidence		Based on at least one well-designed and well-implemented quasi-experimental study.
3	Promising Evidence		Based on at least one well-designed and well-implemented correlational study with statistical controls for selection bias.
4	Demonstrates a Rationale	Demonstrates a rationale based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes	Includes <u>ongoing efforts to examine the effects*</u> of such activity, strategy, or intervention.

Source: Adapted from *Chiefs for Change*, 2016



Evidence-based interventions are activities, strategies, practices or programs that are effective at producing results and improving outcomes when implemented.



The type of evidence described in ESSA has generally been produced through formal studies and research.



It's Important to Understand...

Although there are interventions already supported by a robust body of evidence, there are solutions for which the field is still testing new ideas and collecting evidence. The different evidence levels identified in ESSA acknowledge this important variation.

For each of the first three levels, the research studies must demonstrate a “statistically significant effect on improving student outcomes or other relevant outcomes.” This means the difference observed in the study is not likely due to chance, but rather a cause and effect relationship.

The fourth level, **demonstrates a rationale**, can be thought of as an opportunity for building evidence. Through the use of a theory of action or logic model*, an intervention with minimal evidence can be examined for its potential to improve outcomes. This level allows for the collection of evidence demonstrating effectiveness for the identified intervention.

*Shakman, K., & Rodriguez, S. M. (2015). *Logic models for program design, implementation, and evaluation: Workshop toolkit* (REL 2015–057). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands. Retrieved from <http://ies.ed.gov/ncee/edlabs>.

Types of Evidence

Many information sources, from marketing material to peer-reviewed studies published in prestigious journals, present evidence of product effectiveness. The quality of this evidence can vary widely. Below, we've explained four types of evidence in order of weakest to strongest in more detail along with consideration for use.



Each type of evidence has the potential to contribute to a consumer's decision regarding the use of a particular product.



Anecdotal Evidence

Anecdotal evidence includes personal descriptions or claims based on one's own experience. This may be claims about the effectiveness of an intervention. Anecdotal evidence is not able to provide strong support for the claims being made because those claims are based on subjective opinions. However, anecdotal evidence may provide information about the context in which an intervention might be expected to be effective. In general, this type of evidence can help identify interventions that are promising enough to warrant more rigorous research and review.

Descriptive Evidence

Descriptive evidence summarizes characteristics of an intervention such as program participants and their outcomes over a given period of time. Since descriptive evidence does not include a comparison group, it is impossible to know what would have happened without the intervention over the same time period. The means descriptive evidence alone cannot provide strong support for claims about an intervention's impact on the outcome since it is impossible to know what would have happened if the intervention had not been used.

Correlational Evidence

Correlational evidence can identify the relationship between an educational condition or intervention and a specific outcome. This type of evidence can be a useful starting point mainly because it cannot rule out other possible explanations for the differences in outcomes. Correlational evidence can easily be misinterpreted and used solely to demonstrate success. While correlational evidence is worthwhile, it is not the strongest type of evidence to measure effectiveness.

Causal Evidence

Causal analysis is the only way to determine effectiveness of an intervention with confidence. This type of analysis ensures that the only difference between the group receiving the intervention (i.e., treatment group) and a comparison group is the intervention itself. A strong causal analysis must show that the treatment group and the comparison group are equivalent in characteristics (such as previous test scores and demographic characteristics) so that the differences in outcomes can be attributed directly to the intervention. Randomized controlled trials are often considered the "gold standard" in causal analysis, but other research methods can also be used.

Source: Mathematica. (2016). *Understanding Types of Evidence: A Guide for Educators [Brochure]*.

Evidence Type	Strengths	Considerations and Limitations	ESSA Evidence Level
Anecdotal	<p>May provide an indication of the context in which the intervention may be expected to be effective.</p> <p>May identify aspects from user experience that may enhance or reduce effectiveness.</p> <p>May help identify interventions that are promising enough to warrant more research.</p>	Cannot provide strong support for claims based on subjective impressions.	Demonstrates a Rationale
Descriptive	May help identify interventions that are promising enough to warrant more rigorous research.	<p>Does not include a comparison group so impossible to know what would have happened without the intervention.</p> <p>Cannot alone provide strong support for claims about effect on outcome of interest.</p>	Demonstrates a Rationale
Correlational	Useful starting point when learning about new interventions.	Cannot conclusively demonstrate that intervention gets results because it cannot rule out other possible explanations for differences in outcomes among users and non-users.	Promising
Causal	<p>Determines effectiveness with confidence.</p> <p>Ensures only difference between treatment group and comparison group is the intervention itself.</p>	Not readily available for many educational products.	Strong or Moderate

Source: Mathematica. (2016). *Understanding Types of Evidence: A Guide for Educators [Brochure]*.

Each evidence type can contribute to informed decision making regarding intervention selection and use. It is important to understand the differences in the various types of evidence and how they align to the ESSA evidence levels when reviewing research in order to determine which provides the strongest support for claims of effectiveness.



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