

Research Article

Implementation and Perceptions of Classroom-Based Service Delivery: A Survey of Public School Clinicians

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Purpose: The choice of service delivery model is important for public school clinicians. Despite a theoretical emphasis on inclusive classroom-based services, data from a recent American Speech-Language-Hearing Association Schools Survey indicated that the pullout model is still the more frequently used approach (American Speech-Language-Hearing Association, 2016). In the current study, public school clinicians' use and perceptions of inclusion were examined to better understand potential influences on its implementation.

Method: Three hundred forty-four school-based clinicians completed an online survey about their training in and implementation of inclusion services, along with their perceptions of positive and potentially challenging aspects of this model. Descriptive data were examined, and the relationships of use and perceptions to issues such as caseload size, training, school setting, teacher factors, and administrative

support were analyzed. Additionally, qualitative analysis was used to examine responses to 3 open-ended questions.

Results: Over half of the respondents served 1%–25% of their caseload through an inclusion model, and it was most frequently utilized to address language and social skills. Teacher collaboration and planning time were the 2 most frequently reported keys to inclusion success and were also 2 of the most frequently reported challenges to implementation.

Conclusions: The majority of the respondents reported many positive aspects of inclusion, yet they also reported many of the same challenging perceptions and roadblocks that existed when speech-language pathologists were surveyed over 20 years ago. Based on the results of this study, training in the inclusion model, teacher “buy-in,” planning time, and administrative support are relevant to successful use of classroom-based intervention.

In a recent American Speech-Language-Hearing Association (ASHA) Leader article (Immicke, 2016), a former school teacher and recently turned speech-language pathologist (SLP) wrote, “Now that I am on the other side of the inclusion discussion, I see the many benefits for all students—but these benefits often get overlooked because successful inclusion can be challenging to implement” (p. 8). The choice of service delivery model is an important decision for public school clinicians, and the two prevalent models for direct services are pullout and inclusion, the latter of which can also be referred to as classroom-based intervention or “push-in” therapy. These three terms are considered synonymous for the purposes of this study. In the context of a pullout model, clients are seen individually or in small

groups outside the classroom (e.g., in the “speech room”). In the context of an inclusion or classroom-based model, clinicians “push in” to provide intervention in the classroom (Cirrin et al., 2010). In providing direct services in a classroom-based model, teachers and SLPs may assume a variety of collaborative roles to address clients' Individualized Education Programs (IEPs; ASHA, 1996). Elksnin and Capilouto (1994) outlined several variations of collaborative classroom-based service delivery that included station teaching (i.e., students move through stations to work with different adults at each station), one teach and one drift/observe, remedial teaching (i.e., a specialist works with students who need extra remediation of general education concepts), and team teaching (i.e., professionals share responsibility for whole-class, small group, and individual instruction). In implementation then, the SLP might teach or co-teach lessons to the entire class, work with students in small groups within the classroom, work individually with students in the back of the room or at their desks, or work alongside students during ongoing teacher instruction.

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Changes in federal law and philosophies toward the education of children with disabilities over the past several decades have motivated these more inclusive approaches to intervention (Ehren, 2000; Elksnin & Capilouto, 1994; Kavale, 2002), which include delivery of interventions directly within the general education classroom (Beck & Dennis, 1997; Ehren, 2000; Westby, Watson, & Murphy, 1994). The Individuals with Disabilities Education Act Amendments of 1997 addressed concerns about the quality of education provided to students with special needs and set the stage for inclusive education. The reauthorization of the law in 2004 mandated that “removal of children with disabilities from the regular education environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily” and required documentation of considered placement options on each student’s IEP (Section 612 [5], Part B). In 1996, ASHA developed a technical report that addressed inclusive practices for children with communication disorders (ASHA, 1996). The authors explained that “an array of inclusive service delivery models is recommended for the implementation of services to children and youths with communication disorders. Inclusive practices are intervention services that are based on the unique and specific needs of the individual, and provided in a context that is least restrictive” (ASHA, 1996, p. 2).

In response to these mandates, service delivery changes became an issue for SLPs practicing in the schools. Thus, several surveys were created between 1994 and 2003 (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Pershey & Rapking, 2003) that directly examined various classroom-based service delivery issues. Two such surveys were sent to SLPs only and one, to both SLPs and classroom teachers. The number of participants in these studies ranged from 31 to 51, and most were from small geographic areas in the United States (e.g., a single-school district, three Midwest suburban school districts). Factors contributing to effective service delivery included having knowledge and skills that were valued, time to plan, and administrative support (Beck & Dennis, 1997; Elksnin & Capilouto, 1994). Positive elements of the inclusion process included increased carryover of skills, the ability to address functional academic goals, prevention of speech and language issues by working with all students, and addressing students’ social communication skills (Beck & Dennis, 1997; Elksnin & Capilouto, 1994). Disadvantages identified included limited planning time, difficulty in incorporating IEP goals, and lack of individualization of therapy. Reported stumbling blocks to inclusion implementation included large caseload sizes, elements of teacher resistance, absence of SLPs from curriculum planning, and teacher and SLP role uncertainty (Elksnin & Capilouto, 1994; Pershey & Rapking, 2003).

Almost 20 years later, current trends toward inter-professional practice (IPP) and interprofessional education provide additional guidelines for and an excellent fit within an inclusion model and have become a focus for the field of speech-language pathology (ASHA, 2017). IPP occurs

when a team of professionals with different areas of expertise work in concert to provide high-quality services to clients and their families that result in successful outcomes. The impetus for IPP in schools is driven by changes that demand increased accountability (e.g., Response to Intervention) and effective implementation of the Common Core State Standards, which are maximized when all professionals integrate their services, communicate, evaluate, and train together to support student success (Blosser, 2016).

Yet, despite these theoretical and clinical emphases on classroom-based direct services for more than two decades, survey data have indicated that inclusion is still not a prevalent service delivery method. The 2008 ASHA Schools Survey found that the pullout model was the one most widely used by practitioners in elementary schools. The report indicated that “overall, clinical service providers spent an average of 22 hours each week in traditional pullout service, five in classroom intervention, four in self-contained classrooms, three in collaborative consultation, and one in a resource room” (ASHA, 2008, p. 8). In 2011, Brandel and Loeb conducted a survey of school-based SLPs about factors related to their program intensity and service delivery. They found that, in most instances, regardless of severity, grade, or type of disorder, students were seen in groups outside the classroom. In 2016, ASHA again conducted a survey of school-based SLPs to update and expand information gathered during previous schools surveys. Within the “Caseload Characteristics and Trends” report (ASHA, 2016), similar results to those found in 2008 were documented for provision of direct pullout and classroom-based services. The surveyed school-based clinicians reported that they spent 18–19 hr per week in pullout and 4.6 hr in classroom-based intervention settings. It seems there was only little change in the use of the inclusion model during those 8 years.

While inclusive approaches are often theoretically viewed as best practice and a number of reports appear in the literature describing their benefits (ASHA, 1996; Bland & Prelock, 1995; Boyle, McCartney, Forbes, & O’Hare, 2007; Moore-Brown & Montgomery, 2001; Throneburg, Calvert, Sturm, Paramboulas, & Paul, 2000), researchers have also reported concerns about the overall effectiveness of classroom-based services (Ehren, 2000; Elksnin & Capilouto, 1994), challenges in collaborative teaming (Achilles, Yates, & Freese, 1991; Beck & Dennis, 1997), and regarding widespread application of inclusive philosophies without consideration of individual differences (Westby et al., 1994). Additionally, there is limited empirical evidence as to the effectiveness of inclusion services. In their meta-analysis, MacGinty and Justice (2006) searched for experimentally designed studies that compared pullout and inclusion models and utilized dependent measures that represented child language outcomes in expressive and/or receptive language. They noted that two of the three studies that met their review criteria found a benefit to classroom-based over pullout services when addressing vocabulary goals for pre-school and early elementary students. Cirrin et al. (2010) conducted a similar review of extant peer-reviewed, experimental studies designed to examine the effects of different

service delivery models on speech-language outcomes for elementary students. Five studies met their review criteria and addressed the influence of service delivery model on vocabulary skills, functional communication, and/or language and literacy outcomes. Due to some concerns about several of the studies' characteristics (e.g., single-subject design, lack of evidence of treatment fidelity, statistical limitations) and their mixed findings, Cirrin et al. concluded that direct speech-language intervention procedures implemented in classroom settings "have not been put to adequate experimental tests to determine their effectiveness in facilitating the development of speech-language abilities in school-age children with disabilities" (p. 249).

With regard to these service delivery decisions then, there is somewhat of an informational disparity. Clinicians have some theoretical and public policy support for inclusion along with a current focus on IPP, but we see continued prevalence of the pullout model (ASHA, 2008, 2016), reported challenges in inclusion implementation and collaborative teaming (Beck & Dennis, 1997; Immicke, 2016), and limited empirical evidence as to inclusion effectiveness (Cirrin et al., 2010; McGinty & Justice, 2006). Additionally, in the 2016 Schools Survey, one of the top five most frequently reported challenges was "incorporating optimal service delivery models" (ASHA, 2016). This might suggest the need for current inquiry based on implementation science or the investigation of "how" what we do actually works in practice. *Implementation science* is defined as "the study of variables and conditions required to promote the systematic uptake, sustainability and effective use of evidence based programs and practices in typical service and social settings" (Boothroyd, 2014). From an implementation perspective, it would be helpful to know what practicing clinicians are doing with regard to inclusion so that "incorporating optimal service delivery models" does not continue to be such a challenge.

Thus, to glean insight into why the pullout model is still utilized roughly four times more often than classroom-based services, updated information about public school SLPs' implementation of and attitudes toward classroom-based instruction is needed. Specifically, their practices and perceptions of the inclusion model, variables related to these practices and perceptions, and free responses to questions about the greatest benefits and challenges to this process would allow us to understand why it still may or may not be implemented or deemed successful. There is not a large body of current research to this end, but potentially relevant variables to implementation of inclusion can be identified based on extant literature. Specifically, variables of interest from previous research include skills targeted in the classroom, method of classroom instruction, characteristics of students served (e.g., elementary), perceived advantages and disadvantages of classroom-based services, and training needs (Elksnin & Capilouto, 1994), along with administrative support, teacher relationships, training, and workload/caseload size (ASHA, 2016; Brandel & Loeb, 2011; Creaghead, 1990). Given that these factors are highly relevant to the work of school-based clinicians, their relationship to

implementation of inclusion services in current public school settings is of interest. If use and perceptions of inclusion are related to factors such as caseload size, school setting (e.g., preschool, elementary school), training (or lack thereof), and teacher and administrative support, perhaps improved practices related to these variables (e.g., increased scheduling flexibility, strategies for building teacher relationships) could be established to facilitate more consistent and successful use of classroom-based instruction than has been seen in the past. Thus, we elicited public school clinicians' responses to a variety of questions related to the issues described above and sought to answer the following questions:

1. What do training in and implementation of inclusion services look like for the surveyed SLPs?
2. What are the surveyed school-based SLPs' perceptions with regard to both positive and potentially challenging aspects of the inclusion service delivery model?
3. Are use and perceptions of inclusion predicted by lack of training in an inclusion model, caseload size, teacher factors, and administrative support or related to school setting?
4. What are SLPs' most frequently reported open-ended responses to "things they like about the inclusion model," "challenges faced when providing inclusion services," and "the most important keys to success for implementing classroom-based services"?

Method

Participant Recruitment

Attempts were made to recruit school-based SLPs from all public school districts in the state of Texas. Texas is divided into 20 educational regions, each served by a regional educational service center. Each educational service center has a speech-language pathology coordinator who maintains contact information for all of the lead SLPs in each school district in the region. An e-mail describing the web-based survey and its purpose was sent to these coordinators, who were asked to forward it to all of the lead SLPs in their region. This e-mail stated the purpose of the survey (which included a description of an inclusion model), noted that the survey had been approved by the university's institutional review board (IRB) and would take 10–15 min to complete, ensured confidentiality for those who completed the survey, and invited the lead SLP to forward the e-mail to all of the SLPs in his or her school district. A follow-up e-mail was sent to the coordinators 2 weeks later as a reminder. In addition, recruitment was also conducted simultaneously at the Texas Speech-Language-Hearing Association convention in two ways. First, flyers containing the above e-mail information were distributed to SLPs who were manning their school district booths in the exhibit hall, accompanied by an invitation from the first author to share the survey link with their colleagues when they returned from the conference. Approximately 20 flyers were disseminated in this manner. Second, the authors received permission

from the state association to invite public school attendees to complete the survey on iPads provided at a booth in the exhibit hall, and 40 clinicians completed the online survey in this manner. Following the e-mail and flyer invitations, the survey remained open for 8 weeks. As a result of these recruitment efforts, 262 Texas public school SLPs completed the survey.

In an attempt to broaden geographical representation and gather additional clinician responses, the survey link was then shared with permission via the ASHA Special Interest Groups 1 (Language, Learning and Education) and 16 (Public Schools) Communities. Postings on both list serves invited public school SLP members to complete the survey, described its purpose (which included a description of an inclusion model), noted that it had IRB approval, stated it would take 10–15 min to complete, and ensured confidentiality for those who completed the survey. A reminder invitation was posted 2 weeks later. As a result, 82 public school clinicians from states other than Texas completed the survey, with one to five respondents from all states except Alaska, Hawaii, Montana, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Utah, and Wyoming. In order to ensure that responses from clinicians in Texas did not differ from the group of clinicians from the other states on the relevant inclusion issues to be analyzed in this study (e.g., positive perceptions, challenging perceptions, teacher support, administrative support, training), chi-square analyses were conducted on the response data and no significant differences were found between the two groups on the following items: “I have good teacher support for my inclusion services” ($\chi^2 = 0.21, p = .65$), “I have good administrative support for the inclusion model” ($\chi^2 = 0.26, p = .61$), “I have received no training in the use of an inclusion model” ($\chi^2 = 1.19, p = .28$), “I have had good success using an inclusion model” ($\chi^2 = 0.25, p = .62$), “The inclusion model is not effective for most of my caseload” ($\chi^2 = 3.11, p = .08$), “I have weekly meetings with teachers” ($\chi^2 = 1.25, p = .26$), and “I serve some students using an inclusion model” ($\chi^2 = 0.43, p = .51$). Additionally, *t* tests and chi-square analyses were conducted to ensure there were no statistically significant differences between Texas clinicians and clinicians from other states on work-related variables. None was noted on number of years worked, $t(342) = -0.60, p = .55$, full-time versus part-time ($\chi^2 = 0.64, p = .42$), or caseload size, $t(342) = 1.12, p = .265$. All procedures involved in the study were approved by the IRB of Texas Woman’s University prior to the initiation of data collection.

Participants

The survey was completed by 344 SLPs, 262 from the state of Texas and 82 from other states in the United States. While the vast majority of SLPs were from Texas, the remaining respondents were fairly evenly distributed across all four U.S. Census Bureau regions: Northeast ($n = 19$), Midwest ($n = 22$), South ($n = 22$), and West ($n = 19$). Table 1 provides credential information for the participants, and

Table 1. Survey participants’ credentials ($N = 344$).

Credential	Frequency	% Sample
Experience		
Certified SLP	344	100
Degree		
Master’s	339	98.5
PhD	5	1.5

Note. SLP = speech-language pathologist.

Table 2 provides the public school clinicians’ work-related data. To further examine the representativeness of the sample, we compared the respondents in this study to the SLPs surveyed in the 2016 ASHA School Survey and found them similar in the following ways: The majority worked in preschool or elementary school settings, were ASHA-certified SLPs, worked full-time, and had a caseload between 30 and 60 students. To examine the representativeness of their survey, ASHA compared school survey respondents to the larger public school SLP membership of the organization with respect to primary employment facility, primary employment function, highest earned degree, age, and region of the country, finding the two groups similar on all factors. Based on ASHA’s methodology and the similarities between ASHA School Survey and this study’s respondents, we considered the sample to be fairly representative of clinicians working in the school setting in the United States.

Survey

Prior to the current study, a 30-item online pilot survey was designed based on the study’s exploratory aims, to be reflective of previous surveys and relevant literature, and for quick and easy responses. It included 20 Likert-style items, each with five response choices (i.e., strongly agree, agree, neutral, disagree, and strongly disagree) and 10 fill-in-the-blank items that addressed certification and work-related information (e.g., degree, school setting). It was completed by 116 SLPs in Texas. Data were analyzed and examined to evaluate the ability of the tool to answer the proposed research questions. In addition, three ASHA-certified SLPs with experience in utilizing classroom-based intervention provided feedback about the survey design and questions. Based on these two sources of input, 20 questions, including three open-ended response items, were added to more effectively ascertain clinicians’ perceptions and usage of an inclusion model. Additionally, several existing questions were reworded, the work-related questions were converted to multiple-choice items for ease of data analysis, and the Likert-scale response format was changed. The SLPs who completed this survey did not participate in the current study.

The resultant 50-item online survey (see Appendix) was accessible to respondents online via a provided link. It contained seven credential and employment-based questions (e.g., degree, certification, school setting), 17 yes/no questions, 21 agree/disagree questions, and one multiple-choice

Table 2. Survey participants' work-related data (*N* = 344).

Work data	Frequency	% Sample
Work setting		
Early childhood/preschool setting	40	12.7
Elementary school setting	129	40.8
Secondary school setting (middle/high school)	45	13.1
Both preschool and elementary schools	49	14.2
Both elementary and secondary schools	53	15.4
Other	28	8.1
No. campuses served		
1	158	45.9
2	95	27.5
3	28	8.1
4	9	2.6
5	6	1.7
6	3	0.9
Caseload size		
0–15	9	1.9
16–30	44	10.5
31–45	90	27.9
46–60	126	36.9
61–75+	78	22.9
No. years working in the public schools		
< 1	15	4.4
2–5	91	26.5
6–10	75	21.8
11–15	56	16.3
16–20	41	11.9
21–25	27	7.8
26–30	21	6.1
31–35	8	2.3
36+	10	2.9
Work status		
Part time	33	9.6
Full time	311	90.4

question. Dichotomous responses (e.g., yes/no, agree/disagree) were utilized instead of Likert-scale items for ease of interpretation and analysis, as items such as “strongly agree” and “agree” are often collapsed for statistical analysis, and depending on the nature of the question, a central response such as “neutral” can be difficult to interpret. Additionally, three free-response, open-ended questions invited participants to list the three things they liked about the inclusion model, the three biggest challenges they faced when providing inclusion services, and the three most important “keys to success” when using an inclusion model. These items were intended to allow respondents to express ideas freely and in greater detail.

Data Analysis and Scoring

The survey data were analyzed using descriptive and nonparametric procedures. Research Questions 1 and 2 were analyzed using descriptive statistics. This method was chosen due to the exploratory nature of the study relative to the small and somewhat older body of existing research investigating public school clinicians' inclusion practices. Research Question 3 was analyzed using logistic regression and nonparametric chi-square analyses. Prior to conducting these analyses, necessary assumptions were checked as recommended by Field (2013). Specifically, there were adequate cell sizes for all chi-square analyses, all observations

were independent, and categories of the categorical variables were mutually exclusive and exhaustive. Likewise for all logistic regression analyses, observations were independent, there were no issues of multicollinearity among independent variables, an adequate sample size was used, and independent variables shared a linear relationship with the log odds. Additionally, Nagelkerke's R^2 was used as an indication of effect size in the logistic regression analyses (Nagelkerke, 1991). Based on guidelines by Draper (2002), .1 was interpreted as a small effect, .3 was interpreted as a medium effect, and .5 was interpreted as a large effect. Additionally, given inequalities in cell sizes and data analysis challenges for the high number of categories in the survey's school setting variable (e.g., early childhood, preschool, elementary), the 10 different settings were collapsed into the five representative categories of preschool, elementary, and secondary, along with combinations of elementary and preschool campuses and of elementary and secondary campuses. This accounted for all but 28 of the respondents who responded with “other,” which was only 8.1% of the sample.

To answer Research Question 4, responses to open-ended questions were downloaded from the survey into an Excel spreadsheet. These items were completed by 286 of the respondents (the remainder did not provide answers). A content analysis (Hsieh & Shannon, 2005) was conducted on all open-ended responses. This iterative process involved

all three authors first carefully analyzing the responses to identify major themes (e.g., teacher collaboration, time constraints). Once these themes were discussed and an initial list was established, the authors independently placed each participant response under the appropriate theme and generated a list of questions as to item best fit and potential adjustments to the themes. Themes were again discussed, relevant literature was reviewed, and consensus was reached on all changes. Then, the responses were tallied in each amended thematic category, and the totals were compared across all three authors. Agreement was reached on most, and then one additional discussion ensued to clarify a select few themes. Finally, frequencies in each theme were tallied a last time, and reliability of scoring was addressed by calculating the total percentage agreement between each of the three authors for each total. Of the 105 percentage agreement values, 88 were between 90% and 100%, with the majority between 97% and 100%. The 17 values that fell between 80% and 89% were for response totals that were considerably smaller (e.g., the percentage agreement between totals of 11 and 12 was 85%). The authors' totals in each theme were then averaged to arrive at a final count that was considered reliably representative of participant responses.

Results

The purpose of the study was to explore public school clinicians' responses to a survey about inclusion practices and perceptions. While most of the survey questions were answered by all 344 participants, the open-ended questions were only answered by 286 respondents. Questions not answered were not included in the analyses, and the total number of responses is provided as necessary in the text and tables with the results.

Training in and Implementation of Inclusion Services

Training in the Inclusion Model

With regard to receiving training in the use of an inclusion model, the respondents ($N = 344$) answered four yes/no questions: 28.8% answered "yes" to receiving training in their university coursework, 43.9% answered "yes" to receiving training via district in-services, 68.3% answered "yes" to receiving training by attending conference presentations, and 27% reported that they had "received no instruction/training in the use of an inclusion model."

Implementation of Inclusion Services

Respondents were asked three agree/disagree questions about serving students via an inclusion model ($N = 344$). Eighty-four percent agreed that they "served some students on their caseload through an inclusion model," 16% agreed that they "served more than half of their caseload through an inclusion model," and 64.5% reported that they "prefer the pullout service delivery model." An additional multiple-response item more specifically addressed the percentage of their caseloads that they served via classroom-based services,

and then a multiple-part yes/no item addressed the disorder areas they treated via an inclusion model. These responses are detailed in Table 3. Over half of the respondents served 1%–25% of their caseload through an inclusion model, and this service delivery model was most frequently utilized to address language and social skills.

Additionally, a multiple-response item addressed how their classroom-based services were implemented (e.g., "When I work with my students via an inclusion model, I most often..."). Thus, 18.3% respondents selected that they teach a lesson to the entire class, 25% selected that they work with a small group of students at the back of the classroom/at a station, 25% selected that they provided support while the teacher taught the lesson, and 7% selected that they worked with their students individually at the back of the room or at their desks.

Perceptions Related to Inclusion Services

In order to explore a variety of perceptions about the inclusion service delivery model and better understand reasons why clinicians may or may not utilize classroom-based services, the survey contained questions that addressed both positive and potentially challenging issues. The percentages of respondents who selected "agree" to the positive statements about inclusion are detailed in Table 4, and the percentages of respondents who selected "agree" with regard to potential challenges are detailed in Table 5. While over half of the clinicians agreed they had "good success," "good teacher support," and "good administrative support," over 60% reported that inclusion was not effective for most of their caseload and agreed that, when implementing inclusion services, they experienced time constraints for planning, would like more planning time with teachers, have limited opportunities for repeated practice of skills, and find it challenging to collect treatment data.

Factors Predicting or Associated With Use and Perceptions of an Inclusion Model

Binary logistic regressions were conducted to predict the odds of using the inclusion model and to predict SLPs' positive and negative perceptions of this form of service delivery with relevant SLP-reported factors including caseload size (i.e., "My caseload size is approximately..."), lack of training (i.e., "I received no training in use of an inclusion model"), teacher factors (i.e., "The teachers I work with like the inclusion model," "I have good teacher support for an inclusion model," and "I have weekly meetings with teachers"), and administrative support (i.e., "I have good administrative support for the use of an inclusion model"). Use of an inclusion model was depicted by the item "I serve some students on my caseload through an inclusion model," an overall positive perception was depicted by the item "I have had good success using an inclusion model," and an overall challenging perception was depicted by the item "The inclusion model is not effective for most of my caseload." Lastly, several chi-square analyses were conducted

Table 3. Percentage of respondents who reported the percentage of their caseload served through and the disorder areas served by an inclusion model ($N = 344$).

Caseload	Frequency	% Sample
The percentage of my caseload that I serve through an inclusion model is:		
0%	41	11.9
1%–25%	218	63.4
26%–50%	44	12.8
51%–75%	20	5.8
76%–99%	10	2.9
100%	11	3.2
I use the inclusion model to provide intervention for the following:		
Language	286	83.1
Social skills/pragmatics	273	79.4
Cognitive aspects of language	215	62.5
Augmentative communication	219	63.7
Articulation	106	30.8
Fluency	58	16.9
Voice	23	6.7
Dysphasia	11	3.2

to explore the relationship between school setting (i.e., pre-school, elementary, secondary, preschool and elementary, and elementary and secondary) and all of the aforementioned factors, as well as between lack of training in the inclusion model and teacher and administrative support.

Factors Predicting Use of an Inclusion Model

A logistic regression was used to predict the odds of SLPs' use of the inclusion model based on the SLP-reported factors (i.e., caseload size, training, teacher support, teachers liking the model, weekly meetings with teachers, and administrative support). Results indicated that the overall model was significant, $\chi^2(6) = 36.61$, $p < .001$, Nagelkerke's $R^2 = .22$, with a small to medium effect size. Inspection of individual predictors indicated that only "administrative support" was a significant predictor of using an inclusion model ($b = 1.70$, $p < .001$, $OR = 5.47$, 95% CI [2.36, 12.70]).

Factors Predicting Positive Perception of an Inclusion Model

A logistic regression was used to predict the odds of SLPs' positive perception of the inclusion model based on

the SLP-reported factors (i.e., caseload size, training, teacher support, teachers liking the model, weekly meetings with teachers, and administrative support). Results indicated that the overall model was significant, $\chi^2(6) = 102.50$, $p < .001$, Nagelkerke's $R^2 = .41$, with a medium to large effect size. Inspection of individual predictors indicated that teacher support ($b = 1.18$, $p < .001$, $OR = 3.24$, 95% CI [1.67, 6.28]), teachers liking the inclusion model ($b = 1.35$, $p < .001$, $OR = 3.88$, 95% CI [2.08, 7.24]), and administrative support ($b = 1.09$, $p < .001$, $OR = 2.96$, 95% CI [1.50, 5.84]) were significant predictors of a positive perception of the inclusion model.

Factors Predicting Negative Perception of an Inclusion Model

A logistic regression was used to predict the odds of SLPs' negative perception of the inclusion model based on SLP-reported factors (i.e., caseload size, teacher support, teachers liking the model, weekly meetings with teachers, and administrative support). Results indicated that the overall model was significant, $\chi^2(6) = 56.82$, $p < .001$, Nagelkerke's $R^2 = .24$, with a small to medium effect size.

Table 4. Percentage of respondents answering "agree" to potentially positive aspects of the inclusion model ($N = 344$).

Survey item	Count	% Sample
I have had good success using an inclusion model.	197	57.3
I have good teacher support for my inclusion services.	217	63.1
Most of the classroom teachers I work with like the SLP inclusion model.	169	49.1
I have good administrative support for the inclusion process.	244	70.9
I have seen an increase in carryover and generalization with the inclusion model.	176	51.2
My treatment data suggest that inclusion services are more effective than pullout therapy.	86	25
Working in the inclusion model can be more effective than pullout therapy.	196	57
When I work within an inclusion model:		
I have weekly meetings with teachers to plan activities and outline responsibilities.	42	12.2
The students on my caseload are active participants in my classroom activities.	226	65.7
I do not typically create a formal lesson plan.	206	59.9

Note. SLP = speech-language pathologist.

Table 5. Percentage of respondents answering “agree” to potential challenges of the inclusion model ($N = 344$).

Challenge	Count	% Sample
The inclusion model is not effective for most of my caseload.	215	62.5
I think the inclusion model requires more preparation than pullout therapy.	194	56.4
Most of the classroom teachers I work with struggle with the inclusion model.	188	54.7
When I work within an inclusion model:		
I experience time constraints to prepare materials/lessons.	246	71.5
I would like more planning time with the teachers for my inclusion lessons.	253	73.5
I have limited opportunities for repeated practice of skills.	209	60.8
I find it challenging to collect treatment data.	210	61.0
I find it challenging to address my students' specific IEP goals.	166	58.0

Note. IEP = Individualized Education Program.

Inspection of individual predictors indicated that teachers not liking the inclusion model ($b = -1.39$, $p < .001$, $OR = 0.25$, 95% CI [0.13, 0.46]) and not having weekly meetings with teachers ($b = -0.91$, $p = .02$, $OR = 0.40$, 95% CI [1.9, 0.86]) were the only significant predictors of a negative perception of the inclusion model.

Relationship of School Setting to Use and Perceptions of Inclusion

Chi-square analyses were utilized to examine the relationship of school setting (i.e., preschool, elementary, secondary, elementary and secondary, and preschool and elementary) to use and perceptions of inclusion. There were no significant differences between school settings with regard to use or positive perception of or good administrative support for an inclusion model. However, there was a significant relationship between school setting and receiving teacher support, $\chi^2(4) = 17.71$, $p = .001$, Cramer's $V = .24$, with a greater proportion of respondents who worked in the preschool setting reporting good teacher support when compared to those working in other settings. The Cramer's V of .24 indicated a large effect (Kim, 2017). Finally, a significantly greater proportion of SLPs working in the elementary school setting reported the inclusion model was not effective for their caseload, $\chi^2(4) = 17.90$, $p = .001$, Cramer's $V = .24$ (large effect), and disagreed that teachers liked the inclusion model, $\chi^2(4) = 19.14$, $p = .001$, Cramer's $V = .25$ (large effect).

Lack of Training in the Inclusion Model

While lack of training was not a significant predictor of use, positive perception, or negative perception of the inclusion model, two additional chi-square analyses were run to explore a potential association between lack of training and perception of teacher and administrative support. For those who responded that they “had received no training,” a significantly smaller proportion agreed that they had “good teacher support,” $\chi^2(4) = 14.22$, $p < .001$, Cramer's $V = .20$ (medium to large effect size), and “good administrative support,” $\chi^2(4) = 9.52$, $p = .002$, Cramer's $V = .17$ (medium effect).

Most Frequently Reported Answers to Free-Response, Open-Ended Questions

Respondents were asked to list “three things you like about the inclusion model,” “three challenges faced when providing inclusion services,” and “the three most important keys to success for implementing classroom-based services.” Frequencies for these responses ($n = 286$) are detailed in Tables 6, 7, and 8. The most frequently reported “things you like” were collaboration and relationships with teachers, observing and working with students in a natural setting, and facilitation of generalization and carryover. The most frequently reported “biggest challenges” were time constraints/planning and preparation time, teacher collaboration and communication, and disruptions in the classroom. The most frequently reported “keys to success” were teacher collaboration, planning and communication, planning and preparation time, and flexibility.

Discussion

The aim of this study was to glean current information about public school clinicians' training in and implementation of inclusion services, perceptions of positive and potentially challenging aspects of this service delivery model, relationships of use and perceptions to caseload size, training, school setting, teacher factors, and/or administrative support, as well as most frequently reported “things you like,” “challenges faced,” and “keys to success” when implementing classroom-based services.

Training in and Implementation of Inclusion Services

Training

Over one fourth of respondents reported having no training in an inclusion model, and a small percentage reported receiving training in their university coursework. In 2011, Brandel and Loeb found that less than 25% of the SLPs they surveyed experienced classroom-based intervention at the elementary school level and even fewer did so at the secondary level during their clinical training. They concluded that, if our graduates are expected to use different service

Table 6. Most frequent answers to “List three things you like about the inclusion model” (*N* = 286).

Answers	No. responses
Collaboration and relationships with teachers/teacher understanding and input	160
Can observe child/skills and work with students in a natural setting (e.g., least restrictive environment)	120
Generalization/carryover are facilitated	118
Therapy is relevant to school success/connects to curriculum/is functional	109
More efficient (e.g., students not pulled out of class, no struggle to transition, can serve more students, less missed class time, less preparation)	60
Social and language skills supported by peer models; increased peer interaction	50
All students are included and can benefit	32
N/A or “don’t know” or a mention of “dislike/nothing” stated in all three columns (count one time per person)	13
Effective	10
Fun/kids like	6

delivery models within the schools, we should provide them with a variety of clinical training experiences accordingly. Furthermore, continuing education is also an important consideration for instruction in classroom-based intervention. Our respondents received training by attending conference presentations and district in-services as did those in Elksnin and Capilouto’s (1994) study, who preferred these means over reading journal articles. In a recent ASHA Convention Program Book (ASHA, 2018), one oral seminar specifically addressed professional collaboration in preschool and elementary settings, and two addressed specific types of therapy (e.g., classroom-based coaching for social issues, vocabulary intervention) administered in a classroom setting. Based on past and present survey findings, conference presentations addressing strategies for establishing teacher relationships, administrative support, and logistics for implementing classroom-based intervention (e.g., time allocation, scheduling) may be most helpful in facilitating the use of this service delivery model (vs. those that provide ideas for in-class lessons).

Implementation

Implementation of an inclusion model can be considered in a variety of ways: use, area of intervention, and

type of classroom instruction. With regard to general use of classroom-based services, many of our respondents served some students on their caseload through an inclusion model, but almost as many preferred the pullout service delivery model. This latter finding supports the continued prevalence of the pullout model reported in the recent ASHA Schools Survey (ASHA, 2016), both of which suggest that classroom-based instruction is still not a forerunner in service delivery choice and inroads are needed if this perspective is to change. With regard to the area of intervention and similar to the findings of Elksnin and Capilouto (1994), inclusion was most frequently utilized to address language and social skills, with fewer respondents using classroom-based intervention to serve children with fluency and voice disorders and dysphasia. Thus, language and social skills may be more amenable to a push-in model, and perhaps therapy for these disorders would be a logical initial focus when establishing this service delivery approach. With regard to the type of instruction provided in the classroom, clinicians were fairly evenly distributed between teaching a lesson to the entire class, working with a small group of students in the classroom, and providing support while the teacher taught the lesson. This was different from the survey findings of Beck and Dennis (1997), who noted that the “one teach, one drift”

Table 7. Most frequent answers to “List the three biggest challenges you face when providing inclusion services” (*N* = 286).

Challenges	No. responses
Time constraints (e.g., for planning, preparation, meeting with teachers)	188
Teacher collaboration/communication/support/understanding/buy-in	122
Classroom disruptions/noise/lack of attention and participation/behavior issues	95
Addressing all IEP goals/meeting students’ needs	86
Student scheduling issues/teacher changes plans	67
Collecting data	55
Limited opportunities for practice/fewer trials	27
No training/no framework/don’t know how it works/lack of inclusion knowledge	11
Materials	10
Lack of administrative support	10
Students hard to group/spread across too many classes	10
Caseload issues (e.g., too large)	10
Feel like a paraprofessional/aide/tutor	9

Note. IEP = Individualized Education Program.

Table 8. Most frequent answers to “List the three most important keys to success for implementing an inclusion model” (*N* = 286).

Key to success	No. responses
Teacher collaboration/planning/communication/buy-in/support	285
Planning time/planning and preparation ahead of time/time	119
Flexibility/adaptability	42
Support from administration	35
SLP's attitude/positivity/buy-in/willingness/perseverance/confidence/open-mindedness	30
Student grouping (e.g., in one classroom) and strategic scheduling	30
Goals/objectives aligned with or incorporated into curriculum/integrated IEPs/co-written goals	28
Student participation/buy-in/cooperation/enjoyment	23
Materials/resources	10
Manageable/smaller caseloads	13
Training	10
Engaging lessons	9
Consistency	9
N/A or “Don’t like” written for all three responses (scored once per respondent)	6

Note. SLP = speech-language pathologist; IEPs = Individualized Education Programs.

model was most frequently used. The choice of instruction could be a function of teacher preference, SLP preference, individual student needs, or classroom environment, and these approaches could be investigated to determine which might be more facilitative to the use of classroom-based intervention.

Perceptions Related to Inclusion Services

Many of our respondents had positive perceptions of inclusion (e.g., good success, teacher support) and agreed they had seen an increase in carryover and generalization with a push-in approach. Similarly, frequently reported positive aspects were collaborating with teachers, relevance to the curriculum, generalization and carryover, intervention in a natural setting, facilitation of social skills, and inclusion of all students. These findings are encouraging and are similar to those from previous studies (Beck & Dennis, 1997; Elksnin & Capilouto, 1994), such that SLP perceptions of inclusion benefits seem to have remained consistent over time.

However, somewhat larger percentages of respondents agreed with potentially challenging perceptions of classroom-based intervention, and clinicians' short answers supported these quantitative data. Concerns included limited planning time, teacher support and understanding, and opportunity for repeated practice of skills, along with challenges due to student scheduling, classroom distractions, and collecting treatment data. These data are similar to those from earlier surveys (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Pershey & Rapping, 2003), indicating that we still have some work to do in overcoming these difficulties.

Factors Related to SLP Perception and Use of an Inclusion Model

Caseload Size

Caseload size was not a significant predictor of use or positive and challenging perceptions of inclusion, which

is similar to the finding by Katz, Fallon, and Maag (2008) that caseload size did not predict level of collaboration. In addition, while caseload size was listed in both the biggest challenge and keys to success of open-ended survey items, the frequencies of these responses were quite small. While caseload size is a significant concern for public school SLPs (ASHA, 2016), perhaps it is not as influential in implementation of inclusive service delivery or perhaps clinicians report time constraints in general over caseload size as the greater challenge.

Training

Training was not a significant predictor of use, positive perception, or negative perception of inclusion, but a lack thereof was related to less teacher and administrative support. In support of the former finding, training was not frequently listed under both biggest challenges and keys to success. Perhaps other challenges to inclusion (e.g., time, collaboration with teachers) were more pressing than the perceived importance of adequate training.

School Setting

With regard to school setting, more SLPs working in the preschool setting reported good teacher support, and significantly more clinicians working in the elementary schools felt the inclusion model was not effective and disagreed that teachers liked it. While not specifically examining the issue of setting in the same way, Elksnin and Capilouto (1994) reported that their participants primarily provided “integrated services” to preschoolers and elementary students, and Brandel and Loeb (2011) found that preschoolers had the highest level of classroom intervention rates. Perhaps preschool environments have more scheduling, classroom, and teacher flexibility than other settings. Since no previous empirical research has examined the role of school setting to the use of classroom-based intervention, future survey or interview studies may be needed to better

determine the nature of the challenges seen in the elementary school setting.

Teacher Factors

Teacher factors were relevant to perception of classroom-based intervention, and teacher collaboration was by far the most frequently reported key to inclusion success. Similarly, teacher support and relationships were also identified as important in the surveys from the 1990s (Beck & Dennis, 1997; Elksnin & Capilouto, 1994). Given their continued importance to the inclusion process, relationships with teachers should be promoted as a means of increasing the use of this service delivery model.

Administrative Support

Good administrative support predicted both use of and success with an inclusion model and was a frequently listed key to success. It was also not frequently listed as a challenge, suggesting that many clinicians felt their administrators were helpful with regard to classroom-based intervention. Pershey and Rapking (2003) suggested that administrative leadership and support were “indispensable” for the success of collaborative service delivery and that “service configurations need to be purposefully designed by collaborative building-level and district-level teams consisting of personnel from regular and special education” (p. 219), again providing a potential focus area to support increased use of push-in services.

Limitations

Several limitations of this study are important to acknowledge. First, an inherent limitation of survey research is the potential for bias. Individuals who choose to respond may not be representative of the overall population, as only those interested in sharing their thoughts and experiences participated. Additionally, responses obtained may not be reflective of participants’ actual practice but instead be affected by their desire to present themselves in the best possible light (Bowling, 2005). To minimize the risk of bias and to increase participation in this study, the rationale for the survey was clearly described, and a web-based survey was utilized to reduce participant burden and assure anonymity. A second limitation was that not all participants completed the entire survey, therefore reducing the amount of data for analysis on several items. Third, we were unable to calculate a survey response rate as our invitation to participate was open-ended via e-mail distributions and ASHA Special Interest Group communities. As a result of this invitation process, many individuals were not reached. Fourth, our survey was exploratory, and while the items were based conceptually on previous surveys and issues represented in the research literature, the questions themselves had no prior established validity and the factors examined may not characterize an exhaustive list of issues with the potential to influence implementation of classroom-based services. Lastly, while we examined representativeness of our sample as best possible, it still may not have been

completely representative of all SLPs across the United States given that the vast majority of respondents were from Texas. Thus, generalizability of the findings to all SLPs across the United States could be somewhat limited.

Despite these limitations, this study provides current SLP perspectives on classroom-based intervention and is based on a larger and more geographically diverse group of participants than other surveys that directly addressed public school SLPs’ inclusion practices in years past (Beck & Dennis, 1997; Elksnin & Capilouto, 1994; Pershey & Rapking, 2003). Our survey supported earlier findings and addressed several new issues that have application to successful implementation of an inclusion model.

IPP Implications

The results of this study have several implications for interprofessional training and practice.

Training

Based on our data, training in classroom-based intervention is lacking for some and reportedly is less prevalent at the university level when compared to conference presentations and district in-services. Thus, university training programs could focus on educating students about service delivery models in undergraduate and graduate coursework and ensure that classroom-based intervention opportunities are provided during clinical experiences. Then, as a field, we need to ensure that school district in-services and conference presentations continue to address inclusion procedures and strategies. School district administrators could make certain that ongoing professional development opportunities are provided for their teachers and clinicians, and those who are successfully doing the work in the field should continue to present ideas and strategies via district in-services and at state and national conventions. While it seems that most practicing clinicians philosophically understand the inclusion service delivery model and its benefits, based on our findings, there still needs to be a stronger link between theory and practice.

Teacher Factors

Given that teacher factors (e.g., collaboration, support) are important to successful classroom-based intervention, this is another area in which change could make a difference. With regard to IPP, change might come in the form of building teacher awareness. Edgar and Ross-Lugo (2007) conducted a survey of school-based SLPs to examine the critical shortage of clinicians in the public schools and found that 58% of their participants reported that other professionals did not understand the role of the SLP. Additionally, Elksnin and Capilouto (1994) found that their survey respondents felt it was important that SLPs’ knowledge and skills were valued by their classroom teachers and vice versa. Ehren (2000) suggested that, with regard to classroom-based therapy, SLPs may have concerns over becoming more like classroom aides and shortchanging students by “watering down” therapy. Beck and Dennis (1997) suggested that “for practicing speech-language pathologists and teachers,

joint in-service workshops addressing the concerns and questions of both groups together may be beneficial toward achieving a greater sense of teamwork” (p. 151). Given that SLPs in the elementary school setting reportedly had less success with inclusion based on our study, this is an important arena for teacher education and building awareness of classroom-based intervention. Perhaps joint in-service workshops and/or an information session led by the SLP could be included during back-to-school meeting times. Practical suggestions that could facilitate teacher–SLP partnerships would be provision of the SLP’s access to teachers’ electronic lesson plans, dedicated co-planning time, definition of the SLP’s role and expertise, explanation of data collection methods and their importance to progress monitoring, and assurance that inclusion is a team effort (and does not imply judgment of abilities by either party).

Planning Time and Administrative Support

While many of our respondents had good administrative support for their inclusion services, more of them agreed that, when implementing inclusion services, they experienced time constraints for planning and would like more planning time with teachers. Perhaps these two issues could be addressed together such that more work could be done to build administrative understanding of the logistical needs for classroom-based intervention, beginning with time, scheduling, and a workload (vs. caseload) approach. Additionally, school-based SLPs are often assigned to noninstructional activities during the week, such as lunch or bus duty, further reducing time for collaboration (ASHA, 2016). Thus, the SLP “leads” or program directors could be involved in facilitating SLP, teacher, and administrative connections, and SLPs could be encouraged to self-advocate with regard to classroom-based instructional issues (e.g., planning time, student scheduling, workload). Zurawski (2014) suggested that “discussions with administrators regarding the importance of SLPs involvement in scheduling and placement of the speech and language impaired caseload must take place for successful implementation to occur. Clustering of students into classes based on several factors includes: exceptionality, minutes, and behavioral concerns, along with potential role models” (p. 7). Similarly, Katz, Maag, Fallon, Blendarn, and Smith (2010) stated that SLPs could argue for administrators to provide support for collaborative practices by allotting time in SLPs’ and teachers’ schedules for planning collaborative sessions, along with supporting and encouraging SLPs’ efforts to participate in continuing education with regard to creating and maintaining positive collaborative relationships. Lastly, advocating for and explaining the logic behind a workload approach may help administrators begin to reconceptualize how students can be served (Meaux & Norris, 2018). Again, these issues might especially need to be addressed in the elementary school setting as inclusion was perceived as less successful there.

Conclusion

The majority of the SLPs we surveyed utilized an inclusion model with some of their caseload and listed many

positive elements of classroom-based instruction. Yet, many of the same challenging perceptions and roadblocks exist just as they did when SLPs were surveyed over 20 years ago. Thus, continued research into factors influencing the implementation of inclusion is warranted to determine if the use of classroom-based intervention is positively influenced by strategies such as clustering caseload students into fewer classes, changes in scheduling (e.g., additional planning time, workload model), provision of teacher in-services, greater continuing education for clinicians, and so forth. Research is also still needed to compare the effectiveness of inclusion versus other service delivery models (e.g., pullout) so that clinicians have greater empirical support for selection of this service delivery model. However, the knowledge that training in the inclusion model, teacher “buy-in,” planning time, and administrative support are relevant to successful classroom-based intervention can help inform change in our IPP moving forward.

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References

- Achilles, J., Yates, R. R., & Freese, J. M. (1991). Perspectives from the field: Collaborative consultation in the speech and language program of the Dallas Independent School District. *Language, Speech, and Hearing Services in Schools*, 22, 154–155.
- American Speech-Language-Hearing Association. (1996). *Inclusive practices for children and youth with communication disorders* [Technical Report]. Available from <http://www.asha.org/policy>
- American Speech-Language-Hearing Association. (2008). *2008 Schools survey: Caseload characteristics*. Rockville, MD: Author.
- American Speech-Language-Hearing Association. (2016). *2016 Schools survey: Caseload characteristics*. Rockville, MD: Author.
- American Speech-Language-Hearing Association. (2017). *Inter-professional Practice Survey Results*. Available from <https://www.asha.org/uploadedFiles/2017-Interprofessional-Practice-Survey-Results.pdf>
- American Speech-Language-Hearing Association. (2018, November). Program of the Annual ASHA Convention, Los Angeles, CA.
- Beck, A. R., & Dennis, M. (1997). Speech-language pathologists’ and teachers’ perceptions of classroom-based interventions. *Language, Speech, and Hearing Services in Schools*, 28, 146–153.
- Bland, L. E., & Prelock, P. A. (1995). Effects of collaboration on language performance. *Journal of Children’s Communication Development*, 17(2), 31–37.
- Blosser, J. (2016). *Strengthening the breadth and depth of your collaboration with school professionals* (Webinar). Rockville Pike, MA: ASHA.
- Boothroyd, R. (2014). Applied implementation research: Addressing the “how” of real world practice. *CREd Library*, March 2014. <https://doi.org/10.1044/cred-pvid-implscid1p3>
- Bowling, A. (2005). Mode of questionnaire administration can have serious effects on data quality. *Journal of Public Health*, 27, 281–291.
- Boyle, J., McCartney, E., Forbes, J., & O’Hare, A. (2007). A randomised controlled trial and economic evaluation of direct

- versus indirect and individual versus group modes of speech and language therapy for children with primary language impairment. *Health Technology Assessment*, 11(25), 1–139.
- Brandel, J., & Loeb, D. F.** (2011). Program intensity and service delivery models in the schools: SLP survey results. *Language, Speech, and Hearing Services in Schools*, 42, 461–490.
- Cirrin, F. M., Schooling, T. L., Nelson, N. W., Diehl, S. F., Diehl, S., Flynn, P. F., ... Adamczyk, D. F.** (2010). Evidence-based systematic review: Effects of different service delivery models on communication outcomes for elementary school-age children. *Language, Speech, and Hearing Services in Schools*, 41, 233–264.
- Creaghead, N.** (1990). Mutual empowerment through collaboration: A new script for an old problem. *Best Practices in School Speech-Language Pathology*, 1, 109–116.
- Draper, S. W.** (2002). *Effect size*. Retrieved from <http://www.psy.gla.ac.uk/~steve/best/effect.html>
- Edgar, D., & Ross-Lugo, L.** (2007). The critical shortage of speech-language pathologists in the public school setting: Features of the work environment that affect recruitment and retention. *Language, Speech, and Hearing Services in Schools*, 38, 31–46.
- Ehren, B.** (2000). Maintaining a therapeutic focus and sharing responsibility for student success: Keys to in-classroom speech-language services. *Language, Speech, and Hearing Services in Schools*, 31, 219–229.
- Elksnin, L., & Capilouto, G.** (1994). Speech-language pathologists' perceptions of integrated service delivery in school settings. *Language, Speech, and Hearing Services in Schools*, 25, 258–267.
- Field, A.** (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). Los Angeles, CA: Sage.
- Hsieh, H.-F., & Shannon, S. E.** (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277–1288.
- Immicke, K.** (2016). Inclusion: Friend or foe? *ASHA Leader*, 21, 8–9.
- Individuals with Disabilities Education Act Amendments of 1997, Pub. L. No. 105-117, 20 U.S.C. § 1400 et seq.
- Katz, L. A., Fallon, K. A., & Maag, A.** (2008, November). *School-based SLPs' collaborative practices in literacy*. Seminar presented at the American Speech-Language-Hearing Association Convention, Chicago, IL.
- Katz, L. A., Maag, A., Fallon, K. A., Blendarn, K., & Smith, M. K.** (2010). What makes a caseload (un)manageable? School-based speech-language pathologists speak. *Language, Speech, and Hearing Services in Schools*, 41, 139–151.
- Kavale, K. A.** (2002). Mainstreaming to full inclusion: From orthogenesis to pathogenesis of an idea. *International Journal of Disability, Development and Education*, 49, 201–214.
- Kim, H.-Y.** (2017). Statistical notes for clinical researchers: Chi-squared test and Fisher's exact test. *Restorative Dentistry and Endodontics*, 42(2), 152–155.
- McGinty, A., & Justice, L.** (2006). Classroom-based versus pullout interventions: A review of the experimental evidence. *EBP Briefs*, 1, 3–25.
- Meaux, A. B., & Norris, J. A.** (2018). Curriculum-based language interventions: What, who, why, where, and how. *Language, Speech, and Hearing Services in Schools*, 49, 165–175.
- Moore-Brown, B. J., & Montgomery, J. K.** (2001). *Making a difference for America's children: Speech-language pathologists in public schools*. Eau Claire, WI: Thinking Publications.
- Nagelkerke, N. J. D.** (1991). A note on a general definition of the coefficient of determination. *Biometrika*, 78(3), 691–692.
- Pershey, M. G., & Rapking, C. I.** (2003). A survey of collaborative speech-language service delivery under large caseload conditions in an urban school district in the United States. *Journal of Speech-Language Pathology and Audiology*, 27(4), 211–220.
- Throneburg, R. N., Calvert, L. K., Sturm, J. J., Paramboulas, A. A., & Paul, P. J.** (2000). A comparison of service delivery models: Effects on curricular vocabulary skills in the school setting. *American Journal of Speech-Language Pathology*, 9, 10–20.
- Westby, C. E., Watson, S., & Murphy, M.** (1994). The vision of full inclusion: Don't exclude kids by including them. *Journal of Childhood Communication Disorders*, 16, 13–22.
- Zurawski, L. P.** (2014). Speech-language pathologists and inclusive service delivery: What are the first steps. *SIG 16 Perspectives on School-Based Issues*, 15(1), 5–14.

Appendix (p. 1 of 4)

Survey

Inclusion Survey

This Texas Woman's University Institutional Review Board–approved survey is anonymous and will ask for no personal information such as your name, address, phone number, school name, or e-mail address. The return of your completed survey constitutes your informed consent to act as a participant in this research, and there is no penalty if you choose to not answer any of the questions below.

General information

My degree is

1 – Bachelor's 2 – Master's 3 – PhD

I am a

1 – Certified Speech/Language Pathologist

2 – Certified Speech/Language Pathology Assistant

3 – Other

The number of years I've worked in the public schools is (select one)

1. 0–1 year
2. 2–5 years
3. 6–10 years
4. 11–15 years
5. 16–20 years
6. 21–25 years
7. 26–30 years
8. 31–35 years
9. 36–40 years
10. 41+ years

The percentage of my caseload I serve through an inclusion model is approximately (select one)

1. 0%
2. 1%–25%
3. 26%–50%
4. 51%–75%
5. 76%–99%
6. 100%

I work

1 – Part time 2 – Full time

My caseload size is approximately

1. 0–15
2. 16–30
3. 31–45
4. 46–60
5. 61–75
6. 76–90
7. 91–105
8. 105–120
9. 120+

Appendix (p. 2 of 4)

Survey

I work in (select one)

- 1 – the elementary school setting (which can include one or more elementary schools)
- 2 – the middle/intermediate school setting (which can include one or more middle schools)
- 3 – the high school setting (which can include one or more high schools)
- 4 – the preschool setting (which can include one or more preschools)
- 5 – the elementary school setting AND the middle/intermediate school setting
- 6 – the middle/intermediate school setting AND the high school setting
- 7 – the elementary school setting AND the preschool setting
- 8 – the elementary school setting AND the high school setting
- 9 – the early childhood special education setting
- 10 – the early childhood special education and one additional setting
- 11 – Other

I *most often* use the inclusion model to serve (select one)

- 1 – Preschool/Pre-K students
- 2 – Early Childhood Special Education students
- 3 – Elementary–general ed students
- 4 – Middle School–general ed students
- 5 – High School–general ed students
- 6 – Elementary–life skills students
- 7 – Middle School–life skills students
- 8 – High School–life skills students
- 9 – Not applicable

Appendix (p. 3 of 4)**Survey**

Please respond with: 1 – yes 2 – no

I use the inclusion model to provide intervention for the following:

Articulation	1	2
Language	1	2
Cognitive aspects of language	1	2
Social skills/behavior/pragmatics	1	2
Augmentative communication	1	2
Hearing impairment	1	2
Fluency	1	2
Voice	1	2
Dysphasia	1	2
I have received no instruction/training in the use of an inclusion model.	1	2
I received instruction in use of the inclusion model in my college coursework.	1	2
I have received training in use of the inclusion model via district in-services.	1	2
I have received instruction in use of the inclusion model by attending conference presentations.	1	2
I serve some students on my caseload through an inclusion model.	1	2
More than half of my caseload is served through an inclusion model.	1	2
I can describe an inclusion model.	1	2
I prefer the pullout service delivery model.	1	2
My district requires the use of an inclusion model.	1	2

When I work with my students via an inclusion model, I MOST OFTEN (please select one)

1. teach the lesson to the entire class.
2. work with a small group of students in the back of the room/via station teaching.
3. work with one student in the back of the room or at his/her desk.
4. provide support in the classroom while the teacher presents the lesson.
5. Not applicable.

Please respond with: 1 – Agree 2 – Disagree

Most of the classroom teachers I work with like the SLP inclusion model.	1	2
I have good teacher support for my inclusion services.	1	2
I have had good success utilizing an inclusion model.	1	2
I find I have more behavioral challenges with inclusion versus pullout services.	1	2
The inclusion model is not effective for most of my caseload.	1	2
I have good administrative support for the inclusion process.	1	2
Working in the inclusion model can be more effective than pullout therapy.	1	2
I have seen an increase in carryover and generalization with the inclusion model.	1	2
Most of the classroom teachers I work with struggle with the inclusion model.	1	2
My treatment data suggest that inclusion services are more effective than pullout therapy.	1	2
I think the inclusion model requires more preparation than pullout therapy.	1	2

Appendix (p. 4 of 4)**Survey**

When I work within an inclusion model:

I have weekly meetings with teachers to plan activities and outline responsibilities.	1	2
I create and provide a lesson plan for the inclusion session to the teacher.	1	2
I do not typically create a formal lesson plan.	1	2
I experience time constraints to prepare materials/lessons.	1	2
I would like more planning time with the teachers for my inclusion lessons.	1	2
I have limited opportunities for repeated practice of skills.	1	2
The teacher is typically not involved in the planning of my lessons.	1	2
I find it challenging to collect treatment data.	1	2
The students on my caseload are active participants in my classroom activities.	1	2
I find it challenging to address my students' specific IEP goals.	1	2

Please list three things you like about inclusion service delivery.

Please list the three biggest challenges you face when providing inclusion services.

Please list the three most important "keys to success" for using an inclusion model (e.g., what makes it work?).

Thank you so much for taking the time to complete this anonymous survey!
