Teacher Perspectives on Intervention Sustainability

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Abstract

Sustainable use of academic classroom interventions is a cause for concern in the field of special education. This study examined factors that encouraged and/or deterred sustainable use of classroom interventions. Furthermore, data were collected on factors that assist teachers to implement new interventions with high perceived fidelity. A total of 174 special education teachers from two school districts completed a survey to provide feedback on interventions they had been trained on in the last two academic years. Results for both districts had several similarities. A majority of teachers sustained interventions that they perceived improved student academic outcomes and were easy to implement. Teachers identified lack of planning time followed by the need for regular training as the most important factors contributing to their perceived implementation fidelity. However, a majority of interventions teachers provided feedback on were not evidence-based practices.

Keywords: Evidence-based practice; sustainability; classroom intervention; professional development; research-to-practice gap; teacher perspectives

Teacher Perspectives on Intervention Sustainability

In 1998, the National Assessment of Educational Progress (NAEP) report highlighted that students with disabilities performed well below their typically developing peers on the NAEP reading assessment (Donahue et al. 1999). Students with disabilities on average scored 41, 42, and 48 points lower on a 0 to 500 scale than their nondisabled peers in grades 4, 8, and 12 respectively (Donahue et al. 1999). Federal legislation aimed at ameliorating the persistent academic deficits of students with disabilities helped formalize the need for evidence-based practices (EBPs) in the field of special education. The U.S. federal government passed the No Child Left Behind Act (NCLB 2002), the Individuals with Disabilities Education Improvement Act (IDEIA 2004), and the Every Student Succeeds Act (ESSA 2015), with each piece of legislation having a primary goal to improve academic outcomes for students with disabilities. All three acts make provisions to accomplish this goal with a mandate to emphasize the use of EBPs for students with disabilities.

Similar enactments, emphasizing the use of EBPs in generating positive student academic outcomes, have also been seen internationally. In the U.K., the National Literacy Strategy was established in 1998 to increase the use of EBPs in education. In New Zealand, the Best Evidence Synthesis program, launched in 2009, evaluates programs on their effectiveness and uses data to guide educational policy and practice. Likewise, the Australian Education Act of 2013 mandates the use of evidence-based strategies in classrooms. These examples convey the intentions of governments to create an environment conducive to improving educational policy and practice.

The term EBP denotes a teaching strategy or intervention that is supported by findings from multiple, rigorous studies demonstrating strong evidence of positive effects on academic or behavioral outcomes for targeted student populations (Cook and Cook 2013). While EBPs are

not a panacea, they are research-based approaches and are thus most likely to lead to improved student academic outcomes. The last few decades have seen a surge in the number of EBPs identified; What Works Clearinghouse (WWC) lists several academic interventions as having positive or potentially positive effects on student academic outcomes. Thus, the research literature provides a number of scientifically validated interventions for educational institutions and educators to choose from when addressing academic needs of all students including those with disabilities.

Despite the availability of EBPs, however, educational research literature consistently highlights the persistent research-to-practice gap within the field of special education (Cook and Cook 2013; Fuchs and Fuchs 1998; Fuchs and Fuchs 2001; Greenwood and Abbott 2001; Kearns et al. 2010). In other words, practitioners, on average, are either unable to or do not choose to use EBPs in classrooms. For example, Burns and Ysseldyke (2009) found that teachers reported using ineffective classroom practices as often as they used EBPs. Similarly, an analysis of a national sample of early elementary teacher survey data found that most reading curricula teachers reported using in classrooms were not EBPs; they were mostly commercial reading programs with little evidence to support their use to positively impact student learning (Kretlow and Helf 2013). Furthermore, in one large-scale intervention study involving more than 1,100 students and 60 teachers in four school districts (Rohrbach, Graham, and Hansen 1993), researchers reported that even after teachers were trained on and provided with free materials for a program, only a minority of teachers continued to use the program a year after the departure of the research team.

Although governments have passed laws and directed funding to encourage the use of EBPs in classrooms, these efforts have not led to universal impacts on educational practices.

Recent studies (Desimone and Garet 2015; Kraft, Blazar, and Hogan 2016) emphasize the need for high quality professional development (PD) models that continually disseminate knowledge of EBPs to teachers. Regular PD provides teachers the opportunities needed to gain a deeper understanding of EBPs thus enabling their use in an effective and sustainable manner (Baker et al. 2004; Timperley and Phillips 2003).

Professional Development

Moore and Hyde (1981) describe professional development (PD) as "any activity that is intended partly or primarily to prepare paid staff members for improved performance in present or future roles in the school district" (9). Several studies have shown that PD improves teacher performance (Desimone 2009; Desimone and Garet 2015; Garet et al. 2016) and also has a positive impact on student academic outcomes (Johnson, Kahle, and Fargo 2007; Kraft et al. 2016; Matsumara, Garnier, and Spybrook 2013). However, PD is less effective when training opportunities are irregular and have no follow-up trainings embedded in the model (Wei et al. 2009).

For PD to be an effective tool in enhancing teacher performance, it is important for teachers to receive sustained PD (i.e., 20+ hours a year, see Desimone 2009; Desimone and Garet 2015) on proven practices that improve student academic outcomes (Deshler et al. 2001). Giving teachers the opportunity to regularly interact with intervention experts allows them to discuss challenges and gain a deeper understanding of the various facets of the intervention (Gersten, Morvant, and Brengelman 1995; Showers, Joyce, and Bennett 1987). Simultaneously, on-going coaching/PD can help teachers adapt interventions to suit their classroom needs while preserving the core components of the program (Fixsen et al. 2005; Joyce and Showers 2002). For instance, a recent study (Jensen et al. 2016) describing four-high performing international

school systems reported that regular PD provided teachers opportunities to develop deeper understanding of programs and was also associated with sustainable implementation of interventions.

These studies highlight the importance of ongoing PD as a sustainable way to bridge the research-to-practice gap. In a longitudinal study, Timperley and Phillips (2003) provided teachers with regular PD, over 6-months, on literacy instruction for low-income students. The authors observed the impact of PD on teacher classroom practices and student academic outcomes over the following year. Results indicated that students taught by treatment group teachers had higher levels of academic achievement compared to those instructed by control group teachers. Furthermore, classroom observations of treatment group teachers revealed high levels of program implementation in the following year.

It is noteworthy that a majority of these studies focused on teachers of typically developing students. Indeed, a national study on PD trends in the US (Wei, Darling-Hammond, and Adamson 2010) reported a consistent increase in teacher participation in PD, which rose from 59% in 2000 to 83% in 2004 and 87% in 2008. While the rise in number of teachers partaking in PD is encouraging, data on teachers of students with disabilities is less reassuring. The National Center for Education Statistics (Parsad et al. 2000) reported that teachers of students with special needs received limited PD focused on students with disabilities and frequently reported feeling unprepared to address the needs of this population. For instance, when teachers were asked to choose a top priority for future PD opportunities, the need for more PD for teaching students with disabilities was one of the top three choices (Wei et al. 2009).

Sustainability of Practices

In educational research, implementing EBPs with sufficient fidelity is considered to be essential to enhancing student outcomes (Cook and Cook 2013). However, according to McLaughlin (1990), another important consideration in determining the success of an EBP is whether teachers and districts are able to sustain the practice over a period of time. Sustainability refers to the persistent long-term use of a practice with high levels of fidelity to continuously produce positive student outcomes (McIntosh, Horner, and Sugai 2009). Conversely, if a program is implemented with low fidelity lacking core or critical features, this does not meet the standard definition of sustainable use of a practice (McIntosh et al. 2010). Researchers emphasize fidelity of implementation when developing and implementing programs. While high fidelity of implementation is linked to improved student achievements (Stein et al. 2008), low fidelity of implementation has the potential to hinder positive student outcomes (Fuchs et al. 2010), and may reduce the possibility of executing a practice sustainably (Kearns et al. 2010).

Often, however, teachers tend to use intuition and knowledge of their students to make changes to a program that enables student differentiation (Greenwood and Abbott 2001; Stanovich 1993). Thus, programs that allow teachers to be flexible with the implementation of certain aspects without drastically altering essential elements are found to be more successful and sustainable (Klingner 2004; Klingner, Cramer, and Harry 2006; McMaster et al. 2010; McMaster et al. 2014). For instance, Quinn and Kim (2017) reported that teachers who received training on a reading program and implemented the program with high fidelity earlier were later able to not only adapt the program to suit their class' academic needs but also continued to demonstrate improved reading outcomes for their students. Hence, a nuanced understanding of the program can ensure fidelity and flexibility of implementation without excluding core elements (Baker et al. 2004).

Once teachers have a deeper understanding of the program and are able to successfully implement its core elements, it is important to sustain the intervention. Studies have shown that sustained, intensive interventions help students with disabilities make steady progress in their academics and provides opportunities for them to remain competent at grade-level (Hanushek, Kain, and Rivkin 1998; Vaughn et al., 2012). While some students with disabilities may reach academic benchmarks relatively soon, others may need longer exposure to an intervention to attain their academic goals (Vaughn, Linan-Thompson, and Hickman 2003; Fuchs, Fuchs, and Hollenbeck 2007). For instance, Denton et al. (2006) found that delivering an EBP consistently for longer periods of time had a positive impact on the reading outcomes of students with severe reading disabilities; on average students showed gains for every additional hour of instruction received. Similarly, a synthesis (Wanzek and Vaughn, 2007) of extensive (100 or more sessions) reading interventions designed for students with reading difficulties and disabilities reported positive effects on students' reading outcomes denoting that longer exposure to treatment positively influenced students' academic outcomes.

However, sustainability of EBPs has proven to be a critical challenge in the field of special education (Fuchs and Fuchs 1998). Education research indicates that positive intervention effects dissipate once interventionists depart and teachers have the sole responsibility of implementing and sustaining a practice (Coburn 2003; Stokes 1997). The failure of so many teachers involved in research to sustain intervention after the research team departs is a special cause for concern (Vaughn, Klingner, and Hughes 2000). This is particularly disconcerting because when teachers fail to sustain interventions, they often revert to past practices that are not EBPs (Giles 2006).

Multiple factors adversely affect the sustainability of interventions. Education literature highlights disconnectedness between researchers and teachers (Cook and Cook 2013; Gersten et al. 1997; Greenwood and Abbot 2001; McLaughlin 1990) and teachers' and administrators' low perceptions of the effectiveness of educational research practices (Greenwood and Abbot 2001; Fuchs and Fuchs 1998, 2001; Gersten et al. 1997; Klingner et al. 1999) as factors detrimental to intervention sustainability. Additionally, Mclaughlin and Mitra (2001) identified factors such as insufficient resources, lack of teacher knowledge about an intervention, and unsupportive school and/or district leadership as having potential to deter sustainability of practice.

In contrast, nurturing robust relationships between researchers and practitioners, and implementing programs that produce positive student academic outcomes have been found to support sustainability of EBPs (Fuchs and Fuchs 2001; Klingner 2004; Klingner et al. 1999; McIntosh et al. 2010; Vaughn et al. 2000). More importantly, to prevent teachers from ceasing to use EBPs after researchers depart, it is vital that continuous PD is embedded in the school system because ongoing PD has been associated not only with improved teacher knowledge of intervention but also sustainable use of practices (Jensen et al. 2016; Timperley and Phillips 2003). Furthermore, support from administrators and leaders of school districts is another crucial aspect that positively impacts sustainability of EBPs (Kearns et al. 2010; Klingner 2004; Klingner et al. 1999; Loman, Rodriguez, and Horner 2010; McIntosh et al. 2010; McIntosh et al. 2015).

Purpose

The existing research literature identifies an acute need to ensure that EBPs translate into sustainable practices to positively affect student outcomes in the long-term. For EBPs to translate into sustainable practices, it is crucial for educational researchers to understand and incorporate

teacher perspectives. Such feedback channels can assist researchers in modifying current programs to better suit teacher needs and/or in developing more feasible interventions (Fuchs and Fuchs 2001). Thus, because teachers have to implement and integrate new ideas and techniques into their repertoire to affect changes (Hord, Rutherford, Huling-Austin, and Hall 1987), teacher feedback can provide valuable information on factors that assist and/or hinder the sustainability of EBPs (Derouise and Bierman 2012).

The purpose of this study was to gain insights into special educators' perspectives on sustainability of interventions. The central research question was to understand what factors assist or hinder sustainable use of classroom interventions. The study was also designed to collect qualitative data on factors that assist teachers in implementing new interventions with high perceived fidelity.

Method

A survey instrument was developed to gain special educators' feedback on intervention sustainability. The goal was to provide special education teachers an opportunity to express their views about various interventions they were trained on in the past two academic years. Specifically, we designed one survey (i.e., Survey 1 [S1]) and sought feedback from administrators in two school districts. One of the school districts requested edits to the survey to elicit special educator feedback on intervention training quality. Hence, we incorporated those changes and created a second similar survey (i.e., Survey 2 [S2]) to solicit special educator feedback in the second school district.

Instrument Development

The surveys were developed following an extensive literature review on the topics of sustainability and implementation practices in the field of special education. The literature

review helped identify and create a pool of questions that formed the core elements of the surveys. Next, the surveys were shared with both districts' special education coordinators; further suggestions for changes to the surveys were accommodated at this point.

Survey Instrument Content

Both surveys (S1 and S2) had five sections. The first section of the surveys focused on collecting data related to teacher demographics and background characteristics (e.g. gender, age, experience, education level). The second section focused on information about PD and implementation practices. Special educators responded to questions about number of interventions they were trained on in the last two academic years, roles they played in selection of interventions, factors that helped enhance their implementation fidelity, training quality and material resources they received, and amount of time they had to plan and implement new interventions. The section ended by asking teachers to quantify (all, most, some, none) the total number of interventions they were trained on in the last two years that they continue to implement currently.

In the third section of the surveys, teachers were provided with a list of the names of interventions on which the school district provided training in the last two years. For S1, teachers had to choose an intervention that they thought was most successful in enhancing their students' academic outcomes. For S2, teachers only had to choose an intervention that they were most recently trained on. The list of interventions varied across districts.

After selecting an intervention, teachers from both districts were asked questions pertaining to the implementation of the intervention. The questions included: (a) number of days intervention was used, (b) percentage of students intervention was implemented with, (c) teacher perception of level of implementation fidelity, (d) personnel who administered the intervention,

(e) reasons for continuing or discontinuing the practice, (f) beneficial aspects of the intervention, and (g) suggestions to improve the intervention. Furthermore, implementation fidelity was defined for teachers as how closely they implemented the intervention to how it was intended to be implemented as defined by the training or manual. Additionally, questions about ease of implementation, intervention's recommended class size, and recommended frequency of use were asked in S2.

The fourth section of the surveys was different for S1 and S2. For S1, the fourth section mirrored the third section with one key difference. Teachers had to choose the least successful intervention from the list of interventions they were trained on. Follow up questions remained the same as those asked in the third section (a-g). For S2, the fourth section contained questions that elicited responses on the quality of training programs teachers had attended. Even-point Likert-type scale questions (1 = Strongly Disagree, 4 = Strongly Agree) asked teachers to: a) state their understanding of the program following the training session, b) provide feedback on access to material resources needed to implement the program following training, and c) indicate the support they received following training to implement the intervention with high fidelity. A comments section was also provided for participants to comment on training-related questions. The final section of S1 and S2 asked teachers to choose one of three educational non-governmental organizations to which a donation would be made on behalf of research participants ($500).

Procedures

Following feedback from faculty members and the district representatives, survey data were collected and managed using REDCap (Harris et al. 2009) electronic data capture tools. Within each district, special education coordinators sent an email that included the survey link to

special educators in their respective school districts. All special education teachers had the option of choosing to complete the survey by clicking on the link or refraining from responding. Furthermore, all questions in both surveys were made optional. These online surveys were completely anonymous and participants had two weeks to respond. A survey reminder email was sent to all participants to improve the response rate: at end of the first week, half way through the second week, and a day before closure of each survey.

Study Group

All special education teachers received the survey (S1) in the first district (n = 281). In the second district, only teachers who had been trained on interventions mentioned in the survey received S2 (164 of 522 special education teachers). While a total of 222 responses were received from special educators (S1 = 123; S2 = 99), only 174 responses (S1 = 96; S2 = 78) were classified as complete surveys. Incomplete surveys were responses in which survey takers only responded to the demographic section of the surveys. Only complete survey responses were considered for data analysis. The total combined (S1 and S2) complete survey response rate was 39.1%.

Data Analysis

Descriptive analyses were conducted using STATA (StataCorp 2013). Summary statistics (i.e., frequency, mean, standard deviation) were calculated. Additionally, correlations between relevant variables are reported.

Results

Survey Section 1: Demographics

As shown in Table 1, a majority of respondents were female (S1= 92.7%, S2=85.9%). In both school districts, greater percentage of special educators had a master's degree (S1= 62.1%,

S2=77.9%) and over 10 years of overall teaching experience (S1= 58.9%, S2=52.5%) as well as special education teaching experience (S1= 52.1%, S2=48.7%). A larger percentage of respondents taught elementary school students with special needs than those in middle or high schools.

Survey Section 2: Professional Development and Implementation Practices

The second segment of the surveys inquired about support mechanisms teachers had at their disposal while implementing new interventions. In S1 (79.92%) and S2 (85.71%) a majority of teachers reported that they had received training for 'all,' 'most,' or 'some' of the interventions implemented in their classroom. Only 20% and 15% of teachers reported receiving 'no' training for any of the interventions in S1 and S2 respectively.

Next, a majority of teachers in S1 (73.68%) and S2 (68.83%) felt that they 'needed more time than available,' had 'very little time,' or had 'absolutely no time' to plan for new interventions. In contrast, an overwhelming majority of the teachers (S1 = 90.62%; S2 = 89.6%) reported that school administrators and staff were either 'extremely' or 'somewhat' supportive in helping teachers implement new interventions with high fidelity.

Subsequently, teachers identified factors that assisted them in implementing an intervention with high fidelity. Of the five multiple-choice options provided, teachers chose 'more planning time' (S1 = 61.46%; S2 = 67.95%), followed by 'regular training' (S1 = 39.58%; S2 = 35.90%), 'better quality training' (S1 = 36.46%; S2 = 19.83%), 'more support at school' (S1 = 29.17%; S2 = 28.21%), and 'online support' (S1 = 15.62%; S2 = 14.10%).

Additionally, participants were asked to quantify the number of interventions they were trained on in the last two academic years that they continue to use today. In S1, only a minority of teachers (13.68%) indicated that they used 'all' the interventions in their classes post training.

About a quarter of the teachers (26.31%) stated they used ‘most’ of the interventions, followed by close to half (46.31%) that used ‘some,’ and 13.68% used ‘none’ of the interventions. In contrast, in S2 close to half the respondents (44.15%) stated they used ‘all’ the interventions, 28.57% used ‘most’ of the interventions, 18.18% used ‘some’ of the interventions, and only 9.09% used ‘none’ of the interventions.

Finally, special education teachers were asked how often their schools or districts solicited their input in selecting new interventions. In both S1 and S2, more than half of the teachers (S1 = 58.32%; S2 = 55.12%) expressed that their inputs were ‘never’ or ‘rarely’ considered prior to program implementation. Only a small minority of teachers (S1 = 1.04%; S2 = 5.12%) stated that their input was ‘always’ taken.

Survey Sections 3 and 4: Intervention Feedback

Survey 1

In S1, the third and fourth sections of the survey asked teachers to select one specific program that they felt was the most and least successful in improving their students’ academic outcomes respectively. As shown in Table 2, teacher perception of implementation fidelity for successful programs was high (M = 71.80, SD = 25.99). The teacher perceived effect successful interventions had on enhancing student achievement was also high (M = 72.27, SD = 23.65). Additionally, a majority of teachers (82.85%) indicated they still use the program they identified as most successful.

On the other hand, teacher perception of implementation fidelity for least successful programs was low (M = 64.57, SD = 32.12), and their perceived effect of the interventions on improving student outcomes was low too (M = 42.75, SD = 29.71). Furthermore, over a third of the participants (34.78%) continue to use programs they judged least successful in improving

student outcomes. Statistically significant correlations were observed between teacher perception of implementation fidelity and perceived improvement in student outcomes for both most ($r=0.40$, $p<0.05$) and least ($r=0.37$, $p<0.05$) successful programs.

As shown in Table 3, the main reason teachers continued to implement successful interventions was improved student outcomes (41.67%). Other key reasons were ease of implementation (30.21%), availability of detailed intervention manuals (17.71%), use of interventions that complemented traditional teaching (16.67), and high levels of student satisfaction (15.62). According to teachers, the reason least responsible for sustainability of practice was alignment of interventions with year-end standardized testing goals (4.17%).

Because a greater percentage of teachers continue to use programs they think are successful, only a small sample of teachers responded to questions aimed at identifying reasons for discontinuing successful programs. Each reason for discontinuation received less than 5% of participant responses. The main reason for discontinuation of least successful interventions was implementation of other more effective programs (12.5%); however, due to the low response rate, this should be interpreted with caution.

Survey 2

The third section of the survey probed teachers about the implementation of a specific intervention. Most teachers (59.09%) were able to deliver the selected program to a group of the suggested size. A majority of teachers (55.93%) were also able to implement the program for the recommended duration (5-days a week).

Teacher perception of implementation fidelity across all interventions was high ($M = 70.03$, $SD = 26.94$) and their perceived effect of the interventions on improving student outcomes was similar ($M = 70$, $SD = 27.57$). Moreover, 72.13% of participants found the

interventions easy to implement, and 76.19% stated they were still using the programs in their classrooms. Statistically significant correlations were observed between teacher perception of implementation fidelity and perceived improvement in student outcomes for all interventions ($r=0.47$, $p<0.05$).

Within the third section, teachers were also asked reasons why they continued or discontinued an intervention. A majority of the teachers (76%) reported continued use of the selected intervention. Only a minority of teachers (24%) reported discontinuing programs, and each reason for discontinuation received an extremely low response (<8%). Of the small percentage of teachers who discontinued programs, reasons commonly selected were: intervention was time consuming (7.69%) and lack of planning time (5.13%); due to the low response rate, these results should be interpreted with caution.

As shown in Table 5, a majority of teachers chose to continue interventions because they perceived the program to improve student outcomes (51.28%). The other main reasons were ease of implementation (32.05%) and high student satisfaction (19.23%). The reason least motivating for teachers to continue interventions was alignment of the intervention with year-end testing goals (2.56%).

The fourth section of the survey asked teachers questions pertaining to their training experience. An overwhelming percentage of the teachers (85.07%) ‘strongly agreed’ or ‘agreed’ that the training or PD provided them with a clear understanding of the intervention. Similarly, a majority of special education teachers (72.73%) ‘strongly agreed’ or ‘agreed’ to receiving intervention materials to help them implement the program with high fidelity. Conversely, close to 1 in 4 (27%) teachers ‘disagreed’ or ‘strongly disagreed’ to receiving materials to help implementation.

The third question asked participants to provide information on follow up support they had received post intervention. While close to half (54.55%) of the teachers were in agreement, the other half (45.45%) 'disagreed' or 'strongly disagreed' to receiving post-training support. Overall, teacher ratings for training experience in providing clarity of the intervention was favorable (M = 3.17, SD = 0.67), receiving all materials to implement the intervention with fidelity was close to the midpoint (M = 2.95, SD = 0.86), and follow up support was less favorable (M = 2.55, SD = 0.82).

Discussion

The purpose of this study was to understand special educators' perspectives on factors that aid and hinder sustainable use of classroom interventions. While survey data contributed to a better understanding of factors that aid sustainability of classroom interventions, data collected were unable to provide substantial insights into factors that hinder sustainability. The reason for the latter was that most participants continued to use interventions they were trained on in the last two academic years.

The first research question was focused on factors that allow special education teachers to use interventions sustainably. In S1 and S2, the most common reason for continuing an intervention was teachers' perceptions of improved student academic outcomes followed by ease of implementation. Similar to researchers who linked high implementation fidelity to improved student outcomes (Baker et al. 2004; Fuchs et al. 2010; Stein et al. 2008), in both S1 and S2 we also found a statistically significant correlation between teacher perceptions of their implementation fidelity and their perceived improvement in student academic outcomes. In S1, data illustrates that when teachers perceived programs to be successful they had higher perceived implementation fidelity (M = 71.80) and superior perceived student outcomes (M = 72.27) that

led to better sustainability (M = 0.82). In comparison, S1 programs perceived as least successful were also perceived to have lower implementation fidelity (M = 64.57), lower perceived student academic success (M = 42.75), equating to much lower sustainability (M = 0.34).

The second research question inquired about factors that help or deter implementation of new interventions with high fidelity. In both S1 and S2, teachers self-reported lack of planning time followed by the need for regular training as critical impediments to implementation of new interventions with high fidelity. Notably, the shortage of planning time is well-documented in research literature (Fuchs and Fuchs 2001; Greenwood and Abbott 2001; Klingner et al. 1999; Vaughn, Hughes, Schumm and Klingner 1998), and continues to be an obstacle for teachers. Similarly, past studies have also identified continuous high-quality PD to be associated with better fidelity of implementation (Baker et al. 2004; Timperley and Phillips 2003)

In S2, follow-up support after training was identified as a factor not only in enhancing teacher perception of implementation fidelity but also in positively impacting teacher perceived student outcomes. The results also align with Jensen et al.'s (2016) recent report identifying continuous PD as a common factor in high performing school districts. In S2, four of the five interventions had mean ranging from 2.75 to 2.78 (Max=4) for follow-up support. All four interventions had a teacher perceived implementation fidelity mean ranging from 64.33 to 90.0, and teacher perceived improved student outcomes mean ranging from 69.66 to 95.75. Conversely, one intervention (Intervention 4 in Table 4) had an unfavorable follow-up support teacher rating (M = 2.23). For this particular intervention, teachers reported low perceived implementation fidelity (M = 61.68) and even lower perceived student academic improvement (M = 59.15). While data provide strong support to findings, they should be interpreted with caution as findings were purely based on teacher reported data.

When teachers were asked to elaborate on their training and post-training experiences, one teacher stated the following:

> ‘excellent start on the trainings - follow up support in the form of company trainer or expert within the district observing implementation and providing feedback would be helpful; having the company rep go through the components in a 1/2 day training session does not support fidelity of implementation; excellent choice of interventions; having an 'expert' to contact with questions/etc. would be helpful.’

The comment sums up the training and post-training follow-up data collected in S2. While teachers received good quality training on interventions that were helpful for their students, lack of follow-up support impeded their ability to implement the program effectively and sustainably.

Limitations

The current studies’ findings should be viewed in light of the following limitations. One of the primary drawbacks in the current study is that not all interventions on which teachers provided feedback were EBPs. Many interventions were commercially packaged programs with little to no evidence of their effectiveness in improving academic outcomes for students with special needs. For example, in S1, none of the twelve interventions teachers commented on were listed as EBPs on either the WWC website or on Johns Hopkins University’s (JHU) www.bestevidence.org website. In S2, two of the five interventions teachers commented on were listed as EBPs on both the WWC and JHU websites. Nonetheless, the interventions were selected by school leaders and do represent current practice in participating schools. Furthermore, as with all survey research, data collected were self-reported and they could reflect biases in teacher perceptions.

Implications for Future Research

Teachers pointed out several factors that helped improve sustainability of interventions. In both S1 and S2, the main factor that teachers reported enhanced sustainability of interventions was when they perceived the intervention to improve student academic outcomes. While approximately half the teachers indicated that improved student outcomes was the most important reason for sustainability, it was perplexing that the other half did not. More importantly, the second most crucial reason for sustainability of practice was ease of implementation. Hence, it is important for researchers to focus on both factors--enhancing students' academic outcomes and creating EBPs that can be implemented with ease. Fuchs and Fuchs (2001) illustrates how incorporating teacher feedback in improving program delivery to better suit classroom needs can lead to better sustainability of practices. Therefore, researchers need to create a model of educational research that incorporates teacher feedback in designing or fine tuning new interventions.

The teacher self-reported data on implementation fidelity and improved student outcomes were statistically significantly correlated. This correlation could indicate that poor implementation fidelity negatively impacts student outcomes. Alternately, the correlation could indicate that teachers implement interventions with low fidelity due to an underlying belief that the program is not a good instructional match for their students. Thus, it is important for future researchers to better understand how teachers can implement programs with fidelity while building in some flexibility without altering the core elements of the intervention (McMaster et al. 2010). By embedding some flexibility in the program, they can ensure that interventions align with individual teacher's classroom needs.

Another factor, highlighted in the limitations section, was the lack of EBPs used in the two school districts. While teachers have a positive attitude towards interventions supported by

research (Kretlow and Blatz 2011), there is a lack of regular PD opportunities for teachers of students with disabilities (Wei et al., 2009) to learn about EBPs. Future studies could focus on understanding how schools/districts select educational programs or PD opportunities for teachers of students with special needs and devise user-friendly methods to help improve the selection process.

Implications for School Leadership

Findings suggest that follow-up support was an important factor in helping teachers implement new interventions with high fidelity. District and school administrators need to consider providing teachers not only with training for new interventions, but also with continuous follow-up support to ensure that teachers build a deeper understanding of interventions. Follow-up support can not only help teachers adapt core components of the program to improve their individual students' academic needs, but can also enhance sustainability of interventions.

Additionally, close to a quarter of the teachers (S2) reported not receiving materials needed to implement interventions with high fidelity. It is critical that administrators ensure that teachers receive all the tools needed to implement interventions as designed. Lack of materials puts teachers in an unenviable position where they are expected to implement programs with high fidelity to achieve positive student outcomes but lack the necessary resources to fulfill their job requirements.

Moreover, school administrators and district personnel should focus on the provision of adequate time for teachers to plan selected interventions. Built-in planning schedules, in daily routines, can allow teachers the time needed to improve their implementation fidelity through extra practice and/or planning. Studies (Baker et al. 2004; Fuchs et al. 2010; Stein et al. 2008)

have suggested that low implementation fidelity leads to lower student outcomes. Hence, when the school or district spends valuable resources on new interventions, it is vital to make the most of these resources. Thus, providing teachers with adequate planning time can mitigate challenges of implementing new interventions effectively and sustainably.

Conclusion

Education policy and laws in many countries require school administrators and teachers to use evidence to guide instruction. Thus, it provides the stimulus schools need to use EBPs in their classrooms to address student academic needs. Moreover, EBPs are educational programs that have been tested using empirical research methodologies and have consistently shown positive effect sizes on student outcomes. Hence, the lack of academic EBPs being used in classrooms for students with disabilities is concerning and highlights the need for better dissemination of this body of research.

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APPENDIX A. Special Educator Survey Instrument 1

Confidential

Survey 1

Please complete the survey below.

Thank you!

The study seeks to understand teachers' perspective of evidence-based practices and how researchers can bridge the research-to-practice gap. Your responses to this questionnaire are entirely voluntary and will be used, anonymously, in our research to better understand how researchers can create better interventions that suit classroom needs. You may withdraw your participation at any time and may choose to skip any question. By completing this questionnaire, you agree to be in our study. For our part, we agree to report the findings only as aggregate data. A checkbox indicates that you have read and understand the terms of this agreement, agree to participate in this study, and allow the use of your information in the questionnaire for research purposes:

- ◯ Yes
- ◯ No

Confidential

Teacher Survey Page 1 of 5

What is your gender?
- ○ Male
- ○ Female

What is your age?
_____ (in years)

What zipcode do you live in?
_____

What area is your school in?
- ○ Urban/Inner City
- ○ Suburban
- ○ Rural

What type of school do you teach at?
- ○ Public
- ○ Private
- ○ Charter

What is your highest degree?
- ○ High School Graduate
- ○ Bachelors Degree
- ○ Masters Degree
- ○ Doctoral Degree
- ○ Other

What is your highest degree?
_____

How many years have you worked as a teacher in schools?
- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

How many years have you taught at your current school?
- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

What grade level(s) do you teach at your current school?
- ☐ Pre-k
- ☐ K
- ☐ Grade 1
- ☐ Grade 2
- ☐ Grade 3
- ☐ Grade 4
- ☐ Grade 5
- ☐ Grade 6
- ☐ Grade 7
- ☐ Grade 8
- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12

(Choose all that apply)

Are you a certified special education teacher?
- ○ Yes
- ○ No

Confidential

What type of special needs students do you work with?

- ☐ Autism
- ☐ Deaf-blindness
- ☐ Deafness
- ☐ Developmental Delay
- ☐ Emotional Disturbance
- ☐ Hearing Impairment
- ☐ Intellectual Disability
- ☐ Multiple Disabilities
- ☐ Orthopedic Impairment
- ☐ Specific Learning Disability
- ☐ Speech or Language Impairment
- ☐ Traumatic Brain Injury
- ☐ Visual Impairment (including blindness)
- ☐ Other Health Impairment

(Choose all that apply)

For how many years have you taught students with special needs?

- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

Confidential

Teacher Survey Page 2 of 5

How many new classroom interventions were you trained on by the district/school in the last two academic years to improve your students' academic achievement?

- ◯ 1 - 3
- ◯ 4 - 6
- ◯ 7 - 10
- ◯ 10+

Did your school/district solicit and consider your input when selecting new interventions?

- ◯ Always
- ◯ Most of the times
- ◯ Sometimes
- ◯ Rarely
- ◯ Never

Do you think you received adequate training and follow-up materials to implement these new interventions?

- ◯ Yes, for all the interventions
- ◯ Yes, for most of the interventions
- ◯ Yes, for some of the interventions
- ◯ No, for none of the interventions

How much time did you have to plan and organize new interventions?

- ◯ More than sufficient time
- ◯ Sufficient time
- ◯ Need more time than available
- ◯ Very little time
- ◯ Absolutely no time

How supportive is your school in helping you use new interventions as directed in manuals/training sessions?

- ◯ Extremely supportive
- ◯ Somewhat supportive
- ◯ Not at all supportive

What support system do you think would help you implement new interventions with high fidelity?

- ☐ More planning time
- ☐ More support at school
- ☐ Better training
- ☐ Regular training
- ☐ Online support

(Choose all that apply)

What are some support mechanisms that your school provides to help you with the implementation of new interventions regularly and with the highest fidelity?

_____

What are some support mechanisms that you would like your school to provide to assist you in implementing new interventions regularly with the highest fidelity?

_____

How many of the classrooms interventions you were trained on in the last two years do you still use in your classrooms today?

- ◯ All
- ◯ Most
- ◯ Some
- ◯ None

Confidential

Teacher Survey Page 3 of 5

Of the interventions you were trained on in the last two years, which was the MOST SUCCESSFUL in achieving your students' academic goals?

- ○ S.P.I.R.E. (Specialized Program Individualizing Reading Excellence)
- ○ MCI (Making Connections Intervention)
- ○ Sounds Sensible
- ○ Making Connections
- ○ Quick Reads
- ○ STARS (Standardized Test for the Assessment of Reading)
- ○ Edmark Reading Program
- ○ Reading Milestones
- ○ Reading Rocks
- ○ Making Reading Connection
- ○ Six Minute Solution
- ○ Rewards (Reading Excellence: Word Attack & Rate Development Strategies)

How many days a week do you / did you use the above mentioned intervention with your students?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5

What percentage of your students do you / did you use the above mentioned intervention with?

- ○ Less than 10%
- ○ 10 to 25%
- ○ 26 to 50%
- ○ 51 to 75%
- ○ 76 to 99%
- ○ 100%

On a scale of 1 to 100, how closely did you / do you follow the above mentioned intervention as directed in the manual/training session?

Not at all like the manual/training session | Somewhat like the manual/training session | Just like the manual/training session

(Place a mark on the scale above)

Who most frequently implemented the above mentioned intervention with the students?

- ○ Classroom or Content area teacher
- ○ Special Education Teacher
- ○ Paraprofessional

Do you still use the above mentioned intervention with your students?

- ○ Yes
- ○ No

What were the reasons for discontinuing the above mentioned intervention?

- ☐ Lack of planning time
- ☐ Lack of support from school administration
- ☐ Not an effective program
- ☐ Time consuming
- ☐ Lack of knowledge about the intervention
- ☐ Lack of sufficient training
- ☐ School leadership made the decision to discontinue practice
- ☐ Tried another more effective program
- ☐ Other

(Choose all that apply)

What were the reasons for discontinuing the above mentioned intervention?

_____

Confidential

What were some of the reasons for continuing the intervention mentioned above?

- ☐ Improves academic achievement
- ☐ Compliments traditional teaching
- ☐ Ease of implementation
- ☐ In-depth training and understanding of intervention
- ☐ Detailed manual
- ☐ Aligned with year-end standardized testing goal
- ☐ High level of student satisfaction
- ☐ School leadership made the decision to continue
- ☐ Other

(Choose all that apply)

What was the reason for continuing the above mentioned intervention?

_____

On a scale of 0 to 100, how convinced are you that the above mentioned intervention enhanced students' academic success?

Not at all convinced — Completely convinced

(Place a mark on the scale above)

What are some aspects of the above mentioned intervention that you see as beneficial?

_____

What are some aspects of the above mentioned intervention that you would change?

_____

Confidential

Teacher Survey Page 4 of 5

Of the interventions you were trained on in the last two years, which was the LEAST SUCCESSFUL in achieving your students' goals?

- ○ S.P.I.R.E. (Specialized Program Individualizing Reading Excellence)
- ○ MCI (Making Connections Intervention)
- ○ Sounds Sensible
- ○ Making Connections
- ○ Quick Reads
- ○ STARS (Standardized Test for the Assessment of Reading)
- ○ Edmark Reading Program
- ○ Reading Milestones
- ○ Reading Rocks
- ○ Making Reading Connection
- ○ Six Minute Solution
- ○ Rewards (Reading Excellence: Word Attack & Rate Development Strategies)

How many days a week do you / did you use the above mentioned intervention with your students?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5

What percentage of your students do you / did you use the above mentioned intervention with?

- ○ Less than 10%
- ○ 10 to 25%
- ○ 26 to 50%
- ○ 51 to 75%
- ○ 76 to 99%
- ○ 100%

On a scale of 1 to 100, how closely did you / do you follow the above mentioned intervention as directed in the manual/training session?

Not at all like the manual/training session | Somewhat like the manual/training session | Just like the manual/training session

(Place a mark on the scale above)

Who most frequently implemented the above mentioned intervention with the students?

- ○ Classroom teacher
- ○ Special Education Teacher
- ○ Paraprofessional

Do you still use the above mentioned intervention?

- ○ Yes
- ○ No

What are the reasons for discontinuing the above mentioned intervention?

- ☐ Lack of planning time
- ☐ Lack of support from school administration
- ☐ Not an effective program
- ☐ Time consuming
- ☐ Lack of knowledge about the intervention
- ☐ Lack of sufficient training
- ☐ School leadership made the decision to discontinue practice
- ☐ Tried another more effective program
- ☐ Other

(Choose all that apply)

What was the reason for discontinuing the above mentioned intervention?

_____

Confidential

What were some of the reasons for continuing the intervention mentioned above?

- ☐ Improves academic achievement
- ☐ Compliments traditional teaching
- ☐ Ease of implementation
- ☐ In-depth training and understanding of intervention
- ☐ Detailed manual
- ☐ Aligned with year-end standardized testing goal
- ☐ High level of student satisfaction
- ☐ School leadership made the decision to continue
- ☐ Other

(Choose all that apply)

What was the reason for continuing the above mentioned intervention?

_____

On a scale of 0 to 100, how convinced are you that the above mentioned intervention enhanced students' academic success?

Not at all convinced — Completely convinced

(Place a mark on the scale above)

What are some aspects of the above mentioned intervention that you see as beneficial?

_____

What are some aspects of the above mentioned intervention that you would change?

_____

Confidential

Teacher Survey Page 5 of 5

We would like to donate our research funds ($500) to Educational Charities. Please select any one organization that you would like us to support on your behalf.

- ○ Adopt a Classroom (Helps teachers purchase supplies for classes - 100% of donation goes to a classroom)
- ○ Say Yes to Education (Helps improve inner city education - 93% of donation goes towards the program)
- ○ Save the Children (Gives children a healthy start, the opportunity to learn and protection from harm in the US and 120 other countries - 89% of all donation goes to program services to assist children)

Confidential

Thank you for taking the time to complete the survey!

APPENDIX B. Special Educator Survey Instrument 2

Confidential

Survey 2

The study seeks to understand teachers' perspectives on evidence-based practices and how researchers can bridge the research-to-practice gap. Your responses to this questionnaire are entirely voluntary and will be used, anonymously, in our research to better understand how researchers can create better interventions that suit classroom needs. You may withdraw your participation at any time and may choose to skip any question. By completing this questionnaire, you agree to be in our study. For our part, we agree to report the findings only as aggregate data, which will be shared with your school district. This survey has been reviewed by your district's Research, Assessment & Evaluation and is being administered in partnership with your district.

A checkbox indicates that you have read and understand the terms of this agreement, agree to participate in this study, and allow the use of your information in the questionnaire for research purposes.

- ○ Yes
- ○ No

For any questions or queries about the survey, please email - johny.daniel@vanderbilt.edu.

Confidential

Survey Completed 1%

What is your gender?

- ○ Male
- ○ Female

What is your age?

- ○ 20 to 29 years old
- ○ 30 to 39 years old
- ○ 40 to 49 years old
- ○ 50 to 59 years old
- ○ 60 years or older

What zip code is your school in?

_____

What is your highest degree?

- ○ Bachelors Degree
- ○ Masters Degree
- ○ Doctoral Degree
- ○ Other

What is your highest degree?

_____

How many years have you worked as a teacher in schools?

- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

How many years have you taught at your current school?

- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

What grade level(s) do you teach at your current school?

- ☐ Pre-k
- ☐ K
- ☐ Grade 1
- ☐ Grade 2
- ☐ Grade 3
- ☐ Grade 4
- ☐ Grade 5
- ☐ Grade 6
- ☐ Grade 7
- ☐ Grade 8
- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12
- ☐ Post Grade 12

(Choose all that apply)

Are you a certified special education teacher?

- ○ Yes
- ○ No

Confidential

What are the IDEA disability eligibility categories of students you teach?

- ☐ Autism
- ☐ Deaf-blindness
- ☐ Deafness
- ☐ Developmental Delay
- ☐ Emotional Disturbance
- ☐ Hearing Impairment
- ☐ Intellectual Disability
- ☐ Multiple Disabilities
- ☐ Orthopedic Impairment
- ☐ Specific Learning Disability
- ☐ Speech or Language Impairment
- ☐ Traumatic Brain Injury
- ☐ Visual Impairment (including blindness)
- ☐ Other Health Impairment

(Choose all that apply)

For how many years have you taught students with disabilities?

- ○ Less than 1 year
- ○ 1 - 3 years
- ○ 4 - 6 years
- ○ 7 - 9 years
- ○ 10 or more years

Confidential

Survey Completed 28%

Classroom interventions are curricula, programs, or sets of strategies that teachers use in their classrooms to improve academic or behavioral outcomes. For the purpose of this study, we are interested in specific interventions on which you received professional development. These may include commercially-available programs (e.g., Corrective Reading, Peer Assisted Learning Strategies) and less formal sets of strategies that are targeted through professional development (e.g., corrective feedback, positive reinforcement).

Examples of classroom intervention are:
- Repeated Reading
- Rocket Math
- PALS (Peer Assisted Learning Strategies)
- Corrective Reading

How many new classroom interventions were you trained on by the district/school since Fall 2014 to improve your students' academic achievement?

- ○ 1 - 3
- ○ 4 - 6
- ○ 7 - 10
- ○ 10+

Can you name the interventions you were trained on since Fall 2014?

_____

Did your school/district solicit and consider your input when selecting new interventions?

- ○ Always
- ○ Most of the time
- ○ Sometimes
- ○ Rarely
- ○ Never

Do you think you received adequate training and follow-up materials to implement these new interventions?

- ○ Yes, for all the interventions
- ○ Yes, for most of the interventions
- ○ Yes, for some of the interventions
- ○ No, for none of the interventions

How much time did you have to plan and organize new interventions?

- ○ More than sufficient time
- ○ Sufficient time
- ○ Need more time than available
- ○ Very little time
- ○ Absolutely no time

How supportive is your school leadership and administration in helping you use new interventions as directed in manuals/training sessions?

- ○ Extremely supportive
- ○ Somewhat supportive
- ○ Not at all supportive

What support systems do you think would help you implement new interventions with high fidelity?

- ☐ More planning time
- ☐ More support at school
- ☐ Better training
- ☐ Regular training
- ☐ Online support

(Choose all that apply)

What are some support mechanisms that your school or district provides to help you with the implementation of new interventions regularly and with the highest fidelity?

_____

What are some support mechanisms that you would like your school or district to provide to assist you in implementing new interventions regularly with the highest fidelity?

_____

Confidential

How many of the classroom interventions you were trained on since Fall 2014 do you still use in your classrooms today?

- ○ All
- ○ Most
- ○ Some
- ○ None

Confidential

Survey Completed 51%

Your school district offered training on several interventions last year. Please select one on which you received training.

- ○ PCI
- ○ TeachTown
- ○ Wilson Reading
- ○ SRA Corrective Reading
- ○ TN Core Reading Intervention

(If you received training in more than one of the given intervention options, then please select the one on which you were trained on most recently.)

Based on the training/manual, what was the recommended group size for the above selected intervention?

- ○ 1 to 5 students
- ○ 6 to 10 students
- ○ 11 to 15 students
- ○ 16 or more students
- ○ Training/Manual did not suggest
- ○ I don't know

What was the average group size that you used the above selected intervention with?

- ○ 1 to 5 students
- ○ 6 to 10 students
- ○ 11 to 15 students
- ○ 16 or more students

How many days a week did the training/manual recommend using the above mentioned intervention with students?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ Training/Manual did not suggest
- ○ I don't know

How many days a week do/did you use the above mentioned intervention with your students?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5

On a scale of 1 to 100, how closely did you implement the intervention with fidelity (i.e., as intended in the training)?

Not at all like the manual/training session | Somewhat like the manual/training session | Just like the manual/training session

(Place a mark on the scale above)

Did you find it easy to implement the program?

- ○ Yes
- ○ No

What were some challenges you faced that made it hard to implement the program?

_____

Do you still use the above mentioned intervention with your students?

- ○ Yes
- ○ No

Confidential

What were the reasons for discontinuing the above mentioned intervention?

- ☐ Lack of planning time
- ☐ Lack of support from school administration
- ☐ Not an effective program
- ☐ Time consuming
- ☐ Lack of knowledge about the intervention
- ☐ Lack of sufficient training
- ☐ School leadership made the decision to discontinue practice
- ☐ Tried another more effective program

(Choose all that apply)

Briefly describe why you discontinued the above program.

_____

What were some of the reasons for continuing the intervention mentioned above?

- ☐ Improves academic achievement
- ☐ Compliments traditional teaching
- ☐ Ease of implementation
- ☐ In-depth training and understanding of intervention
- ☐ Detailed manual
- ☐ Aligned with year-end standardized testing goal
- ☐ High level of student satisfaction
- ☐ School leadership made the decision to continue

(Choose all that apply)

Briefly describe why you chose to continue the above program.

_____

On a scale of 0 to 100, how convinced are you that the above mentioned intervention enhanced students' academic/behavior/social success?

Not at all convinced — Completely convinced

(Place a mark on the scale above)

What are some aspects of the above mentioned intervention that you see as beneficial?

_____

What are some aspects of the above mentioned intervention that you would change?

_____

Please share other comments or expand on previous responses about the intervention here:

_____

Confidential

Survey Completed 88%

The training/professional development gave me a clear understanding of how the intervention works and what I need to do to make it a successful program.

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

I received all the materials and/or online access information to help me implement the program as specified in the manual/training session(s).

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

I received follow-up support for the intervention through extra coaching, materials, and/or other supports to implement the program effectively with the highest fidelity.

- ○ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly Disagree

Please share other comments or expand on previous responses about the training here:

_____

Confidential

Survey Completed 97%

We would like to donate our research funds ($500) to Educational Charities. Please select any one organization that you would like us to support on your behalf.

- ○ Adopt a Classroom (Helps teachers purchase supplies for classes - 100% of donation goes to a classroom)
- ○ Say Yes to Education (Helps improve inner city education - 93% of donation goes towards the program)
- ○ Save the Children (Gives children a healthy start, the opportunity to learn and protection from harm in the US and 120 other countries - 89% of all donation goes to program services to assist children)

Thank you for taking the time to complete the survey!

Table 1. Teacher demographic information Surveys 1 and 2.

Variable	Category	Survey 1			Survey 2		
		N	%	Total Responses	N	%	Total Responses
Gender	Male	07	7.30	96	11	14.10	78
	Female	89	92.70		67	85.90	
Age	20 to 29 years	16	17.02		20	25.97	
	30 to 39 years	20	21.27		19	24.68	
	40 to 49 years	34	36.17	94	16	20.78	77
	50+	24	25.53		22	28.57	
Type of School	Urban/Inner City	07	7.29				
	Suburban	50	52.08	96	N/a	N/a	N/a
	Rural	37	38.54				
Highest Degree	Bachelors	31	32.63		10	12.99	
	Masters	59	62.10		60	77.92	
	Doctoral	01	1.05	95	04	5.19	77
	Other	04	4.21		03	3.90	
Teaching Experience	Less than 1 year	01	1.05		05	6.41	
	1 to 3 years	11	11.57		11	14.10	
	4 to 6 years	17	17.89	95	13	16.67	78
	7 to 9 years	10	10.52		08	10.26	
	10+ years	56	58.94		41	52.56	
Current Tenure at School	Less than 1 year	13	13.54		21	26.92	
	1 to 3 years	27	28.12		23	29.49	
	4 to 6 years	19	19.79	96	15	19.23	78
	7 to 9 years	11	11.45		05	6.41	
	10+ years	26	27.08		14	17.95	
Teaching at Grade Level*	Pre-k	08	8.33		01	1.28	
	K	39	40.62		26	33.33	
	Grade 1	43	44.79		29	37.17	
	Grade 2	43	44.79		35	44.87	
	Grade 3	47	48.95		36	46.15	
	Grade 4	47	48.95		33	42.30	
	Grade 5	47	48.95		18	23.07	
	Grade 6	17	17.70	96	17	21.79	78
	Grade 7	17	17.70		17	21.79	
	Grade 8	18	18.75		22	28.20	
	Grade 9	19	19.79		04	4.16	
	Grade 10	22	22.91		04	4.16	
	Grade 11	21	21.87		04	4.16	
	Grade 12	20	20.83		03	3.12	
	Post Grade 12	-	-		01	1.28	

Certified Special Educator	Yes	92	95.83	96	78	100.00	78
	No	04	4.17		0	0.00	
Type of student disabilities*	Autism	77	80.20	96	67	85.89	78
	Deaf-blindness	05	5.20		03	3.84	
	Deafness	09	9.37		03	3.84	
	Developmental Delay	50	52.08		53	67.94	
	Emotional Disturbance	55	57.29		48	61.53	
	Hearing Impairment	18	18.75		13	16.66	
	Intellectual Disability	42	43.75		55	70.51	
	Multiple Disabilities	38	39.58		30	38.46	
	Orthopedic Impairment	13	13.54		14	17.94	
	Specific Learning Disability	72	75.00		58	74.35	
	Speech or Language Impairment	79	82.29		57	73.07	
	Traumatic Brain Injury	16	16.66		12	15.38	
	Visual Impairment (including blindness)	18	18.75		08	10.25	
	Other Health Impairment	74	77.08		54	69.23	
Experience teaching students with special needs	Less than 1 year	03	3.26	92	05	6.41	78
	1 to 3 years	11	11.95		15	19.23	
	4 to 6 years	16	17.39		15	19.23	
	7 to 9 years	14	15.21		05	6.41	
	10+ years	48	52.17		38	48.72	

*Note: Percentage totals to over 100 because items were not mutually exclusive

Table 2. Variable, range, frequency, mean, and standard deviation for Survey 1.

Variable	Range	Most Successful Intervention			Least Successful Intervention		
		N	M	SD	N	M	SD
Implementation Fidelity	0 to 100	62	71.80	25.99	42	64.57	32.12
Improved Student Outcome	0 to 100	65	72.27	23.65	40	42.75	29.17
Still Use the Program	0 to 1	70	0.82	0.37	46	0.34	0.48

Table 3. Reasons for continuing successful interventions in Survey 1.

Reason for Continuing Successful Intervention	No. of Participants that Agree	%*
Improved academic achievement	40	41.67
Ease of implementation	29	30.21
Detailed manual	17	17.71
Compliments traditional teaching	16	16.67
High level of student satisfaction	15	15.62
School leadership made the decision to continue	11	11.46
In-depth training and understanding	9	9.38
Aligned with year-end standardized testing goal	4	4.17

*Note percentage does not add up to 100 as all options were not mutually exclusive and teachers could choose more than one option.

Table 4. Variables, range, frequency, mean and standard deviation for interventions in Survey 2.

Variable	Range	Intervention 1			Intervention 2			Intervention 3			Intervention 4			Intervention 5		
		N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Implementation Fidelity	0 to 100	16	78.56	15.20	4	90.0	3.74	15	64.33	25.39	19	61.68	36.68	3	71.66	16.07
Improved Student Outcome	0 to 100	17	71.28	28.79	4	95.75	4.19	13	72.46	15.89	19	59.15	33.82	3	69.66	23.45
Ease of implementation	0 to 1	17	0.76	0.43	4	1	0	15	0.6	0.5	19	0.73	0.45	3	1	0
Still use the program	0 to 1	17	0.88	0.33	4	1	0	15	0.86	0.35	21	0.57	0.5	3	1	0
Clear training	1 to 4	17	3.47	0.62	4	3.25	0.5	14	3.07	0.47	22	3.13	0.77	4	3.25	0.5
Received material	1 to 4	17	3.41	0.61	4	3.5	0.57	14	2.71	0.61	21	2.66	1.11	4	3.25	0.5
Follow-up post training	1 to 4	17	2.76	0.75	4	2.75	0.95	14	2.78	0.69	21	2.23	0.83	4	2.75	1.25

Table 5. Reasons for continuing interventions in Survey 2.

Reason for Continuing Intervention	No. of Participants that Agree	%*
Improved academic achievement	40	51.28
Ease of implementation	25	32.05
High level of student satisfaction	15	19.23
Compliments traditional teaching	12	15.38
In-depth training and understanding	12	15.38
Detailed manual	11	14.10
School leadership made the decision to continue	3	3.85
Aligned with year-end standardized testing goal	2	2.56

*Note percentage does not add up to 100 as all options were not mutually exclusive and teachers could choose more than one option.