



Analysis of Parent Survey Data Addressing

Part B SPP/APR Indicator #8

Bureau of Indian Education

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For the Bureau of Indian Education

June 2011

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SECTION 1

EXECUTIVE SUMMARY

In accordance with federal reporting requirements mandated by the U.S. Department of Education, Office of Special Education Programs (OSEP) under the Individuals with Disabilities Education Act, the Bureau of Indian Education (BIE) must report annually on 20 performance indicators related to the provision of special education services to children ages 3-21. This report presents findings of a survey conducted by the BIE to address Indicator #8, the percent of parents with a child receiving special education services who reported that schools facilitated parent involvement as a means of improving services and results for children with disabilities.

The survey administered by the BIE consisted of a 25-item rating scale, the Schoolsq Efforts to Partner with Parents Scale (SEPPS), developed and validated by the National Center for Special Education Accountability Monitoring (NCSEAM). Demographic items addressing the studentsq race/ethnicity, grade, and primary exceptionality were also included. A total of

6,976 surveys were distributed to 174 sites; 4,014 surveys were returned from 152 sites for an overall response rate of 57.54%. The number of returned surveys exceeds the minimum number required for an adequate confidence level based on established survey sample guidelines (e.g., <http://www.surveysystem.com/sscalc.htm>). The data set submitted for analysis contained no personally identifiable information on the respondents.

Data from the rating scale were analyzed through the Rasch measurement framework. The analysis produces a measure for each survey respondent on a scale from 0 to 1,000. Each measure reflects the extent to which the parent indicated that schools facilitated that parentsq involvement. The measures of all respondents were averaged to yield a mean measure reflecting the overall performance of the BIE sites in regard to schoolsq facilitation of parent involvement.

OSEP requires that statesq performance be reported as the *percent* of parents who report that schools facilitated their involvement. Deriving a percent from a continuous

distribution requires application of a standard, or cut-score. The BIE elected to apply the standard recommended by a nationally representative stakeholder group convened by NCSEAM. The recommended standard, established based on item content expressed in the scale, was operationalized as a measure of 600. Thus, the percent of parents who report that schools facilitated their involvement was calculated as the percent of parents with a measure of 600 or above on the SEPPS.

The following points represent the major findings related to Indicator #8.

1. BIE Mean Measure on the SEPPS

The BIE mean measure on the SEPPS is 583, with a standard deviation of 139. The standard error of the sample mean is 2.2. The 95% confidence interval for the sample mean is 579.0 . 587.6. This means that there is a 95% likelihood that the true value of the Bureau-level mean is within this range.

Descriptively, a mean measure of 583 indicates that schools are facilitating parent involvement in many ways. For example, approximately 94%-95% of parents of students receiving special education services at BIE sites agreed (with over 50% agreeing strongly or very strongly) with statements to the effect that teachers are available to speak with parents, parents are considered equal partners with teachers and other professionals in planning their child's program, and all of the parents' concerns and recommendations were documented on the IEP. In other respects, schools' facilitation of parent involvement is less consistent. Parents expressed weaker agreement . with approximately 86%-90% agreeing overall, and 36%-47% expressing strong or very strong agreement - with statements to the effect that teachers and administrators show sensitivity to the needs of students with disabilities, teachers and administrators seek out parent input, and schools explain what options parents have if they disagree with a decision of the school. In still other areas, schools have even greater room for improvement. Only 74%-82% of parents of students with disabilities at BIE sites agreed (and

only 31%-35% agreed strongly or very strongly) with statements to the effect that parents were given information about organizations that offer support for parents of students with disabilities, schools offer parents training about special education issues, and parents were given information on agencies that can assist with transition from school.

2. BIE Percent on Indicator #8

The percent of parents who reported that schools facilitated parent involvement, calculated as the percentage of respondents with a SEPPS measure at or above the adopted standard of 600, is 38%. The standard error of the sample percentage is 0.8%. The 95% confidence interval for the sample percentage is 36.8% - 39.8%. This means that there is a 95% likelihood that the true value of the Bureau percentage is between 36.8% and 39.8%.

Descriptively, a parent with a measure at or above 600 would have a very high likelihood (95% or greater) of having agreed with the item that calibrates at 600 (see Section 5 for an explanation of item calibrations, and Table 11 for SEPPS item calibration values). In other words, a parent with a measure of 600 would typically have expressed strong or very strong agreement with all the items having calibrations at or below 600, and would have expressed simple agreement with items having higher calibrations. Close to two-fifths of parents of students with disabilities served at BIE sites had measures high enough to support the claim that schools facilitate parent involvement at the level deemed desirable and appropriate by the BIE.

SECTION 2

METHOD

Federal Requirements

Lead Agencies under Part B of the Individuals with Disabilities Education Improvement Act (IDEA 2004) are currently required to report data annually addressing 20 key performance indicators. Each Lead Agency was required to submit a State Performance Plan (SPP) to OSEP detailing its plan to collect data addressing the 20 indicators, as well as baseline data and targets for each indicator. State-level performance on the indicator must be reported annually. Districts with an average daily membership (ADM) of 50,000 or more must be included in each year's data collection. Data addressing each district's performance on the indicator must be collected at least once in the 6-year period of the SPP.

Survey Administration

The surveys were printed double-sided on letter-size paper in English and included modified race and primary exceptionality demographic items. The survey also included the Paperwork Reduction Act Statement and OMB Control Number 1040-0001.

Each site was responsible for distributing surveys to all of their parents of students with disabilities. Site distribution methodologies included mailing surveys, sending surveys home with students, administering surveys during home visits, and handing out surveys at meetings/gatherings. Surveys were distributed in mid-March 2011. Sites were asked to return surveys by May 9, 2011. Once data collection efforts were concluded, sites shipped completed surveys directly to Piedra Data Services (PDS) for processing.

A total of 6,976 surveys were distributed to 174 sites; 4,014 surveys were returned from 152 sites for an overall response rate of 57.54%. The number of returned surveys exceeds the minimum number required for an adequate confidence level based on established survey sample guidelines (e.g., <http://www.surveysystem.com/sscalc.htm>).

Survey Instrument

The SchoolsqEfforts to Partner with Parents Scale (SEPPS) was developed by the National Center for Special Education Accountability Monitoring (NCSEAM) to provide states with a valid and reliable instrument for measuring the extent to which parents perceive that schools facilitate their involvement. Potential items to measure schoolsqfacilitation of parent involvement, as well as other aspects of parentsqinvolvement with and perceptions about special education services, were developed with substantial input from parents and other key stakeholders across the country. A full description of the development of the item content is available at www.accountabilitydata.org.

As part of its National Item Validation Study, NCSEAM collected data from a nationally representative sample of over 2,500 parents of children receiving special education services. Results of NCSEAMs data analyses supported the high reliability and validity of the SEPPS. Additionally, the study yielded a large bank of items that could be used to measure schoolsq facilitation of parent involvement. It was determined that a reliability of .90 or above could be achieved with 25 items. NCSEAM provided states with an appropriate 25-item set that represented the full range of available items.

Standard

The BIE elected to apply the standard recommended by NCSEAM as a way of deriving the percent to be reported on Indicator #8, based on the distribution of measures on the SEPPS.

To establish a recommended standard, NCSEAM convened a group of nationally representative stakeholders, including parents of children with disabilities, state directors of special education, state early intervention coordinators, district and program personnel, advocates, attorneys, and community representatives. Participants were invited to examine a

set of items from the SEPPS, laid out in their calibration order (see Table 11). The items towards the bottom of the scale, with lower calibrations, are items that parents tend to agree with most. The items towards the top of the scale, with higher calibrations, are items that parents tend to agree with least. Because of the robust structure of the scale, a parent who agrees with a given statement will have a very high likelihood of agreeing, or agreeing even more strongly, with all the items below it on the scale.

The consensus of the stakeholder group was that schools could only be said to have adequately facilitated parent involvement if parents agreed with all the items on the scale up to, and including, the item, "The school explains what options parents have if they disagree with a decision of the school." The metric of the SEPPS is such that to achieve this level of agreement, parents would have to have a measure of 600 or above. Thus, states adopting the recommended standard would calculate their percentage on Indicator #8 as the percent of parents with measures at or above 600 on the SEPPS.

SECTION 3

CHARACTERISTICS OF THE SAMPLE

This section describes characteristics of the obtained sample of 4,014 survey respondents. Table 1 presents the distribution of the sample by racial/ethnic group. As expected, the overwhelming majority of respondents identified themselves as American Indian/Alaskan Native.

Table 1. Distribution of Race/Ethnicity in the Sample		
Race/Ethnicity	N	Percentage*
American Indian or Alaskan Native	3,377	84%
Black/African American	11	<1%
Native Hawaiian or other Pacific Islander	184	5%
White	23	<1%
Hispanic	1	<1%
Multi-racial/More than one race	301	8%
Missing	117	3%

Table 2 presents the distribution of the sample by studentsqgrade level.

Table 2. Distribution of Grade Level in the Sample		
Grade Level	N	Percentage*
Pre-Kindergarten	7	<1%
Kindergarten . Grade 5	2,020	50%
Grades 6 . 8	929	23%
Grades 9 . 12+	930	23%
Missing	128	3%

* Percentages have been rounded and may not sum to exactly 100%.

Table 3 presents the distribution of the sample by students' primary exceptionalities.

Table 3. Distribution of Primary Exceptionality in the Sample		
Primary Exceptionality	N	Percentage*
Autism	64	2%
Deaf Blindness	2	<1%
Deafness	3	<1%
Developmental Delay	312	8%
Emotional Disturbance	129	3%
Hearing Impairment	28	<1%
Mental Retardation	130	3%
Multiple Disabilities	78	2%
Orthopedic	7	<1%
Other Health	219	6%
Specific Learning Disability	1,451	36%
Speech or Language Impairment	769	19%
Traumatic Brain Injury	14	<1%
Visual Impairment	10	<1%
More than one disability	344	9%
Missing	454	11%

* Percentages have been rounded and may not sum to exactly 100%.

SECTION 4

RESULTS PERTAINING TO MEASURES ON THE SEPPS AND BIE

SITES' PERFORMANCE ON INDICATOR #8

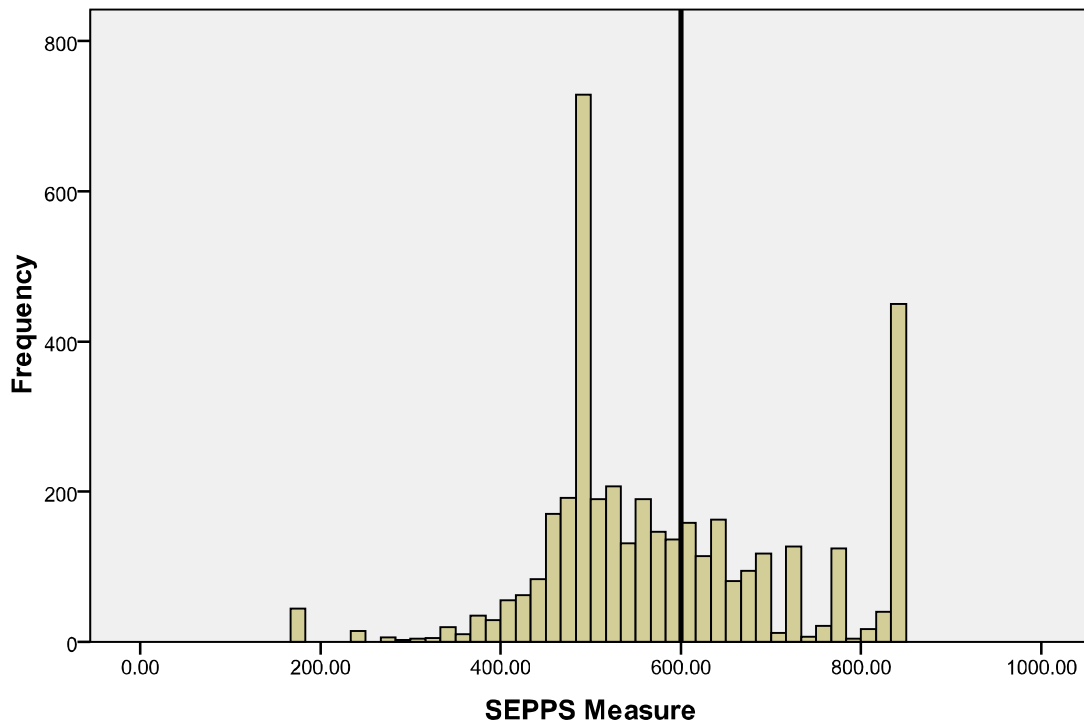
4.1. Distribution of the SEPPS Measures

The results described in this section are based on the 4,014 respondents 3,988 of whom provided sufficient data to estimate a measure on the SEPPS. The properties of the distribution of SEPPS measures for the sample of 3,988 respondents are shown in Table 4 below. The sample mean was 583. The standard deviation of measures was 139, indicating that the average distance of measures from the mean measure was 139 units. The standard error of the sample mean, that is, the expected error of the sample mean in estimating the true population mean for BIE sites, was 2.2. The 95% confidence interval for the true population mean for BIE sites extended from 579.0 to 587.6, indicating that we are 95% confident that the true population mean for parents of students served at BIE sites lies somewhere in the range of 579.0 to 587.6.

Table 4. Properties of SEPPS Measures			
Sample Mean	Standard Deviation	Standard Error of the Sample Mean	95% Confidence Interval for the Population Mean
583	139	2.2	579.0 to 587.6

The distribution of SEPPS measures obtained for the 3,988 respondents is shown in Figure 1. Each bar represents the number of respondents who had a measure at a particular value. The black line corresponds to a measure of 600, applied as the standard. As seen in the graph, most parents had measures below the standard value of 600.

Figure 1. Distribution of SEPPS Measures



The distribution of measures approximates a normal distribution, with the exception of an unexpectedly high number of respondents with measures at the positive end of the scale (represented by the high bars at the extreme right and left of the graph). These individuals responded in the "very strongly agree" category to each and every item. When individuals fail to make any distinction among items that are known to have different levels of agreeability, they are said to display a "response set," that is, a uniform way of responding that makes it hard to judge whether the responses are authentic or are, in effect, a way of complying with the task that does not really provide useful information. This phenomenon should be taken into consideration when interpreting the findings.

4.2. Interpretation of the Mean SEPPS Measure

Descriptively, a mean measure of 583 indicates that schools are facilitating parent involvement in many ways. For example, approximately 94%-95% of parents of students receiving special education services at BIE sites agreed (with over 50% agreeing strongly or very strongly) with statements to the effect that teachers are available to speak with parents, parents are considered equal partners with teachers and other professionals in planning their child's program, and all of the parents' concerns and recommendations were documented on the IEP.

In other respects, schools' facilitation of parent involvement is less consistent. Parents expressed weaker agreement . with approximately 86%-90% agreeing overall, and 36%-47% expressing strong or very strong agreement - with statements to the effect that teachers and administrators show sensitivity to the needs of students with disabilities, teachers and administrators seek out parent input, and schools explain what options parents have if they disagree with a decision of the school.

In still other areas, schools have even greater room for improvement. Only 74%-82% of parents of students with disabilities at BIE sites agreed (and only 31%-35% agreed strongly or very strongly) with statements to the effect that parents were given information about organizations that offer support for parents of students with disabilities, schools offer parents training about special education issues, and parents were given information about options their child will have after high school.

For reference, the frequency distribution of responses to all the items in the SEPPS is provided in Appendix A.

4.3. BIE Performance on Indicator #8: Percent of Parents at or above the Standard

The percentage of parents of a child receiving special education services who reported that schools facilitated parent involvement as a means of improving services and results for children with disabilities, calculated as the percentage of respondents with a SEPPS measure that met or exceeded the standard of 600, was 38%. Table 5 presents statistical information relevant to the percentage of respondents at or above the standard of 600.

Table 5. Percent of Parents at or above the Standard		
Percent at or above the Standard Value of 600	Standard Error of the Sample Percentage	95% Confidence Interval for Population Percentage
38% (1,529 of 3,988 met criterion)	0.8%	36.8% - 39.8%

The standard error of the sample percentage, that is, the expected error of the sample percentage in estimating the true percentage of measures at or above the standard in the population of parents whose children are served at BIE sites, equaled 0.8%. Equations for computing the standard error of the sample percentage can be found in Moore & McCabe, 1998, p. 382.

The 95% confidence interval for the population percentage ranged from 36.8% to 39.8%. Confidence intervals for percentages, in contrast to confidence intervals for means, are asymmetrical. The asymmetric confidence interval reported here is the interval proposed by Wilson (1927), and is described in greater detail in Agresti (1996) and Penfield (2003).

4.4. Percent of Parents at or above the Standard by Racial/Ethnic Category

Table 6 presents the percentage of respondents with measures that met or exceeded the standard, by racial/ethnic category. When considering these data, it is important to bear in mind that the sampling plan was not designed to yield a representative sample of parents *within* each racial/ethnic category. Therefore, the data are presented for illustrative purposes only.

Table 6. Percent of Parents at or above Standard by Racial/Ethnic Category				
Race/Ethnicity	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
American Indian or Alaskan Native	3,377	1,285	38%	36% - 40%
Black/African American	11	5	45%	21% - 72%
Native Hawaiian or other Pacific Islander	184	73	40%	33% - 47%
White	23	14	61%	41% - 78%
Hispanic	1	1	100%	--
Multi-racial/More than one race	301	126	42%	36% - 48%
Missing	91	25	27%	19% - 37%

4.5. Percent of Parents at or above the Standard by Student's Grade

Table 7 presents the percentage of parents meeting or exceeding the standard of 600 as a function of their child's grade level. Grades were grouped into four meaningful categories, so that moderate sample sizes would exist in each category. The four categories are as follows: (a) Pre-Kindergarten, (b) Kindergarten to Grade 5, (c) Grade 6 to Grade 8, and (d) Grade 9 to Grade 12. As seen in the table, the percentage meeting or exceeding the standard of 600 was higher for parents of students in grades K-5 than for parents of students in grades 6-12.

Table 7. Percent of Parents at or above Standard by Grade Category				
Grade Category	N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Pre-Kindergarten	7	2	29%	8% - 64%
Kindergarten . Grade 5	2,020	860	43%	40% - 45%
Grades 6 . 8	929	332	36%	33% - 39%
Grades 9 . 12+	930	297	32%	29% - 35%
Missing	102	38	37%	28% - 47%

4.6. BIE Performance on Indicator #8 by Part B vs. 619 Administration

Table 8 presents the percentage of parents at or above the standard of 600, separately for children ages 3-5 receiving services under Section 619 and students 6-21 receiving services under Part B, along with the associated 95% confidence intervals for the true population percentages.

Table 8. Percent of Parents at or above Standard by Part B Administration				
Grade Category	N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
619 Preschool (PK)	7	2	29%	8% - 64%
Part B School Age (KG-12+)	3,879	1,489	38%	37% - 40%

4.7. Percent of Parents at or above the Standard by Students' Primary Exceptionality

Table 9 presents the percentage of parents meeting or exceeding the standard of 600 as a function of their child's primary exceptionality. It should be noted that owing to the small number of students in some of the categories, the confidence intervals are very large, meaning that the percentage given may not be a very accurate estimate of the true percentage for that category.

Table 9. Percent of Parents at or above Standard by Primary Exceptionality				
Student's Primary Exceptionality	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Autism	64	27	42%	31% - 54%
Deaf-Blindness	2	0	0%	--
Deafness	3	0	0%	--
Developmental Delay	312	145	46%	41% - 52%
Emotional Disturbance	129	42	33%	25% - 41%
Hearing Impairment	28	12	43%	27% - 61%
Mental Retardation	130	56	43%	35% - 52%
Multiple Disabilities	78	33	42%	32% - 53%
Orthopedic	7	6	86%	49% - 97%
Other Health	219	82	37%	31% - 44%
Specific Learning Disability	1,451	532	37%	34% - 39%
Speech or Language Impairment	769	317	41%	38% - 45%
Traumatic Brain Injury	14	7	50%	27% - 73%
Visual Impairment	10	5	50%	24% - 76%
More than one disability	344	138	40%	35% - 45%
Missing	428	127	30%	26% - 34%

4.8. Percent of Parents at or above the Standard by Site

Table 10 presents the percentage of parents meeting or exceeding the standard of 600 as a function of the BIE site where their child is served. As mentioned with regard to the breakdown by primary exceptionality, the small number of students per site means that these percentages should be interpreted with caution.

Table 10. Percent of Parents at or above Standard by Site				
Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Ahfachkee Day School	7	5	71%	36% - 92%
Alamo Navajo School	50	20	40%	28% - 54%
American Horse School	22	10	45%	27% - 65%
Aneth Community School	16	7	44%	23% - 67%
Atsa` Biya`a`zh Community	10	2	20%	6% - 51%
Baca/Dlo'Azhi Community School	32	6	19%	9% - 35%
Beatrice Rafferty School	16	12	75%	51% - 90%
Beclabito Day School	8	2	25%	7% - 59%
Blackwater Community School	17	13	76%	53% - 90%
Bogue Chitto Elementary	24	2	8%	2% - 26%
Bread Springs Day School	6	2	33%	10% - 70%
Bug-O-Nay-Ge-Shig School	36	16	44%	30% - 60%
Casa Blanca Community School	23	7	30%	16% - 51%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Ch'ooshgai Community School (Chuska)	38	29	76%	61% - 87%
Chemawa Indian School	5	1	20%	4% - 62%
Cherokee Central Elementary School	45	12	27%	16% - 41%
Cherokee Central High School	37	7	19%	9% - 34%
Cheyenne-Eagle Butte School	127	44	35%	27% - 43%
Chi Chil Tah (Jones Ranch Community School)	2	2	100%	--
Chief Leschi School (Puyallup)	43	24	56%	41% - 70%
Chilchinbeto Community School	12	3	25%	9% - 53%
Chitimacha Tribal School	14	13	93%	69% - 99%
Choctaw Central High School	66	14	21%	13% - 33%
Choctaw Central Middle School	18	6	33%	16% - 56%
Circle of Life Survival School	26	7	27%	14% - 46%
Circle of Nations-Wahpeton Indian Boarding School	12	7	58%	32% - 81%
Coeur d'Alene Tribal School	9	6	67%	35% - 88%
Conehatta Elementary	49	34	69%	55% - 80%
Cottonwood Day School	13	1	8%	1% - 33%
Crazy Horse School	45	23	51%	37% - 65%
Crow Creek Reservation High School	19	4	21%	9% - 43%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Crow Creek Sioux Tribal Elementary School	19	6	32%	15% - 54%
Crystal Boarding School	5	3	60%	23% - 88%
Dennehotsso Boarding School	22	6	27%	13% - 48%
Dibe Yazhi Hablti'n O'lt'a Inc. (Borrego Pass)	9	3	33%	12% - 65%
Dilcon Community School Inc.	17	9	53%	31% - 74%
Dishchii'bikoh Community School	14	10	71%	45% - 88%
Duckwater Shoshone Elementary	3	1	33%	6% - 79%
Dunseith Day School	36	17	47%	32% - 63%
Dzilth-Na-O-Dith-Hle Community School	28	6	21%	10% - 40%
Enemy Swim Day School	17	11	65%	41% - 83%
First Mesa Elementary School	20	8	40%	22% - 61%
Flandreau Indian School	38	8	21%	11% - 36%
Fond du Lac Ojibwe School	42	24	57%	42% - 71%
Gila Crossing Community School	65	6	9%	4% - 19%
Greasewood Springs Community School	15	4	27%	11% - 52%
Greyhills Academy High School	52	17	33%	22% - 46%
Hanaa'dli School/Dormitory Inc. (Huerfano)	3	2	67%	21% - 94%
Hopi Jr./Sr. High School	31	14	45%	29% - 62%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Hotevilla Bacavi Community School	6	3	50%	19% - 81%
Hunters Point Boarding School	7	1	14%	3% - 51%
Indian Island School	17	9	53%	31% - 74%
Indian Township School	25	6	24%	11% - 43%
Isleta Elementary School	22	8	36%	20% - 57%
Jemez Day School	17	8	47%	26% - 69%
John F. Kennedy Day School	18	7	39%	20% - 61%
Joseph K. Lumsden Bahweting Anishinabe School	8	5	63%	31% - 86%
Kaibeto Boarding School	21	8	38%	21% - 59%
Kayenta Community School	39	10	26%	15% - 41%
Keams Canyon Elementary School	10	2	20%	6% - 51%
Kickapoo Nation School	4	1	25%	5% - 70%
Kin Dah Lichi'i Olta	15	10	67%	42% - 85%
Lac Courte Oreilles Ojibwe School	39	12	31%	19% - 46%
Laguna Elementary School	33	20	61%	44% - 75%
Laguna Middle School	30	5	17%	7% - 34%
Leupp Schools Inc.	32	11	34%	20% - 52%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Little Eagle Day School (Sitting Bull School)	11	8	73%	43% - 90%
Little Singer Community School	12	4	33%	14% - 61%
Little Wound Day School	65	24	37%	26% - 49%
Loneman Day School	7	4	57%	25% - 84%
Lower Brule Tribal School	52	16	31%	20% - 44%
Lukachukai Community School	20	12	60%	39% - 78%
Lummi High School	19	4	21%	9% - 43%
Lummi Tribal School	50	12	24%	14% - 37%
Mandaree Day School	31	5	16%	7% - 33%
Many Farms High School	54	15	28%	18% - 41%
Mariano Lake Community School	20	7	35%	18% - 57%
Marty Indian School	37	8	22%	11% - 37%
Menominee Tribal School	17	4	24%	10% - 47%
Mescalero Apache School	42	15	36%	23% - 51%
Meskwaki Settlement School	28	17	61%	42% - 76%
Miccosukee Indian School	8	2	25%	7% - 59%
Moencopi Day School	19	11	58%	36% - 77%
Muckleshoot Tribal School	23	7	30%	16% - 51%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Na`Neelzhinn Ji`Olta (Torreon) Day School	19	7	37%	19% - 59%
Nay-Ah-Shing School	19	15	79%	57% - 91%
Nenahnezah Community School	17	0	0%	--
Noli Indian School	11	11	100%	--
Northern Cheyenne Tribal School	9	4	44%	19% - 73%
Ojo Encino Day School	19	5	26%	12% - 49%
Oneida Nation Tribal School	43	9	21%	11% - 35%
Paschal Sherman Indian School	19	13	68%	46% - 85%
Pearl River Elementary School	75	38	51%	40% - 62%
Pierre Indian Learning Center	8	2	25%	7% - 59%
Pine Hill School	42	10	24%	13% - 39%
Pine Ridge School	72	21	29%	20% - 41%
Pine Springs Day School	7	3	43%	16% - 75%
Porcupine Day School	41	20	49%	34% - 64%
Pueblo Pintado Community School	20	9	45%	26% - 66%
Quileute Tribal School	24	7	29%	15% - 49%
Red Water Elementary School	27	22	81%	63% - 92%
Riverside Indian School	40	8	20%	10% - 35%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Rock Creek Day School	20	13	65%	43% - 82%
Rocky Ridge Boarding School	11	4	36%	15% - 65%
Rough Rock Community School	35	11	31%	19% - 48%
Salt River Elementary School	33	10	30%	17% - 47%
San Felipe Pueblo Elementary School	34	12	35%	21% - 52%
San Ildefonso Day School	5	0	0%	--
San Simon School	17	6	35%	17% - 59%
Santa Clara Day School	6	2	33%	10% - 70%
Santa Fe Indian School	26	14	54%	35% - 71%
Santa Rosa Boarding School	16	4	25%	10% - 49%
Santa Rosa Ranch School	21	14	67%	45% - 83%
Seba Dalkai Boarding School	13	3	23%	8% - 50%
Second Mesa Day School	16	10	63%	39% - 82%
Sequoyah High School	21	17	81%	60% - 92%
Sherman Indian High School	18	2	11%	3% - 33%
Shiprock Northwest High School	23	11	48%	29% - 67%
Shonto Preparatory School	29	12	41%	26% - 59%
Shoshone-Bannock School	4	2	50%	15% - 85%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Sky City Community School	32	14	44%	28% - 61%
St. Francis Indian School	45	10	22%	13% - 36%
St. Stephens Indian School	31	10	32%	19% - 50%
Standing Pine Elementary School	27	24	89%	72% - 96%
Standing Rock Community School	29	16	55%	38% - 72%
T'iis Nazbas Community School (Teecnospos)	15	2	13%	4% - 38%
T'iis Ts'ozi Bi'olta' (Crownpoint) Community School	38	16	42%	28% - 58%
T'siya Elementary and Middle School	9	5	56%	27% - 81%
Takini School	20	10	50%	30% - 70%
Taos Day School	15	2	13%	4% - 38%
Tata Topa Elementary School	37	24	65%	49% - 78%
Theodore Jamerson Elementary School	22	13	59%	39% - 77%
Theodore Roosevelt School	2	1	50%	9% - 91%
Tiospa Zina Tribal School	28	13	46%	30% - 64%
Tiospaye Topa School	23	15	65%	45% - 81%
Tohaali' Community School (Toadlena)	30	10	33%	19% - 51%
Tohono O'odham High School	11	3	27%	10% - 57%

Table 10. Percent of Parents at or above Standard by Site

Site	Total N	N at or above the Standard Value of 600	Percent at or above the Standard Value of 600	95% Confidence Interval for the Population Percentage
Tonalea (Red Lake) School	19	10	53%	32% - 73%
Tuba City Boarding School	91	30	33%	24% - 43%
Tucker Elementary School	21	5	24%	11% - 45%
Turtle Mountain Community Elementary School	107	43	40%	31% - 50%
Turtle Mountain Community High School	84	21	25%	17% - 35%
Turtle Mountain Community Middle School	56	16	29%	18% - 41%
Twin Buttes Day School	3	1	33%	6% - 79%
Two Eagle River School	9	2	22%	6% - 55%
Wah-He-Lut Indian School	16	10	63%	39% - 82%
White Shield School	22	4	18%	7% - 39%
Wide Ruins Community School	9	7	78%	45% - 94%
Wingate Elementary School	63	28	44%	33% - 57%
Wingate High School	52	9	17%	9% - 30%
Wounded Knee Elementary School	12	5	42%	19% - 68%
Yakama Nation Tribal School	9	2	22%	6% - 55%

SECTION 5

THE RASCH MEASUREMENT FRAMEWORK

The measurement approach used by NCSEAM, known as the Rasch framework, applies a series of parametric models to estimate the properties of each survey item and each respondent in a way that places individuals and items on a common metric (Bond & Fox, 2001; Fischer & Molenaar, 1995; Rasch, 1960; Wright & Masters, 1982). The Rasch approach offers many advantages over typical approaches to survey development. First, it is possible to test whether the items administered belong together, that is, whether they are all related to the construct that the scale is supposed to measure. Ongoing confirmation of the fit of the items helps to maintain the quality of the measurement system. It is also possible to test whether the response categories are operating in the expected fashion. Often, the way in which respondents actually use the response categories does not correspond to the equidistant way in which they are laid out on paper. Extreme categories (e.g., ~~very strongly disagree~~) are sometimes used so infrequently that it makes sense to combine them with an adjacent, less extreme, category (~~very strongly disagree~~/~~strongly disagree~~).

Second, it is possible to determine where each item is located on the measurement ruler. The item's location is referred to as the item's ~~calibration~~. Typically, items in a test or survey are not all equal with respect to the amount of the attribute or quality that the items are measuring. It has been empirically demonstrated, in fact, that items in the SEPPS scale are not all of equal agreeability. Items range from those that are most likely to draw agree responses to those that are least likely to draw agree responses. Highly agreeable items have low calibrations; less agreeable items have higher calibrations. Table 11 displays the SEPPS items in calibration order. The item, ~~At the IEP meeting, we discussed accommodations and modifications that my child would need,~~ which calibrated at 490, was the most agreeable item

in this item set. The item, %was given information about options my child will have after high school+which calibrated at 673, was the least agreeable item in the item set.

Table 11. SEPPS Items in Calibration Order	
Item Calibration	Item
673	I was offered special assistance (such as child care) so that I could participate in the Individualized Educational Program (IEP) meeting.
653	The school offers parents training about special education issues.
647	I was given information about organizations that offer support for parents of students with disabilities.
634	The school provides information on agencies that can assist my child in the transition from school.
600	The school explains what options parents have if they disagree with a decision of the school.
591	I have been asked for my opinion about how well special education services are meeting my child's needs.
581	The school gives parents the help they may need to play an active role in their child's education.
573	Written justification was given for the extent that my child would not receive services in the regular classroom.
570	The school gives me choices with regard to services that address my child's needs.
564	At the IEP meeting, we discussed how my child would participate in statewide assessments.
561	The school offers parents a variety of ways to communicate with teachers.
550	The school communicates regularly with me regarding my child's progress on IEP goals.
544	Teachers and administrators seek out parent input.
533	Teachers and administrators show sensitivity to the needs of students with disabilities and their families.
528	Teachers and administrators ensure that I have fully understood the Procedural Safeguards [the rules in federal law that protect the rights of parents].
526	Teachers and administrators encourage me to participate in the decision-making process.
523	The school has a person on staff who is available to answer parents' questions.
513	All of my concerns and recommendations were documented on the IEP.
511	Teachers treat me as a team member.
507	I am considered an equal partner with teachers and other professionals in planning my child's program.
505	My child's evaluation report is written in terms I understand.
505	Written information I receive is written in an understandable way.
504	Teachers and administrators respect my cultural heritage.
492	Teachers are available to speak with me.
490	At the IEP meeting, we discussed accommodations and modifications that my child would need.

The fact that items have highly stable calibrations (agreeability levels) regardless of the population that is asked to respond to the items is a very important attribute of well-constructed measurement scales. This stability means that items with similar calibrations are, for all intents and purposes, interchangeable. As an example, this is why the SAT is the same test each time it is administered, even though it contains different items each time. The score achieved on any particular version of the SAT is comparable to the score achieved on any other version. Thus, a state can change some of the items on the survey from year to year, and still have validly comparable SEPPS measures across successive years. Guidelines for creating comparable item sets are available at: www.accountabilitydata.org.

Third, a Rasch analysis condenses information from a person's responses to all the items in a scale into a single number. That number is the person's measure on the scale. Since the Rasch framework puts measures on the same metric as item calibrations, a person's measure on a scale can be meaningfully interpreted in terms of the items on the scale. A person with a higher measure is expressing more agreement with items, overall, than a person with a lower measure. When SEPPS measures from a representative sample of parents are aggregated, the average value represents a reliable and highly interpretable measure of the extent to which schools are facilitating parent involvement.

Fourth, a Rasch analysis yields an estimate of the reliability of both the calibration values (related to the items) and the measures (related to people's responses). Scientific approaches to measurement require that the amount of error, or imprecision, in the system be estimated, so that interpretations based on the measures can take this into consideration.

For a more detailed explanation of these concepts, please refer to Bond and Fox (2001) and Wright and Masters (1982).

SECTION 6

PSYCHOMETRIC PROPERTIES OF THE SEPPS

6.1. Psychometric Properties of SEPPS Measures

The quality of a measurement instrument, and by implication the usefulness of inferences drawn from measures derived from the instrument, is assessed in terms of two characteristics of the instrument, namely, reliability and validity. The reliability of the obtained SEPPS measures pertains to the extent to which a particular individual would be expected to attain the same SEPPS measure if the SEPPS were administered to the individual multiple times. That is, reliability concerns the stability of the SEPPS measure¹ (Crocker & Algina, 1986; Lord, 1980; Traub, 1994). Validity, on the other hand, concerns the extent to which the scale actually measures the intended attribute, in this case, schools' facilitation of parent involvement.² The validity of the SEPPS measures can be evaluated using numerous approaches, several of which are described below.

Statistics used to express measurement reliability range from 0 (indicating lack of any stability) to 1 (indicating perfect stability). The reliability of the SEPPS measures for the BIE sample was measured in the Rasch framework to be .89, indicating a high level of stability in the obtained SEPPS measures. An alternative approach to estimating the reliability of the SEPPS measures is to employ Cronbach's alpha, which makes no assumptions about the fit of the responses to any particular model (Cronbach's alpha is based on the simpler true score model, and is commonly used in the behavioral sciences as a model-free index of reliability). The value of Cronbach's alpha was .98, which is consistent with the value obtained from the Rasch

¹ A definition of reliability that is more theoretically accurate describes reliability as the extent to which a given respondent's score is determined by random error versus his or her true level of the trait being measured; low reliability coincides with a high level of measurement error, and high reliability coincides with a low level of measurement error (Crocker & Algina, 1986; Lord, 1980; Traub, 1994).

² This definition of validity is a simplification of the definition now endorsed by the technical measurement community. The contemporary definition of validity describes it as the extent to which evidence and theory support the interpretations of the scale scores entailed by the proposed use of the scale (AERA/APA/NCME, 1999; Osterlind, 2006). That is, the validity of the SEPPS measures is based on how much evidence we have that the measures support the intended purposes of the use of the measures. In the case of measures used to address system accountability, we will want to ascertain whether use of the measures leads to correct decisions (e.g., about need for intervention) at the state and district levels.

analysis. These results suggest that the measures obtained from the SEPPS contain relatively little error, and thus serve as stable measures of the underlying construct (i.e., schools' facilitation of parent involvement).

Support for the validity of the measures obtained by the SEPPS comes from several lines of evidence. First, items for the SEPPS were developed in consultation with multiple groups of individuals, including parents, school personnel, district-level administrators, and advocates, with direct and extensive experience related to schools' efforts to encourage parent involvement and to ensure that parents are active participants in decision-making related to their child's education. Subsequent review of the items by expert panels, researchers, and NCSEAM's Parent/Family Involvement Workgroup confirmed that the item content maps onto the intended content domain of the SEPPS. Second, dimensionality analysis (i.e., principal components analysis and factor analysis) indicates that the items of the SEPPS are all measuring one primary construct, which is likely the intended one, i.e., schools' facilitation of parent involvement. The results of the dimensionality analyses are presented in Winsteps output displayed in Appendix C. A third line of evidence is related to a characteristic of items known as discrimination. The high discrimination indices of the SEPPS items (see Table 12, below) indicate that the items are providing useful information concerning the construct that is intended to be measured. All of these types of evidence support the claim that the measures obtained using the SEPPS are valid.

6.2. Psychometric Properties of the SEPPS Items

To better understand the properties of the items included in the SEPPS (i.e., which items are located either low or high on the trait scale and which items seem to work well versus those that may require revision), several aspects of each item can be examined. The results of the Rasch analysis provide information concerning two aspects of the items. The first is the location of each item with respect to the underlying construct being measured, specifically, what overall

level of endorsement of school efforts is required to provide a positive endorsement of the item. The second relates to how well the item fits the measurement model, in other words, how accurate the Rasch model is in describing the properties of the item.

Table 12, below, gives the calibration of each item (previously presented in Table 11 above), along with indices of the items fit to the Rasch model. The column labeled %item Calibration provides the value of the location parameter of the item. The higher the value of the item calibration, the greater the level of overall endorsement of schools efforts to facilitate parent involvement that is required to provide an agreeable response to the item (i.e., a response of agree, strongly agree, or very strongly agree). The %infit and %outfit columns provide two measures of how well the Rasch model fits the responses provided to each item. In general, values of 1.0 indicate very good fit. Values approaching 2, or less than 0.5, suggest poorer fit (Bond & Fox, 2001). Only one item, Item #2 (was offered special assistance, such as child care, so that I could participate in the IEP meeting) exhibited less than ideal levels of fit.

Table 12. Calibration, Fit, and Discrimination of the SEPPS Items				
Item	Item Calibration	Infit	Outfit	Discrimination
1	507	0.81	1.24	0.72
2	673	1.95	2.14	0.65
3	564	0.84	0.99	0.72
4	490	0.85	1.00	0.73
5	513	0.63	0.74	0.75
6	573	1.12	1.55	0.68
7	647	1.32	1.33	0.73
8	591	0.79	0.78	0.76
9	505	0.63	0.74	0.76
10	505	0.66	0.78	0.76
11	492	0.81	0.87	0.75
12	511	0.67	0.67	0.76
13	544	0.61	0.64	0.77
14	533	0.66	0.75	0.77
15	526	0.58	0.63	0.77
16	504	0.75	1.06	0.73
17	528	0.56	0.58	0.77
18	523	0.73	0.97	0.76
19	550	0.58	0.59	0.77
20	570	0.55	0.54	0.79
21	653	1.37	1.38	0.71
22	561	0.68	0.69	0.77
23	581	0.64	0.64	0.78
24	634	1.12	1.13	0.74
25	600	0.76	0.77	0.77

The rightmost column of the table presents an index of discrimination for each item, calculated as the corrected item-total correlation coefficient. The values in this column are all relatively high (≥ 0.65), indicating that each item is discriminating well between respondents who had more positive versus more negative perceptions of schoolsqfacilitation of parent involvement.

While Item #2 displays a less than ideal level of fit, it nevertheless has a strong discrimination index, which provides evidence that it is a useful item. Therefore, this item appears to be measuring the intended construct relatively well, but is not a very good fit for the

Rasch framework, which employs specific assumptions concerning the properties of the items. The poor fit of Item #2 makes this item a possible candidate for revision and/or replacement in future administrations of the SEPPS.

Table 13 is provided to assist in interpretation of the item calibrations in relation to the observed distribution of responses to items for parents in the sample (Appendix A). The table displays the observed percentage of responses in (a) any of the three agree categories (A=agree, SA=strongly agree, VSA=very strongly agree) and (b) only the strongly and very strongly agree categories for each of the items. As seen in the table, the percentage of agree responses is highest for items with the lowest calibrations. Conversely, the percentage of agree responses is lowest for items with the highest calibrations. The percentage of responses in the two strongest categories of agreement ranged from 26% to 51%; the percentage of responses in any of the agree categories ranged from 70% to 95%.

The fact that the rank ordering of items by the percentage of agree responses does not correspond exactly to the rank ordering by item calibration is expected, based on the measurement model and the calibration methodology that were applied (see Section 7).

Table 13. SEPPS Item Calibrations, Observed Percentage of Responses in the Strongly Agree/Very Strongly Agree Categories, and Observed Percentage of Responses in Any Agree Category				
Item #	Item Calibration	% SA/VSA	% A/SA/VSA	Item
4	490	52%	95%	At the IEP meeting, we discussed accommodations and modifications that my child would need.
11	492	52%	94%	Teachers are available to speak with me.
16	504	50%	95%	Teachers and administrators respect my cultural heritage.
9	505	50%	95%	My child's evaluation report is written in terms I understand.
10	505	50%	95%	Written information I receive is written in an understandable way.
1	507	50%	94%	I am considered an equal partner with teachers and other professionals in planning my child's program.

Table 13. SEPPS Item Calibrations, Observed Percentage of Responses in the Strongly Agree/Very Strongly Agree Categories, and Observed Percentage of Responses in Any Agree Category

Item #	Item Calibration	% SA/ VSA	% A/SA/ VSA	Item
12	511	50%	93%	Teachers treat me as a team member.
5	513	51%	95%	All of my concerns and recommendations were documented on the IEP.
18	523	45%	93%	The school has a person on staff who is available to answer parents' questions.
15	526	48%	92%	Teachers and administrators encourage me to participate in the decision-making process.
17	528	48%	93%	Teachers and administrators ensure that I have fully understood the Procedural Safeguards.
14	533	47%	90%	Teachers and administrators show sensitivity to the needs of students with disabilities.
13	544	46%	90%	Teachers and administrators seek out parent input.
19	550	47%	91%	The school communicates regularly with me regarding my child's progress on IEP goals.
22	561	40%	88%	The school offers parents a variety of ways to communicate with teachers.
3	564	42%	89%	At the IEP meeting, we discussed how my child would participate in statewide assessments.
20	570	43%	91%	The school gives me choices with regard to services that address my child's needs.
6	573	37%	85%	Written justification was given for the extent that my child would not receive services.
23	581	41%	90%	The school gives parents the help they may need to play an active role in their child's education.
8	591	47%	90%	I have been asked for my opinion about how well the special education services my child receive are meeting my child's needs.
25	600	36%	86%	The school explains what options parents have if they disagree with a decision of the school.
24	634	35%	82%	The school provides information on agencies that can assist my child in the transition from school.
7	647	35%	80%	I was given information about organizations that offer support for parents of students with disabilities.
21	653	31%	74%	The school offers parents training about special education issues.
2	673	29%	70%	I was offered special assistance (such as child care) so that I could participate in the Individualized Educational Program (IEP) meeting.

SECTION 7

CALIBRATION METHODOLOGY

The Rasch calibrations were conducted using the Winsteps software program. The original six-category response structure was reduced to a three-category response structure by collapsing the bottom three categories (very strongly disagree, strongly disagree, disagree) into one category, and the top two categories (strongly agree, very strongly agree) into a single category. The rationale for combining the categories was based on two factors: (a) low response rates (i.e., < 5%) in the extreme categories, making their corresponding threshold parameter estimates relatively unstable, and (b) the extreme category threshold estimates were not far enough apart to indicate that the distinct categories served to meaningfully distinguish between individuals having substantially different levels of the trait being measured.

The SEPPS was calibrated using the Rating Scale Model (Wright & Masters, 1982). An initial calibration was conducted with all item parameters freed, and on a standard metric (mean = 0 and 1 scale unit per logit). The resulting item location parameter estimates were then correlated with the values obtained by Dr. William P. Fisher, Jr., consultant to NCSEAM, on a larger multi-state database for the same items. The resulting correlation was 0.98, indicating a very strong linear relationship between the locations of the items for the BIE sample and the larger multi-state sample. In addition, the structure of the two thresholds was very similar to that obtained in the multi-state calibration. As a result of the nearly perfect relationship between the initial BIE calibration and the multi-state calibration, a second calibration of the BIE data was conducted in which all item location parameters and threshold values were fixed to the values obtained in the multi-state analysis (the values of the fixed parameters are documented in the Winsteps control file shown in Appendix B). The purpose of fixing the item parameter values to the multi-state analysis values was to set the metric of the items such that the resulting item and person location measures are on an equivalent metric with the multi-state analysis, thus

permitting an exact comparison of the BIE results to those of other states employing a Rasch calibration.

It should be noted that in the multi-state calibration, efforts were taken to ensure that at a measure of 600 there would be a 95% chance of observing an agreeable response (agree, strongly agree, or very strongly agree) on the item that the national stakeholder group convened by NCSEAM identified as the threshold item for the recommended standard (Item #25, "The school explains what options parents have if they disagree with a decision of the school"). Specifically, the values of the threshold parameters were established so that a respondent with a measure of 600 would have a .95 likelihood of having an agreeable response to the item.

The control file used in the current analysis of the SEPPS is given in Appendix B. The pertinent output related to the properties of each item on the SEPPS scale is given in Appendix C.

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APPENDIX A: RESPONSE FREQUENCIES BY ITEM

Q1 - I am considered an equal partner with teachers and other professionals in planning my child's program.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	53	1.3	1.3	1.3
	Strongly Disagree	42	1.0	1.1	2.4
	Disagree	135	3.4	3.4	5.8
	Agree	1770	44.1	44.6	50.4
	Strongly Agree	938	23.4	23.6	74.0
	Very Strongly Agree	1034	25.8	26.0	100.0
	Total	3972	99.0	100.0	
Missing	System	42	1.0		
Total		4014	100.0		

Q2 - I was offered special assistance (such as child care) so that I could participate in the Individualized Educational Program (IEP) meeting.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	153	3.8	4.1	4.1
	Strongly Disagree	101	2.5	2.7	6.8
	Disagree	856	21.3	23.0	29.9
	Agree	1517	37.8	40.8	70.7
	Strongly Agree	557	13.9	15.0	85.6
	Very Strongly Agree	534	13.3	14.4	100.0
	Total	3718	92.6	100.0	
Missing	System	296	7.4		
Total		4014	100.0		

Q3 - At the IEP meeting, we discussed how my child would participate in statewide assessments.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	63	1.6	1.6	1.6
	Strongly Disagree	44	1.1	1.1	2.7
	Disagree	328	8.2	8.4	11.1
	Agree	1818	45.3	46.5	57.6
	Strongly Agree	824	20.5	21.1	78.6
	Very Strongly Agree	836	20.8	21.4	100.0
	Total	3913	97.5	100.0	
Missing	System	101	2.5		
Total		4014	100.0		

Q4 - At the IEP meeting, we discussed accommodations and modifications that my child would need.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	46	1.1	1.2	1.2
	Strongly Disagree	30	.7	.8	1.9
	Disagree	128	3.2	3.2	5.2
	Agree	1705	42.5	43.2	48.4
	Strongly Agree	973	24.2	24.7	73.0
	Very Strongly Agree	1064	26.5	27.0	100.0
	Total	3946	98.3	100.0	
Missing	System	68	1.7		
Total		4014	100.0		

Q5 - All of my concerns and recommendations were documented on the IEP.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	48	1.2	1.2	1.2
	Strongly Disagree	29	.7	.7	1.9
	Disagree	131	3.3	3.3	5.3
	Agree	1732	43.1	43.7	49.0
	Strongly Agree	931	23.2	23.5	72.5
	Very Strongly Agree	1089	27.1	27.5	100.0
	Total	3960	98.7	100.0	
Missing	System	54	1.3		
Total		4014	100.0		

Q6 - Written justification was given for the extent that my child would not receive services in the regular classroom.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	59	1.5	1.5	1.5
	Strongly Disagree	51	1.3	1.3	2.9
	Disagree	457	11.4	11.9	14.8
	Agree	1852	46.1	48.3	63.1
	Strongly Agree	705	17.6	18.4	81.5
	Very Strongly Agree	709	17.7	18.5	100.0
	Total	3833	95.5	100.0	
Missing	System	181	4.5		
Total		4014	100.0		

Q7 - I was given information about organizations that offer support for parents of students with disabilities.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	82	2.0	2.1	2.1
	Strongly Disagree	74	1.8	1.9	4.0
	Disagree	622	15.5	16.0	20.0
	Agree	1734	43.2	44.6	64.5
	Strongly Agree	679	16.9	17.4	82.0
	Very Strongly Agree	701	17.5	18.0	100.0
	Total	3892	97.0	100.0	
Missing	System	122	3.0		
Total		4014	100.0		

Q8 - I have been asked for my opinion about how well the special education services my child receives are meeting my child's needs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	67	1.7	1.7	1.7
	Strongly Disagree	47	1.2	1.2	2.9
	Disagree	292	7.3	7.4	10.3
	Agree	1703	42.4	43.1	53.4
	Strongly Agree	872	21.7	22.1	75.5
	Very Strongly Agree	966	24.1	24.5	100.0
	Total	3947	98.3	100.0	
Missing	System	67	1.7		
Total		4014	100.0		

Q9 - My child's evaluation report is written in terms I understand.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	45	1.1	1.1	1.1
	Strongly Disagree	26	.6	.7	1.8
	Disagree	109	2.7	2.7	4.5
	Agree	1824	45.4	45.9	50.4
	Strongly Agree	899	22.4	22.6	73.1
	Very Strongly Agree	1070	26.7	26.9	100.0
	Total	3973	99.0	100.0	
Missing	System	41	1.0		
Total		4014	100.0		

Q10 - Written information I receive is written in an understandable way.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	44	1.1	1.1	1.1
	Strongly Disagree	25	.6	.6	1.7
	Disagree	117	2.9	3.0	4.7
	Agree	1800	44.8	45.5	50.2
	Strongly Agree	927	23.1	23.4	73.6
	Very Strongly Agree	1046	26.1	26.4	100.0
	Total	3959	98.6	100.0	
Missing	System	55	1.4		
Total		4014	100.0		

Q11 - Teachers are available to speak with me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	66	1.6	1.7	1.7
	Strongly Disagree	27	.7	.7	2.3
	Disagree	144	3.6	3.6	6.0
	Agree	1671	41.6	42.1	48.0
	Strongly Agree	855	21.3	21.5	69.5
	Very Strongly Agree	1210	30.1	30.5	100.0
	Total	3973	99.0	100.0	
Missing	System	41	1.0		
Total		4014	100.0		

Q12 - Teachers treat me as a team member.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	60	1.5	1.5	1.5
	Strongly Disagree	32	.8	.8	2.3
	Disagree	188	4.7	4.8	7.1
	Agree	1688	42.1	42.9	50.1
	Strongly Agree	829	20.7	21.1	71.1
	Very Strongly Agree	1135	28.3	28.9	100.0
	Total	3932	98.0	100.0	
Missing	System	82	2.0		
Total		4014	100.0		

Q13 - Teachers and administrators: -seek out parent input.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	83	2.1	2.1	2.1
	Strongly Disagree	36	.9	.9	3.0
	Disagree	265	6.6	6.7	9.7
	Agree	1735	43.2	44.0	53.8
	Strongly Agree	820	20.4	20.8	74.6
	Very Strongly Agree	1000	24.9	25.4	100.0
	Total	3939	98.1	100.0	
Missing	System	75	1.9		
Total		4014	100.0		

Q14 - Teachers and administrators: -show sensitivity to the needs of students with disabilities and their families.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	84	2.1	2.1	2.1
	Strongly Disagree	48	1.2	1.2	3.4
	Disagree	262	6.5	6.7	10.0
	Agree	1707	42.5	43.4	53.4
	Strongly Agree	819	20.4	20.8	74.2
	Very Strongly Agree	1015	25.3	25.8	100.0
	Total	3935	98.0	100.0	
Missing	System	79	2.0		
Total		4014	100.0		

Q15 - Teachers and administrators: -encourage me to participate in the decision-making process.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	56	1.4	1.4	1.4
	Strongly Disagree	39	1.0	1.0	2.4
	Disagree	205	5.1	5.2	7.6
	Agree	1761	43.9	44.5	52.1
	Strongly Agree	850	21.2	21.5	73.5
	Very Strongly Agree	1047	26.1	26.5	100.0
	Total	3958	98.6	100.0	
Missing	System	56	1.4		
Total		4014	100.0		

Q16 - Teachers and administrators: -respect my cultural heritage.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	53	1.3	1.3	1.3
	Strongly Disagree	24	.6	.6	2.0
	Disagree	105	2.6	2.7	4.6
	Agree	1789	44.6	45.4	50.1
	Strongly Agree	820	20.4	20.8	70.9
	Very Strongly Agree	1147	28.6	29.1	100.0
	Total	3938	98.1	100.0	
Missing	System	76	1.9		
Total		4014	100.0		

Q17 - Teachers and administrators: -ensure that I have fully understood the Procedural Safeguards [the rules in federal law that protect the rights of parents].

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	64	1.6	1.6	1.6
	Strongly Disagree	23	.6	.6	2.2
	Disagree	179	4.5	4.5	6.7
	Agree	1808	45.0	45.6	52.3
	Strongly Agree	836	20.8	21.1	73.4
	Very Strongly Agree	1056	26.3	26.6	100.0
	Total	3966	98.8	100.0	
Missing	System	48	1.2		
Total		4014	100.0		

Q18 - The school: -has a person on staff who is available to answer parents' questions.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	65	1.6	1.7	1.7
	Strongly Disagree	34	.8	.9	2.5
	Disagree	196	4.9	5.0	7.5
	Agree	1884	46.9	47.9	55.4
	Strongly Agree	814	20.3	20.7	76.1
	Very Strongly Agree	941	23.4	23.9	100.0
	Total	3934	98.0	100.0	
Missing	System	80	2.0		
Total		4014	100.0		

Q19 - The school: -communicates regularly with me regarding my child's progress on IEP goals.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	66	1.6	1.7	1.7
	Strongly Disagree	39	1.0	1.0	2.7
	Disagree	232	5.8	5.9	8.6
	Agree	1731	43.1	44.0	52.5
	Strongly Agree	849	21.2	21.6	74.1
	Very Strongly Agree	1021	25.4	25.9	100.0
	Total	3938	98.1	100.0	
Missing	System	76	1.9		
Total		4014	100.0		

Q20 - The school: -gives me choices with regard to services that address my child's needs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	56	1.4	1.4	1.4
	Strongly Disagree	48	1.2	1.2	2.7
	Disagree	267	6.7	6.8	9.5
	Agree	1849	46.1	47.2	56.6
	Strongly Agree	816	20.3	20.8	77.4
	Very Strongly Agree	885	22.0	22.6	100.0
	Total	3921	97.7	100.0	
Missing	System	93	2.3		
Total		4014	100.0		

Q21 - The school: -offers parents training about special education issues.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	117	2.9	3.0	3.0
	Strongly Disagree	94	2.3	2.4	5.5
	Disagree	802	20.0	20.8	26.3
	Agree	1657	41.3	43.1	69.4
	Strongly Agree	568	14.2	14.8	84.2
	Very Strongly Agree	609	15.2	15.8	100.0
	Total	3847	95.8	100.0	
Missing	System	167	4.2		
Total		4014	100.0		

Q22 - The school: -offers parents a variety of ways to communicate with teachers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	62	1.5	1.6	1.6
	Strongly Disagree	57	1.4	1.5	3.0
	Disagree	340	8.5	8.7	11.7
	Agree	1875	46.7	47.9	59.7
	Strongly Agree	768	19.1	19.6	79.3
	Very Strongly Agree	809	20.2	20.7	100.0
	Total	3911	97.4	100.0	
Missing	System	103	2.6		
Total		4014	100.0		

Q23 - The school: -gives parents the help they may need to play an active role in their child's education.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	74	1.8	1.9	1.9
	Strongly Disagree	43	1.1	1.1	3.0
	Disagree	286	7.1	7.3	10.3
	Agree	1894	47.2	48.5	58.8
	Strongly Agree	757	18.9	19.4	78.2
	Very Strongly Agree	851	21.2	21.8	100.0
	Total	3905	97.3	100.0	
Missing	System	109	2.7		
Total		4014	100.0		

Q24 - The school: -provides information on agencies that can assist my child in the transition from school.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	79	2.0	2.1	2.1
	Strongly Disagree	66	1.6	1.7	3.8
	Disagree	538	13.4	14.2	18.0
	Agree	1792	44.6	47.2	65.2
	Strongly Agree	633	15.8	16.7	81.9
	Very Strongly Agree	688	17.1	18.1	100.0
	Total	3796	94.6	100.0	
Missing	System	218	5.4		
Total		4014	100.0		

Q25 - The school: -explains what options parents have if they disagree with a decision of the school.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	96	2.4	2.5	2.5
	Strongly Disagree	58	1.4	1.5	4.0
	Disagree	377	9.4	9.7	13.6
	Agree	1967	49.0	50.5	64.1
	Strongly Agree	629	15.7	16.1	80.2
	Very Strongly Agree	770	19.2	19.8	100.0
	Total	3897	97.1	100.0	
Missing	System	117	2.9		
Total		4014	100.0		

APPENDIX B: WINSTEPS CONTROL FILE

```
&INST ; THIS FILE MUST BE SAVED AS ASCII DOS TEXT BEFORE USE WITH WINSTEPS
Title="BIE 2011 partnership scale: Equated to William Fisher's calibration"
ITEM1=2
DELIMITER=TAB ;           specifies a tab as a delimiter
;FITI=7
;FITP=7
ITLEN=10 ;max length of item label
LCONV=0.0001
RCONV=0.001
RESCOR=2
NEWSCR="111233"
DATA=C:\Users\Valued Customer\Documents\Consulting\IndianAffairs\2011\Data1.TXT ; Name of
data file
NI=25
XWIDE = 1
CODES = "123456"

;ISELECT=E
IAFILE=*
1 507
2 673
3 564
4 490
5 513
6 573
7 647
8 591
9 505
10 505
11 492
12 511
13 544
14 533
15 526
16 504
17 528
18 523
19 550
20 570
21 653
22 561
23 581
24 634
25 600
*
SAFILE=*
  2 = -128.28
  3 = 14.28
*
NAME1 = 1; Column containing person name
NAMLEN = 15; Length of person name
PRCOMP=S
UDECIM=1
UMEAN=553
USCALE=54.105
CFILE=*
1 VS/S/Disagree
2 Agree
3 S/VSAgree
*
CSV=S
HLINES=N
IFILE=ItemStats.sav ;Name of file containing item-level statistics
PFILE=PersonStats.sav ;Name of file containing person-level statistics
REALSE=Y
TABLES=1110000001001100000000100011
&END
q1
```

q2
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q25
END NAMES

EACH '#' IS 42.

TABLE 3.1 BIE 2011 partnership scale: Equated to ZOU202WS.TXT Jun 15 16:46 2011
 INPUT: 4014 PERSONS 25 ITEMS MEASURED: 3988 PERSONS 25 ITEMS 3 CATS 3.66.0

SUMMARY OF 3430 MEASURED (NON-EXTREME) PERSONS

	RAW SCORE	COUNT	MEASURE	REAL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	55.3	24.5	551.03	25.95	.90	-.8	.92	-.7
S.D.	11.5	1.5	98.32	10.69	.52	2.1	.67	2.0
MAX.	74.0	25.0	767.96	70.24	3.76	6.6	9.90	7.1
MIN.	4.0	3.0	236.42	18.80	.05	-5.2	.05	-5.2
REAL RMSE	28.07	ADJ.SD	94.23	SEPARATION	3.36	PERSON RELIABILITY	.92	
MODEL RMSE	25.82	ADJ.SD	94.87	SEPARATION	3.67	PERSON RELIABILITY	.93	
S.E. OF PERSON MEAN = 1.68								

MAXIMUM EXTREME SCORE: 514 PERSONS
 MINIMUM EXTREME SCORE: 44 PERSONS
 LACKING RESPONSES: 26 PERSONS
 VALID RESPONSES: 98.1%

SUMMARY OF 3988 MEASURED (EXTREME AND NON-EXTREME) PERSONS

	RAW SCORE	COUNT	MEASURE	REAL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	57.3	24.5	583.28	36.32				
S.D.	12.9	1.5	138.56	27.54				
MAX.	75.0	25.0	836.36	101.19				
MIN.	4.0	3.0	169.34	18.80				
REAL RMSE	45.58	ADJ.SD	130.84	SEPARATION	2.87	PERSON RELIABILITY	.89	
MODEL RMSE	44.42	ADJ.SD	131.24	SEPARATION	2.95	PERSON RELIABILITY	.90	
S.E. OF PERSON MEAN = 2.19								

PERSON RAW SCORE-TO-MEASURE CORRELATION = .93 (approximate due to missing data)
 CRONBACH ALPHA (KR-20) PERSON RAW SCORE RELIABILITY = .98 (approximate due to missing data)

SUMMARY OF 25 MEASURED (NON-EXTREME) ITEMS

	RAW SCORE	COUNT	MEASURE	REAL ERROR	INFIT		OUTFIT	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	9142.7	3916.1	555.12	1.91	.83	-5.9	.93	-2.8
S.D.	623.4	59.4	52.12	.18	.32	7.1	.36	7.0
MAX.	9774.0	3973.0	673.00	2.67	1.95	9.9	2.14	9.9
MIN.	7417.0	3718.0	490.00	1.75	.55	-9.9	.54	-9.9
REAL RMSE	1.92	ADJ.SD	52.09	SEPARATION	27.20	ITEM RELIABILITY	1.00	
MODEL RMSE	1.85	ADJ.SD	52.09	SEPARATION	28.22	ITEM RELIABILITY	1.00	
S.E. OF ITEM MEAN = 10.64								

UMEAN=553.000 USCALE=54.105
 ITEM RAW SCORE-TO-MEASURE CORRELATION = -.95 (approximate due to missing data)
 84160 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 107958.15 with 80705 d.f. p=.0000

TABLE 10.1 BIE 2011 partnership scale: Equated to ZOU202WS.TXT Jun 15 16:46 2011
 INPUT: 4014 PERSONS 25 ITEMS MEASURED: 3988 PERSONS 25 ITEMS 3 CATS 3.66.0

PERSON: REAL SEP.: 3.36 REL.: .92 ... ITEM: REAL SEP.: 27.20 REL.: 1.00

ITEM STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	COUNT	MEASURE	REAL S.E.	INFIT MNSQ	ZSTD	OUTFIT MNSQ	ZSTD	PT-MEASURE CORR.	EXP.	EXACT MATCH OBS%	DISPLACE	ITEM
2	7417	3718	673.0A	2.7	1.95	9.9	2.14	9.9	A .65	.78	44.4 68.1	-41.4	q2
6	8513	3833	573.0A	1.9	1.12	4.7	1.55	9.9	B .68	.71	68.7 66.5	9.2	q6
21	7858	3847	653.0A	2.1	1.37	9.9	1.38	9.9	C .71	.77	50.9 65.4	-30.8	q21
7	8386	3892	647.0A	2.1	1.32	9.9	1.33	9.5	D .73	.77	49.2 64.6	-49.6	q7
1	9686	3972	507.0A	1.9	.81	-8.0	1.24	4.4	E .72	.63	76.4 70.2	24.4	q1
24	8230	3796	634.0A	1.9	1.12	5.0	1.13	4.0	F .74	.76	63.9 62.2	-40.5	q24
16	9661	3938	504.0A	1.9	.75	-9.9	1.06	1.2	G .73	.63	80.9 70.4	24.9	q16
4	9725	3946	490.0A	2.0	.85	-6.4	1.00	.0	H .73	.60	79.6 70.6	35.3	q4
3	9051	3913	564.0A	1.8	.84	-7.0	.99	-.3	I .72	.70	73.4 67.4	-3.1	q3
18	9328	3934	523.0A	1.9	.73	-9.9	.97	-.7	J .76	.65	78.2 69.8	25.3	q18
11	9774	3973	492.0A	2.0	.81	-8.2	.87	-2.3	K .75	.61	82.0 70.7	34.3	q11
8	9326	3947	591.0A	1.8	.79	-9.8	.78	-7.9	L .76	.73	74.8 64.8	-41.8	q8
10	9705	3959	505.0A	1.9	.66	-9.9	.78	-4.4	M .76	.63	83.7 70.4	23.7	q10
25	8662	3897	600.0A	1.8	.76	-9.9	.77	-8.5	N .77	.74	76.9 64.0	-17.8	q25
14	9310	3935	533.0A	1.8	.66	-9.9	.75	-6.4	O .77	.67	80.0 69.5	16.6	q14
9	9735	3973	505.0A	1.9	.63	-9.9	.74	-5.3	P .76	.63	83.3 70.4	23.8	q9
5	9732	3960	513.0A	1.9	.63	-9.9	.74	-5.7	Q .75	.64	82.2 70.2	14.1	q5
22	8940	3911	561.0A	1.8	.68	-9.9	.69	-9.9	R .77	.70	76.9 67.6	6.4	q22
12	9548	3932	511.0A	1.9	.67	-9.9	.67	-7.3	S .76	.64	82.0 70.2	23.3	q12
23	9015	3905	581.0A	1.8	.64	-9.9	.64	-9.9	T .78	.72	78.5 65.9	-18.3	q23
13	9314	3939	544.0A	1.8	.61	-9.9	.64	-9.9	U .77	.68	81.1 68.8	5.5	q13
15	9513	3958	526.0A	1.9	.58	-9.9	.63	-9.5	V .77	.66	81.6 69.8	14.5	q15
19	9409	3938	550.0A	1.8	.58	-9.9	.59	-9.9	W .77	.69	80.5 68.3	-6.9	q19
17	9558	3966	528.0A	1.8	.56	-9.9	.58	-9.9	X .77	.66	82.6 69.6	10.4	q17
20	9172	3921	570.0A	1.8	.55	-9.9	.54	-9.9	Y .79	.71	81.3 66.9	-14.9	q20
MEAN	9142.7	3916.1	555.1	1.9	.83	-5.9	.93	-2.8			74.9 68.1		
S.D.	623.4	59.4	52.1	.2	.32	7.1	.36	7.0			10.9 2.4		