High-Need Areas in the Use of Evidence-based Interventions: Baseline Findings from an EBI Training Program

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Abstract

The purpose of this study was to describe the pre-training readiness and capacity of educators taking part in the IES-funded Evidence Based Intervention Training for Educators (EBITE). The *Every Student Succeeds Act* (ESSA) in late 2015 charged educational leaders and decision-makers with using evidence-based processes and interventions to achieve positive student and school outcomes. Schools and districts, however, often lack readiness and capacity to implement continuous improvement efforts and use evidence-based practices. Understanding readiness and capacity needs is critical for developing effective training programs. In this study, qualitative and quantitative data on readiness and capacity for continuous improvement efforts involving evidence-based interventions (EBIs) were obtained from 38 educators and higher education individuals before their participation in EBITE. Numerous gaps were identified, including knowledge of how to find EBIs, concerns about resources, and budgeting. Results will be used to improve future iterations of the training program as well as to inform efforts to build capacity in the use of EBIs in schools.

Purpose of the Study

Since the passage of the *Every Student Succeeds Act* (ESSA) in late 2015, educational leaders and decision-makers have been charged with ensuring that their school-improvement initiatives are evidence-based and thus expected to achieve identified outcomes for students and schools. ESSA has contributed to a critical push in the use of research evidence and the adoption of evidence-based interventions (EBIs) within classrooms, schools, and districts. However, realizing the promise and replication value of EBIs focuses attention on the processes necessary for effective use of EBIs. To achieve desired goals, schools and districts must make discerning choices among EBIs given their local context, which requires a combination of skills. These include capacity to use local data to prioritize needs; ability to search for, critically evaluate, and select an EBI that fits local needs and context; and capabilities in evaluation methods to learn if the EBI is working as intended.

Recognizing that education leaders and school/district staff have varying degrees of individual and team capacity in these multifaceted areas led us to develop a training program to elevate and support local capacity for use of EBIs. In 2020, our training program *Evidence-based Intervention Training Program for Education* (EBITE) was funded through the Institute of Education Sciences (IES) to support teams of school and district educators, local researchers, and faculty from institutes of higher education with the goal of strengthening EBI capacity in education. As part of our first cohort of participants, we conducted pre-workshop surveys focused on gauging high-need areas across the EBI use continuum. The purpose

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of the present study was to (a) identify areas of greatest need for districts and schools in their understanding and use of EBIs; (b) inform the content, approach and training focus to address these areas; and (c) clarify differences in terms of readiness to use EBIs between school/district teams and their potential higher-education partners.

Theoretical Framework and Training Perspective

Our training is among the first to focus on capacity building around EBI use in education. The EBITE program engages education professionals through a summer workshop, networking experiences, and individualized coaching in the following academic year. Training for our first cohort of participants began in June 2021 with a focus on one Midwest state; national rollout included consecutive cohorts in 2022 and 2023. EBITE aims to increase districts' capacity to effectively put evidence-based interventions into practice by offering evaluation methods training that is centered around the five phases of the cycle of continuous improvement promoted by the US Department of Education in their "*Non-regulatory Guidance: Using Evidence to Strengthen Education Investments*" (USDOE, 2016). These phases include (1) identify critical needs; (2) research and select an evidence-based strategy; (3) plan for implementation; (4) implement and monitor; and (5) examine, reflect, and adjust. Each of these phases requires some form of knowledge and expertise in evaluation methods and practice, and this process largely corresponds to stages of implementation that promote a cycle of continuous improvement (Cohen-Vogel et al., 2015; Deming, 1982; Sanchez & Blanco, 2014).

Regarding our theory of change for use of EBIs, we drew from three theoretical frameworks on use and implementation of EBIs. First, successful users need ability (knowledge and skills), motivation, and opportunities to practice (*AMO*; Rousseau & Gunia, 2016). Second, we drew from the *Quality Improvement Framework* (*QIF*) (Meyers, Durlak & Wandersman, 2012), a synthesis of 25 implementation frameworks that outlines 14 critical steps for closing the gap between research and practice. Among these are: *needs and resources assessment*, *fit assessment*, developing an *implementation plan*, *process evaluation*, *feedback mechanism*, *learning from experience*, and *TA/coaching/supervision* (Meyers et al., 2012). Third, we considered aspects of the *Concerns Based Adoption Model* (*CBAM*, Hall & Hord, 2006; van den Berg, Sleegers & Pelkmans, 2002), which has been successfully applied to educational settings in which teachers or schools are adopting innovations including evidence-based practices.

Our pre-workshop survey (Table 1) touched on elements of these frameworks, and responses pertaining to participant needs are the focus of this paper. These results will be used to improve future iterations of the training program and inform further practice on the use of EBIs and capacity-building in this area.

Methods

Survey Design

Qualitative and quantitative data on background, readiness, and capacity for aspects of EBI use were obtained from individual participants in the week prior to the start of the EBITE workshop. The survey was administered in Qualtrix and responses were anonymous. The survey contained two sections: participant background/experience, and a comprehensive set of 43 quantitatively-scaled items on familiarity, knowledge, and concerns regarding the use of EBIs in education. Parallel forms were constructed for school/district personnel and higher-education faculty. The survey was estimated to

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take 15 – 20 minutes to complete. IRB review was obtained through the PI's Office of Responsible Research Practices.

Following Ashrafzadeh & Sayadian (2015) and Byrne & Prendergast (2019), we used a modified and expanded version of Hall & Hord's Stages of Concern questionnaire (2006). Since use of an EBI represents a change in some capacity from traditional or existing practice, concerns (e.g., attitudes, motivations, considerations, beliefs) can signal areas for facilitation of change and for coaching support. Overall, the survey was designed to provide responses that would help us adapt workshop content to address participant concerns and to inform our post-workshop approach and coaching strategies. All items were scaled using a 5-point scaling system ranging from Strongly Disagree (1) to Strongly Agree (5) with an additional NA option.

Data Sources and Participant Demographics

We received *n* = 38 responses out of a total of 42 workshop participants (90% response rate). Of these, 30 respondents (79%) were affiliated with schools/districts and eight (21%) were from higher education or the State Department of Education. For the district/school respondents, four people indicated multiple roles but overall were predominantly school counselors (36%); district/school administrators (28%); teachers (17%); State Support Team (SST) members or State Regional Data Leads (RDL) (11%); and school social workers (8%). Respondents were predominantly female (87%) and White (76%).

Results

Simple descriptive statistics were used to summarize responses for both groups of respondents. Eight of the 30 school/district respondents (27%) indicated that they had previously worked with an EBI within their school/district, and three of the eight higher-education respondents (38%) indicated previous experience with EBIs in districts/schools. In describing their prior experience, responses varied but included using EBIs for student needs, response to intervention, and Multitiered Systems of Supports (MTSS); providing support for selection and implementation; vetting prevention and social/emotional learning interventions for their school; and goalsetting for schools/districts. None of the higher-education respondents provided detail on their prior experience. Respondents showed a range of years of experience with EBIs from 0 to 25 years. Respondents also indicated a range of time spent working within or with schools and districts, in any capacity, from 0 to 35 years.

Table 1 provides the proportion of strongly disagree/disagree responses to the 43 items, broken out by district/school or higher-education affiliation. While it is not possible to generalize beyond this cohort from the design of this study, aspects of greatest need are informative for our continuing work with workshop participants and suggest areas that may resonate with others regarding activities to increase capacity for use of EBIs in education. We focus here on summarizing from the top items ($\geq$ 40% SD or D) that indicate weaker endorsement among the workshop participants.

For school/district participants, seven of the twelve items identified as greatest needs come from the *Selection, Clearinghouses, ESSA* section in the survey, which constitutes seven out of nine of the total items in that section. While school/district participants indicated general confidence overall in their knowledge of EBIs (Q23, 30% SD or D), less familiarity or confidence was indicated in areas of identifying EBIs from clearinghouses or other sources, locating information on time/staff commitments, and decision-making processes (Q24 – Q30, range of 40% to 53.3% SD or D). The second most prominent

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section for the school/district group was *Pre-implementation – Resources, Budget, Team Capacity* making up three of the top twelve items. These indicated concerns about capacity/resources, and budgeting, which had the highest overall SD/D endorsements (Q31 and Q38, 56.7% and 66.7% respectively) as well as the ability to prepare a logic model based on an EBI (Q35, 50%).

Given that the total number of respondents for higher education faculty is lower for this survey, we focused on items with SD or D endorsement $\geq$ 37.5% for this group. Interestingly, higher-education faculty expressed difficulty in expanding EBI work to incorporate cultural context (Q32, 50%), more so than school/district responses to this item (Q32, 26.7%). Similar to the school/district group, four of their top eight items identified as greatest needs come from the *Pre-implementation – Resources, Budget, Team Capacity* section, with two of the top eight items coming from the *Selection, Clearinghouses, ESSA* section. Comparing responses to school/district participants, greatest needs were indicated in the same two areas: concerns about capacity/resources (Q31, 62.5%) and knowledge of budgeting (Q38, 75%).

One final area of note that was dissimilar across the two sets of respondents was the sharing of experiences about the use of EBIs. While 40% of school/district respondents indicated some lack of familiarity with different ways of sharing their experiences (Q51), only 12.5% of higher-education faculty indicated unfamiliarity with options for sharing experiences on their work with EBIs in districts or schools. However, 37.5% of the higher-education faculty indicated they had not shared their experiences within research outlets (Q52).

Significance

As the adoption and use of evidence-based interventions within schools and districts continues to expand, additional knowledge is needed on the gaps and challenges faced by practitioners regarding selection, implementation, and evaluation of these interventions. Partnerships between higher-education and education practitioners have been advocated as a way to improve student and school outcomes (Farrell et al., 2018). Our results, although limited in scope, suggest that capacity for effective use of EBIs lies on both sides of the partnership. Overall, the combined skills, knowledge and experiences of school/district staff and higher-education faculty are essential to improve the reach and promise of EBIs. The similarities and differences in concerns and needs reported here identify several areas in which capacity efforts can be focused.

One of the high-need areas identified in the pre-workshop survey related to the decision-making process that K-12 districts utilize to make choices among evidence-based interventions. Knowledge of where in the district (central office or more distributed) these decisions were made and, relatedly, the resources available to purchase and implement interventions, were unclear to many of the respondents – both higher-education faculty and school/district education staff. This lack of knowledge of resource availability and lack of involvement in the decision-making process proposes challenges when working with teachers, school counselors, and other school personnel on needs assessment and intervention selection processes. Involving teachers in the selection of appropriate classroom-, school-, and district-wide interventions requires teacher participation in both instructional and managerial decision-making. Instructional decision-making is related to the substance of the intervention, whereas managerial decision-making involves decisions around affordability/prioritization of finite resources, sustainability, and fit with existing initiatives. Notably, teacher involvement in both decision-making domains

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(instructional and managerial) has been found to be positively related to job satisfaction as well as professional commitment (Park, Cooc, & Lee, 2020).

EBIs targeting academic performance are not the only type of interventions relevant to student and school success. Emerging before COVID-19, and now front and center in K-12 schools, is the need for evidence-based mental and behavioral health interventions. Lack of teacher involvement in the selection and implementation of mental health-related interventions, along with the costs associated with implementing them with high quality, is identified as a critical issue in implementing these important supports for students (Scheaffer et al., 2005).

Overall, our work has identified several areas for improving the use of EBIs within districts and schools. As our work continues, these results will help to inform our future activities and the nature of supports within higher-education and practitioner partnerships within K-12 communities.

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Table 1

*Low Endorsement Responses to Pre-workshop Survey Items for School/District Personnel and Higher-Education Institution (HEI)[a] Faculty: Proportion of Low Familiarity/Low Confidence (≥ 40% Strongly Disagree (SD) or Disagree (D) in **bold**)*

Item	School/District Proportion SD/D (*n* = 30)	Higher Ed Proportion SD/D (*n* = 8)
Needs, Data, Gaps		
Q16 I am familiar with multiple sources of data that can identify areas of need in [my] school[s]/district[s]	0	0
Q17 I have experience using data for identifying student needs for [my] school[s]/district[s]	3.3	0
Q18 I feel confident finding and using data for identifying areas of need	16.7	12.5
Q19 I have experience using data to inform decisions about intervention goals	3.3	12.5
Q20 I have experience conducting a needs assessment to inform decision-making	16.7	0
Q21 For [my] school[s]/district[s], data sources to support identification of needs are easily accessible	16.7	--
Q21 [HEI] Data sources to support identification of needs are easily accessible for schools/districts	--	0
Selection, Clearinghouses, ESSA		
Q22 The Every Student Succeeds Act (ESSA) has made it easier to understand evidence criteria for EBIs	26.7	12.5
Q23 I feel confident about my knowledge of EBIs in general	30.0	12.5
Q24 I am familiar with clearinghouses and online resources that can help identify EBIs	**40.0**	12.5
Q25 I know how to locate information on resources or costs required if [my] school[s]/district[s] decide[s] to adopt a particular EBI	**46.7**	25.0
Q26 I know how to locate information on time and staff commitments required to implement a particular EBI	**53.3**	**37.5**

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Q27 I feel confident in my ability to understand how evidence is rated by different sources	**40.0**	25.0
Q28 I have a good understanding of the decision-making process regarding selection of EBIs for [my] school[s]/district[s]	**46.7**	**37.5**
Q29 I am familiar with how final decisions may be made regarding use or continuation of an EBI [in schools/districts]	**43.3**	12.5
Q30 I know how to compare two or more EBIs intended to address the same identified need in [my] school[s]/district[s]	**43.3**	25.0
Pre-Implementation, Resources, Budget, Team Capacity		
Q31 I am concerned about the capacity or current resources available to [my] school[s]/district[s] to successfully implement an EBI	**56.7***	**62.5***
Q32 I have experience incorporating the cultural context of [my] school[s]/district[s] when planning for implementation of an EBI	26.7	**50.0**
Q33 I am familiar with resources available to [my] school[s]/district[s] if we decide to adopt a particular EBI	**40.0**	**37.5**
Q34 Current resources available to my school/district to support adoption of an EBI are sufficient	36.7	--
Q34 [HEI] The schools/districts I have worked with have sufficient resources to support the adoption of EBIs	--	12.5
Q35 I feel confident in my ability to prepare a logic model based on a selected EBI for [my] school['s]/district['s] context	**50.0**	25.0
Q36 I know how to develop SMART goals based on desired outcomes of an EBI	6.7	12.5
Q37 I am aware of support or resources outside my school/district to help maximize an EBI's implementation and outcomes	36.7	--
Q37 [HEI] I am aware of support or resources at my institution to help a school/district maximize an EBI's implementation and outcomes	--	**37.5**

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Q38 I know how [my] school[s]/district[s] plans to budget for an EBI	**66.7**	**75.0**
Q39 Leadership in my school/district has assured the availability of resources (staff, funds, materials) to support the use of EBIs	33.3	--
Q39 [HEI] Leadership in the schools/districts I have worked with have made resources available (staff, funds, materials) to support the use of EBIs	--	0
Implementation, Measures, Student Outcomes, Fidelity		
Q40 I am familiar with theories of implementation that could guide EBI use in [my] school[s]/district[s]	**50.0**	12.5
Q41 I believe our district/school will be able to implement an EBI with fidelity to the intervention/program protocol	20.0	--
Q41 [HEI] In my experience, schools/districts can implement EBIs with fidelity to the intervention or program protocols	--	0
Q42 I am familiar with tools and methods to monitor student outcomes during implementation of an EBI	23.3	12.5
Q43 I know how to assess fidelity of implementation of an EBI	30.0	25.0
Q44 I am confident in planning for evaluating the impact of an EBI on student outcomes	30.0	25.0
Q45 My school/district has experience working with faculty or researchers in higher-education to support implementation or evaluation of a program or intervention	30.0	--
Q45 [HEI] In my experience, faculty or researchers at my institution have supported implementation or evaluation of programs or interventions within schools/districts	--	25.0
Q46 My school/district has experience working with technical assistance providers (other than higher-education) to support implementation or evaluation of a program or intervention	26.7	--
Q46 [HEI] In my experience, faculty or researchers at my institution have worked with technical assistance providers (district, regional, state, national) to support implementation or evaluation of programs or interventions within schools/districts	--	25.0

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Adapting an Intervention		
Q47 My school/district has the knowledge and resources to supplement, enhance, or adapt an EBI as needed	20.0	
Q47 [HEI] Schools/districts I have worked with have the knowledge and resources to supplement, enhance, or adapt EBIs as needed		**37.5**
Q48 It is important to adjust the use of an EBI based on experiences/outcomes of students	0	0
Q49 It is important to adjust the use of an EBI based on the experiences of teachers or others who are implementing it	13.3	0
Q50 I am familiar with using data and evaluation methods to support adjusting/correcting course for an EBI	30.0	25.0
Examine/Reflect – Interpreting/Sharing Results		
Q51 I am familiar with different ways of sharing my [district's/school's] experiences with implementation of [an] EBI[s]	**40.0**	12.5
Q52 My district/school currently has opportunities in place for sharing experiences/outcomes of programs and interventions with stakeholders (parents, other education leaders, etc.)	13.3	--
Q52 [HEI] I have shared my experiences and results of working with schools/districts around EBIs through research outlets	--	**37.5**
Q53 I understand how to interpret outcome data as a result of a program or EBI	20.0	--
Q53 [HEI] I understand how to interpret outcome data from the implementation of EBIs	--	25.0
Networking, Collaborating, Learning from or with Others		
Q54 I have spent time talking with my peers on "what's worked" in their district or school	20.0	12.5
Q55 I am eager to share with others in my school/district about the process of using EBIs	3.3	--

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Q55 [HEI] I am eager to share with others about the process of using EBIs in schools/districts	--	0	
Q56 My school/district values sharing of experiences when a new program or intervention is put in place	6.7		--
Q56 [HEI] My institution values sharing of experiences when faculty or researchers work with schools/districts in their use of new programs or interventions	--		0
Q57 I would like to help others outside my district in their use of EBIs	3.3		--
Q57 [HEI] I would like to help other faculty and researchers work with schools/districts in their use of EBIs	--		0
Q58 My school/district actively seeks out collaboration with external partners regarding the use of EBIs	13.3		--
Q58 [HEI] In general my institution encourages collaboration with external partners and schools/districts regarding school/district use of EBIs	--		0

[a] Slight wording changes for the HEI/SDE group are shown in brackets

* Proportion of Strongly Agree/Agree due to the reverse coding of the item

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