Analysis of Parent Survey Data Addressing

Part B SPP/APR Indicator #8

Bureau of Indian Education

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On behalf of Piedra Data Services
For the Bureau of Indian Education

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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 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 Schools' Efforts to Partner with Parents Scale (SEPPS), developed and validated by the National Center for Special Education Accountability Monitoring (NCSEAM). Demographic items addressing the student's race/ethnicity, grade, and primary exceptionality were also included. A total of 6,561 surveys were distributed to 174 sites; 3,768 surveys were returned from 152 sites for an overall response rate of 57.43%. 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 parent's involvement. The measures of all respondents were averaged to yield a mean measure reflecting the overall performance of the BIE sites in regard to schools' facilitation of parent involvement.

OSEP requires that states' 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 586, with a standard deviation of 144. The standard error of the sample mean is 2.3. The 95% confidence interval for the sample mean is 581.4 – 590.5. 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 586 indicates that schools are facilitating parent involvement in many ways. For example, approximately 93%-94% of parents of students receiving special education services at BIE sites agreed (with over 48% 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 parent's 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 90% agreeing overall, and 43%-48% expressing strong or very strong agreement - with statements to the effect that teachers and administrators show sensitivity to the needs of students with disabilities and their families, teachers and administrators seek out parent input, and schools give parents choices with regard to services that address their children's needs.

In still other areas, schools have even greater room for improvement. Only 75%-83% of parents of students with disabilities at BIE sites agreed (and only 33%-36% 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 their children in the 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 39%. The standard error of the sample percentage is 0.8%. The 95% confidence interval for the sample percentage is 37.4% - 40.5%. This means that there is a 95% likelihood that the true value of the Bureau percentage is between 37.4% and 40.5%.

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 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 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 early September 2013. Sites were asked to return surveys by November 4, 2013. Once data collection efforts were concluded, sites shipped completed surveys directly to Piedra Data Services (PDS) for processing.

A total of 6,561 surveys were distributed to 174 sites; 3,768 surveys were returned from 152 sites for an overall response rate of 57.43%. 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 Schools' Efforts 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 schools' facilitation of parent involvement, as well as other aspects of parents' involvement 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 NCSEAM's 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 schools' 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 3,768 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	3,403	90%
Asian	0	0%
Black / African American	8	<1%
Hispanic	2	<1%
Native Hawaiian or Pacific Islander	146	4%
White	21	<1%
Multi-Racial	115	3%
Missing	73	2%

Table 2 presents the distribution of the sample by students' grade level.

Table 2. Distribution of Grade Level in the Sample

Grade Level	N	Percentage*
Pre-Kindergarten	5	<1%
Kindergarten – Grade 5	1,866	50%
Grades 6 – 8	935	25%
Grades 9 – 12 +	883	23%
Missing	79	2%

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

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

Table 3. Distribution of Primary Exceptionality in the Sample		
Primary Exceptionality	**N**	**Percentage***
Autism	94	3%
Deaf-Blindness	3	<1%
Deafness	5	<1%
Developmental Delay	311	8%
Emotional Disturbance	120	3%
Hearing Impairment	18	<1%
Mental Retardation	105	3%
Multiple Disability	287	8%
Orthopedic	7	<1%
Other Health	230	6%
Specific Learning Disability	1,432	38%
Speech or Language Impairment	709	19%
Traumatic Brain Injury	18	<1%
Visual Impairment	13	<1%
More than one disability	22	<1%
Missing	394	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

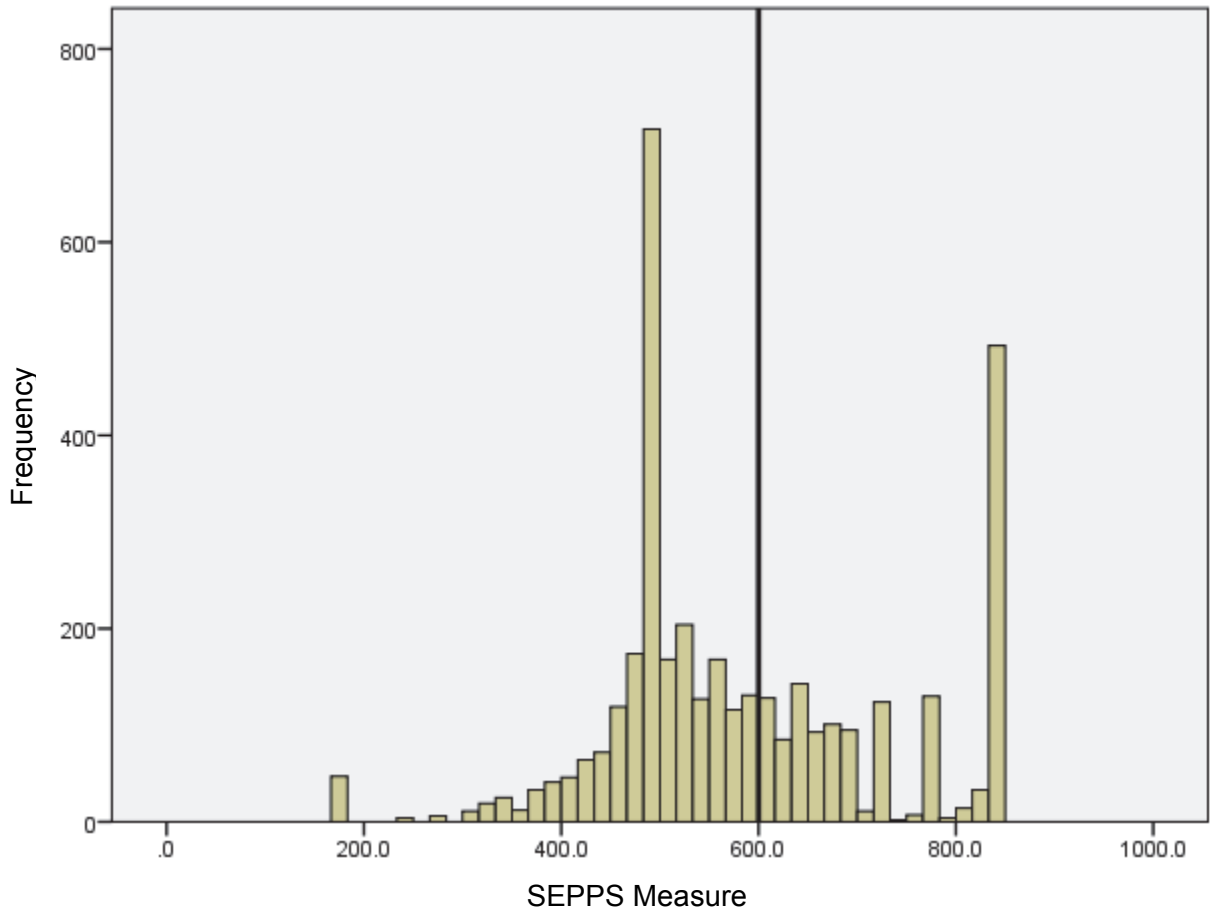
The results described in this section are based on the 3,768 respondents 3,767 of whom provided sufficient data to estimate a measure on the SEPPS. The properties of the distribution of SEPPS measures for the sample of 3,767 respondents are shown in Table 4 below. The sample mean was 586. The standard deviation of measures was 144, indicating that the average distance of measures from the mean measure was 144 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 2.3. The 95% confidence interval for the true population mean for BIE sites extended from 581.4 to 590.5, 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 581.4 to 590.5.

Table 4. Properties of SEPPS Measures

Sample Mean	Standard Deviation	Standard Error of the Sample Mean	95% Confidence Interval for the Population Mean
586	144	2.3	581.4 – 590.5

The distribution of SEPPS measures obtained for the 3,767 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) and at the measure of 500. Respondents at the far right of the graph responded in the “very strongly agree” category to each and every item. Individuals that had SEEPS scores of roughly 500 answered “agree” to 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 difficult 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 586 indicates that schools are facilitating parent involvement in many ways. For example, approximately 93%-94% of parents of students receiving special education services at BIE sites agreed (with over 48% 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 parent's 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 90% agreeing overall, and 43%-48% expressing strong or very strong agreement - with statements to the effect that teachers and administrators show sensitivity to the needs of students with disabilities and their families, teachers and administrators seek out parent input, and schools give parents choices with regard to services that address their children's needs.

In still other areas, schools have even greater room for improvement. Only 75%-83% of parents of students with disabilities at BIE sites agreed (and only 33%-36% 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 their children in the transition from 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 39%. 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
39% (1,465 of 3,767 met criterion)	0.8%	37.4% - 40.5%

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 37.4% to 40.5%. 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	3,403	1,310	38%	37% - 40%
Asian	0	--	--	--
Black / African American	8	2	25%	7% - 59%
Hispanic	2	0	0%	--
Native Hawaiian or Pacific Islander	145	66	46%	38% - 54%
White	21	13	62%	41% - 79%
Multi-Racial	115	49	43%	34% - 52%
Missing	73	25	34%	24% - 46%

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	4	2	50%	15% - 85%
Kindergarten – Grade 5	1,866	830	44%	42% - 47%
Grades 6 – 8	935	332	36%	33% - 39%
Grades 9 – 12	883	273	31%	28% - 34%
Missing	79	28	35%	26% - 46%

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 ages 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)	4	2	50%	15% - 85%
Part B School Age (KG-12+)	3,684	1,435	39%	37% - 41%

4.7. Percent of Parents at or above the Standard by Student's 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	94	49	52%	42% - 62%
Deaf-Blindness	3	0	0%	--
Deafness	5	1	20%	4% - 62%
Developmental Delay	310	127	41%	36% - 47%
Emotional Disturbance	120	47	39%	31% - 48%
Hearing Impairment	18	8	44%	25% - 66%
Mental Retardation	105	57	54%	45% - 63%
Multiple Disability	287	115	40%	35% - 46%
Orthopedic	7	2	29%	8% - 64%
Other Health	230	88	38%	32% - 45%
Specific Learning Disability	1,432	513	36%	33% - 38%
Speech or Language Impairment	709	328	46%	43% - 50%
Traumatic Brain Injury	18	8	44%	25% - 66%
Visual Impairment	13	1	8%	1% - 33%
More than one disability	22	9	41%	23% - 61%
Missing	394	112	28%	24% - 33%

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	22	5	23%	10% - 43%
Alamo Navajo School	48	17	35%	23% - 50%
American Horse School	35	14	40%	26% - 56%
Aneth Community School	19	7	37%	19% - 59%
Atsa` Biya`a`zh Community	9	1	11%	2% - 44%
Baca/Dlo'Azhi Community School	18	4	22%	9% - 45%
Beatrice Rafferty School	26	11	42%	26% - 61%
Beclabito Day School	8	5	63%	31% - 86%
Blackwater Community School	20	12	60%	39% - 78%
Bogue Chitto Elementary	12	4	33%	14% - 61%
Bug-O-Nay-Ge-Shig School	20	4	20%	8% - 42%
Casa Blanca Community School	16	6	38%	18% - 61%
Chemawa Indian School	5	2	40%	12% - 77%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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
Cherokee Central Elementary School	58	28	48%	36% - 61%
Cherokee Central High School	34	11	32%	19% - 49%
Cheyenne-Eagle Butte School	52	17	33%	22% - 46%
Chi Chil Tah (Jones Ranch Community School)	11	5	45%	21% - 72%
Chief Leschi School (Puyallup)	53	21	40%	28% - 53%
Chilchinbeto Community School	8	5	63%	31% - 86%
Chitimacha Tribal School	11	7	64%	35% - 85%
Choctaw Central High School	68	30	44%	33% - 56%
Choctaw Central Middle School	16	7	44%	23% - 67%
Circle of Life School	12	2	17%	5% - 45%
Circle of Nations-Wahpeton Indian Boarding School	8	2	25%	7% - 59%
Conehatta Elementary	55	39	71%	58% - 81%
Cottonwood Day School	21	8	38%	21% - 59%
Crazy Horse School	39	7	18%	9% - 33%
Crow Creek Reservation High School	10	3	30%	11% - 60%
Crow Creek Sioux Tribal Elementary School	25	6	24%	11% - 43%
Crystal Boarding School	9	5	56%	27% - 81%
Dennehotso Boarding School	18	11	61%	39% - 80%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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
Dibe Yazhi Hablti'n O'lt'a Inc. (Borrego Pass)	8	4	50%	22% - 78%
Dilcon Community School Inc.	20	16	80%	58% - 92%
Dishchii'bikoh Community School (Cibeque)	38	5	13%	6% - 27%
Dunseith Day School	48	21	44%	31% - 58%
Dzilth-Na-O-Dith-Hle Community School	6	3	50%	19% - 81%
Enemy Swim Day School	11	0	0%	--
First Mesa Elementary School	3	0	0%	--
Flandreau Indian School	35	1	3%	1% - 15%
Fond du Lac Ojibwe School	31	20	65%	47% - 79%
Gila Crossing Community School	67	37	55%	43% - 67%
Greasewood Springs Community School	11	5	45%	21% - 72%
Greyhills Academy High School	65	6	9%	4% - 19%
Hanaa'dli School/Dormitory Inc. (Huerfano)	2	0	0%	--
Hannahville Indian School	5	1	20%	4% - 62%
Hopi Jr./Sr. High School	41	5	12%	5% - 26%
Hunters Point Boarding School	12	6	50%	25% - 75%
Indian Island School	16	8	50%	28% - 72%
Indian Township School	16	8	50%	28% - 72%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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**
Isleta Elementary School	19	6	32%	15% - 54%
Jeehdeez'a Elementary School (Low Mountain)	13	2	15%	4% - 42%
Jemez Day School	12	5	42%	19% - 68%
John F. Kennedy Day School	26	9	35%	19% - 54%
Joseph K. Lumsden Bahweting Anishinabe School	1	0	0%	--
Kaibeto Boarding School	19	5	26%	12% - 49%
Kayenta Community School	30	12	40%	25% - 58%
Keams Canyon Elementary School	8	6	75%	41% - 93%
Kickapoo Nation School	7	4	57%	25% - 84%
Kin Dah Lichi'i Olta	9	6	67%	35% - 88%
Lac Courte Oreilles Ojibwe School	36	14	39%	25% - 55%
Laguna Elementary School	23	10	43%	26% - 63%
Laguna Middle School	19	9	47%	27% - 68%
Little Singer Community School	8	4	50%	22% - 78%
Lower Brule Tribal School	34	8	24%	12% - 40%
Lukachukai Community School	18	11	61%	39% - 80%
Lummi High School	31	4	13%	5% - 29%
Lummi Tribal School	44	14	32%	20% - 47%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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
Mandaree Day School	15	1	7%	1% - 30%
Many Farms Community School (Chinle Boarding School)	27	16	59%	41% - 75%
Many Farms High School	59	22	37%	26% - 50%
Mariano Lake Community School	21	7	33%	17% - 55%
Marty Indian School	22	5	23%	10% - 43%
Menominee Tribal School	16	6	38%	18% - 61%
Mescalero Apache School	47	15	32%	20% - 46%
Meskwaki Settlement School	42	37	88%	75% - 95%
Miccosukee Indian School	25	22	88%	70% - 96%
Moencopi Day School	17	2	12%	3% - 34%
Muckleshoot Tribal School	45	25	56%	41% - 69%
Na`Neelzhinn Ji`Olta (Torreon Day School)	11	3	27%	10% - 57%
Naa Tsis'Aan Community School (Navajo Mountain)	12	5	42%	19% - 68%
Navajo Preparatory School	5	3	60%	23% - 88%
Nazlini Community School	4	2	50%	15% - 85%
Nenahnezah Community School	23	1	4%	1% - 21%
Noli Indian School	21	7	33%	17% - 55%
Northern Cheyenne Tribal School	1	0	0%	--

Table 10. Percent of Parents at or above Standard by Site (continued)				
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**
Oneida Nation Tribal School	41	20	49%	34% - 64%
Paschal Sherman Indian School	24	11	46%	28% - 65%
Pearl River Elementary School	75	65	87%	77% - 93%
Pierre Indian Learning Center	2	1	50%	9% - 91%
Pine Hill School	37	7	19%	9% - 34%
Pine Ridge School	38	15	39%	26% - 55%
Pine Springs Day School	6	1	17%	3% - 56%
Pinon Community School	6	4	67%	30% - 90%
Porcupine Day School	31	16	52%	35% - 68%
Pueblo Pintado Community School	16	3	19%	7% - 43%
Pyramid Lake Jr./Sr. High School	8	4	50%	22% - 78%
Quileute Tribal School	15	2	13%	4% - 38%
Red Rock Day School	34	9	26%	15% - 43%
Red Water Elementary School	32	23	72%	55% - 84%
Riverside Indian School	45	3	7%	2% - 18%
Rock Point Community School	33	7	21%	11% - 38%
Rocky Ridge Boarding School	16	9	56%	33% - 77%
Rough Rock Community School	39	14	36%	23% - 52%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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**
Salt River Elementary School	41	18	44%	30% - 59%
San Felipe Pueblo Elementary School	26	11	42%	26% - 61%
San Ildefonso Day School	2	0	0%	--
San Simon School	18	3	17%	6% - 39%
Sanostee Day School	6	5	83%	44% - 97%
Santa Clara Day School	7	2	29%	8% - 64%
Santa Fe Indian School	25	13	52%	33% - 70%
Santa Rosa Day School	26	9	35%	19% - 54%
Seba Dalkai Boarding School	9	3	33%	12% - 65%
Second Mesa Day School	9	5	56%	27% - 81%
Sequoyah High School	17	9	53%	31% - 74%
Sherman Indian High School	17	0	0%	--
Shiprock Northwest High School	25	7	28%	14% - 48%
Shonto Preparatory School	28	8	29%	15% - 47%
Shoshone-Bannock Jr/Sr High School	9	8	89%	56% - 98%
Sky City Community School	39	20	51%	36% - 66%
St. Francis Indian School (Sicangu Oyate Ho, Inc.)	30	14	47%	30% - 64%
St. Stephens Indian School	25	9	36%	20% - 55%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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**
Standing Pine Elementary School	31	24	77%	60% - 89%
Standing Rock Community School	57	19	33%	22% - 46%
T'iis Nazbas Community School (Teecnospos)	27	6	22%	11% - 41%
T'iis Ts'ozi Bi'olta' (Crownpoint) Community School	36	16	44%	30% - 60%
T'siya Day School	10	1	10%	2% - 40%
Takini School	17	6	35%	17% - 59%
Taos Day School	17	3	18%	6% - 41%
Tata Topa Elementary School	47	24	51%	37% - 65%
Theodore Jamerson Elementary School	21	15	71%	50% - 86%
Theodore Roosevelt School	12	1	8%	1% - 35%
Tiospa Zina Tribal School	74	27	36%	26% - 48%
Tiospaye Topa School	17	7	41%	22% - 64%
To`Hajiilee-He (Canoncito) Day School	24	7	29%	15% - 49%
Tohaali' Community School (Toadlena)	23	6	26%	13% - 46%
Tohono O'odham High School	21	4	19%	8% - 40%
Tonalea Day School (Red Lake)	16	3	19%	7% - 43%
Tse'ii'ahi' Community School (Standing Rock)	7	4	57%	25% - 84%
Tuba City Boarding School	87	41	47%	37% - 58%

Table 10. Percent of Parents at or above Standard by Site (continued)				
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**
Tucker Elementary School	18	8	44%	25% - 66%
Turtle Mountain Community Elementary School	84	31	37%	27% - 48%
Turtle Mountain Community High School	73	23	32%	22% - 43%
Turtle Mountain Community Middle School	62	17	27%	18% - 40%
Twin Buttes Day School	2	2	100%	--
Two Eagle River School	2	1	50%	9% - 91%
Wah-He-Lut Indian School	12	6	50%	25% - 75%
Wide Ruins Community School	9	3	33%	12% - 65%
Wingate Elementary School	53	18	34%	23% - 47%
Wingate High School	52	12	23%	14% - 36%
Wounded Knee Elementary School	21	10	48%	28% - 68%
Yakama Nation Tribal School	7	2	29%	8% - 64%

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, “I was offered special assistance (such as child care) so that I could

participate in the Individualized Educational Program (IEP) meeting" 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 the special education services my child receives 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: http://accountabilitydata.org/ParentFamily%20Involvement%20Measures/Guidelines%20for%20Item%20Shopping%20December%202006.pdf.

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 measure[1] (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) 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 gives the calibration of each item (previously presented in Table 11), along with indices of the item's 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 ("I was offered special assistance (such as child care) so that I could participate in the Individualized Educational Program (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	0.90	1.51	0.71
2	673	2.05	2.23	0.64
3	564	0.85	0.96	0.73
4	490	0.87	0.95	0.74
5	513	0.67	0.70	0.75
6	573	1.06	1.45	0.72
7	647	1.40	1.50	0.73
8	591	0.81	0.77	0.77
9	505	0.75	0.89	0.76
10	505	0.68	0.80	0.77
11	492	0.84	0.87	0.75
12	511	0.61	0.65	0.78
13	544	0.57	0.63	0.79
14	533	0.62	0.63	0.78
15	526	0.56	0.59	0.79
16	504	0.73	0.90	0.75
17	528	0.55	0.52	0.79
18	523	0.74	0.96	0.77
19	550	0.56	0.57	0.79
20	570	0.54	0.54	0.80
21	653	1.36	1.49	0.73
22	561	0.62	0.66	0.79
23	581	0.59	0.59	0.80
24	634	1.03	1.07	0.78
25	600	0.71	0.74	0.79

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 (>= 0.64), indicating that each item is discriminating well between respondents who had more positive versus more negative perceptions of schools' facilitation 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 28% to 52%; the percentage of responses in any of the agree categories ranged from 69% to 94%.

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 Any Agree Category, and Observed Percentage of Responses in the Strongly Agree/Very Strongly Agree Categories

Item #	Item Calibration	% A/SA/ VSA	% SA/ VSA	Item
4	490	94%	52%	At the IEP meeting, we discussed accommodations and modifications that my child would need.
11	492	93%	52%	Teachers are available to speak with me.
16	504	94%	52%	Teachers and administrators respect my cultural heritage.
9	505	94%	49%	My child's evaluation report is written in terms I understand.
10	505	94%	49%	Written information I receive is written in an understandable way.
1	507	94%	49%	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 Any Agree Category, and Observed Percentage of Responses in the Strongly Agree/Very Strongly Agree Categories (continued)

Item #	Item Calibration	% A/SA/ VSA	% SA/ VSA	Item
12	511	93%	51%	Teachers treat me as a team member.
5	513	94%	51%	All of my concerns and recommendations were documented on the IEP.
18	523	92%	44%	The school has a person on staff who is available to answer parents' questions.
15	526	92%	49%	Teachers and administrators encourage me to participate in the decision-making process.
17	528	93%	48%	Teachers and administrators ensure that I have fully understood the Procedural Safeguards [the rules in federal law that protect the rights of parents].
14	533	90%	48%	Teachers and administrators show sensitivity to the needs of students with disabilities and their families.
13	544	90%	47%	Teachers and administrators seek out parent input.
19	550	91%	45%	The school communicates regularly with me regarding my child's progress on IEP goals.
22	561	88%	41%	The school offers parents a variety of ways to communicate with teachers.
3	564	89%	45%	At the IEP meeting, we discussed how my child would participate in statewide assessments.
20	570	90%	43%	The school gives me choices with regard to services that address my child's needs.
6	573	84%	37%	Written justification was given for the extent that my child would not receive services in the regular classroom.
23	581	90%	42%	The school gives parents the help they may need to play an active role in their child's education.
8	591	88%	47%	I have been asked for my opinion about how well special education services are meeting my child's needs.
25	600	87%	38%	The school explains what options parents have if they disagree with a decision of the school.
24	634	83%	36%	The school provides information on agencies that can assist my child in the transition from school.
7	647	79%	35%	I was given information about organizations that offer support for parents of students with disabilities.
21	653	75%	33%	The school offers parents training about special education issues.
2	673	69%	28%	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	51	1.4	1.4	1.4
	Strongly Disagree	53	1.4	1.4	2.8
	Disagree	123	3.3	3.3	6.0
	Agree	1686	44.7	44.9	51.0
	Strongly Agree	826	21.9	22.0	73.0
	Very Strongly Agree	1015	26.9	27.0	100.0
	Total	3754	99.6	100.0	
Missing	System	14	.4		
Total		3768	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	161	4.3	4.5	4.5
	Strongly Disagree	94	2.5	2.6	7.1
	Disagree	866	23.0	24.2	31.3
	Agree	1439	38.2	40.2	71.5
	Strongly Agree	486	12.9	13.6	85.1
	Very Strongly Agree	533	14.1	14.9	100.0
	Total	3579	95.0	100.0	
Missing	System	189	5.0		
Total		3768	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	61	1.6	1.6	1.6
	Strongly Disagree	62	1.6	1.7	3.3
	Disagree	275	7.3	7.4	10.7
	Agree	1642	43.6	44.2	54.9
	Strongly Agree	781	20.7	21.0	76.0
	Very Strongly Agree	892	23.7	24.0	100.0
	Total	3713	98.5	100.0	
Missing	System	55	1.5		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Strongly Disagree	50	1.3	1.3	1.3
	Strongly Disagree	47	1.2	1.3	2.6
	Disagree	128	3.4	3.4	6.0
Valid	Agree	1562	41.5	41.8	47.8
	Strongly Agree	877	23.3	23.5	71.3
	Very Strongly Agree	1072	28.5	28.7	100.0
	Total	3736	99.2	100.0	
Missing	System	32	.8		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Strongly Disagree	52	1.4	1.4	1.4
	Strongly Disagree	38	1.0	1.0	2.4
	Disagree	150	4.0	4.0	6.4
Valid	Agree	1581	42.0	42.4	48.8
	Strongly Agree	834	22.1	22.4	71.2
	Very Strongly Agree	1076	28.6	28.8	100.0
	Total	3731	99.0	100.0	
Missing	System	37	1.0		
Total		3768	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
	Very Strongly Disagree	70	1.9	1.9	1.9
	Strongly Disagree	73	1.9	2.0	3.9
	Disagree	427	11.3	11.7	15.7
Valid	Agree	1732	46.0	47.6	63.2
	Strongly Agree	627	16.6	17.2	80.4
	Very Strongly Agree	713	18.9	19.6	100.0
	Total	3642	96.7	100.0	
Missing	System	126	3.3		
Total		3768	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	105	2.8	2.8	2.8
	Strongly Disagree	74	2.0	2.0	4.9
	Disagree	579	15.4	15.7	20.5
	Agree	1631	43.3	44.2	64.8
	Strongly Agree	616	16.3	16.7	81.5
	Very Strongly Agree	684	18.2	18.5	100.0
	Total	3689	97.9	100.0	
Missing	System	79	2.1		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	71	1.9	1.9	1.9
	Strongly Disagree	56	1.5	1.5	3.4
	Disagree	303	8.0	8.1	11.5
	Agree	1544	41.0	41.4	53.0
	Strongly Agree	838	22.2	22.5	75.4
	Very Strongly Agree	915	24.3	24.6	100.0
	Total	3727	98.9	100.0	
Missing	System	41	1.1		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	43	1.1	1.1	1.1
	Strongly Disagree	43	1.1	1.1	2.3
	Disagree	145	3.8	3.9	6.2
	Agree	1684	44.7	44.9	51.1
	Strongly Agree	818	21.7	21.8	72.9
	Very Strongly Agree	1015	26.9	27.1	100.0
	Total	3748	99.5	100.0	
Missing	System	20	.5		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	41	1.1	1.1	1.1
	Strongly Disagree	51	1.4	1.4	2.5
	Disagree	121	3.2	3.2	5.7
	Agree	1686	44.7	45.0	50.7
	Strongly Agree	825	21.9	22.0	72.7
	Very Strongly Agree	1022	27.1	27.3	100.0
	Total	3746	99.4	100.0	
Missing	System	22	.6		
Total		3768	100.0		

Q11 - Teachers are available to speak with me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	62	1.6	1.7	1.7
	Strongly Disagree	35	.9	.9	2.6
	Disagree	149	4.0	4.0	6.6
	Agree	1543	41.0	41.2	47.8
	Strongly Agree	805	21.4	21.5	69.2
	Very Strongly Agree	1152	30.6	30.8	100.0
	Total	3746	99.4	100.0	
Missing	System	22	.6		
Total		3768	100.0		

Q12 - Teachers treat me as a team member.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	57	1.5	1.5	1.5
	Strongly Disagree	52	1.4	1.4	2.9
	Disagree	164	4.4	4.4	7.3
	Agree	1563	41.5	41.8	49.1
	Strongly Agree	795	21.1	21.3	70.3
	Very Strongly Agree	1109	29.4	29.7	100.0
	Total	3740	99.3	100.0	
Missing	System	28	.7		
Total		3768	100.0		

Q13 - Teachers and administrators seek out parent input.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	68	1.8	1.8	1.8
	Strongly Disagree	63	1.7	1.7	3.5
	Disagree	248	6.6	6.6	10.2
	Agree	1605	42.6	43.0	53.1
	Strongly Agree	749	19.9	20.1	73.2
	Very Strongly Agree	1000	26.5	26.8	100.0
	Total	3733	99.1	100.0	
Missing	System	35	.9		
Total		3768	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	80	2.1	2.1	2.1
	Strongly Disagree	64	1.7	1.7	3.9
	Disagree	220	5.8	5.9	9.8
	Agree	1594	42.3	42.7	52.5
	Strongly Agree	758	20.1	20.3	72.8
	Very Strongly Agree	1014	26.9	27.2	100.0
	Total	3730	99.0	100.0	
Missing	System	38	1.0		
Total		3768	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	55	1.5	1.5	1.5
	Strongly Disagree	53	1.4	1.4	2.9
	Disagree	207	5.5	5.5	8.4
	Agree	1608	42.7	43.1	51.5
	Strongly Agree	791	21.0	21.2	72.7
	Very Strongly Agree	1021	27.1	27.3	100.0
	Total	3735	99.1	100.0	
Missing	System	33	.9		
Total		3768	100.0		

Q16 - Teachers and administrators respect my cultural heritage.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Strongly Disagree	58	1.5	1.6	1.6
	Strongly Disagree	42	1.1	1.1	2.7
	Disagree	130	3.5	3.5	6.2
Valid	Agree	1581	42.0	42.3	48.5
	Strongly Agree	760	20.2	20.3	68.8
	Very Strongly Agree	1166	30.9	31.2	100.0
	Total	3737	99.2	100.0	
Missing	System	31	.8		
Total		3768	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
	Very Strongly Disagree	51	1.4	1.4	1.4
	Strongly Disagree	42	1.1	1.1	2.5
	Disagree	180	4.8	4.8	7.3
Valid	Agree	1676	44.5	44.7	52.0
	Strongly Agree	709	18.8	18.9	71.0
	Very Strongly Agree	1088	28.9	29.0	100.0
	Total	3746	99.4	100.0	
Missing	System	22	.6		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Strongly Disagree	49	1.3	1.3	1.3
	Strongly Disagree	44	1.2	1.2	2.5
	Disagree	211	5.6	5.7	8.2
Valid	Agree	1768	46.9	47.4	55.6
	Strongly Agree	731	19.4	19.6	75.2
	Very Strongly Agree	925	24.5	24.8	100.0
	Total	3728	98.9	100.0	
Missing	System	40	1.1		
Total		3768	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	53	1.4	1.4	1.4
	Strongly Disagree	45	1.2	1.2	2.6
	Disagree	254	6.7	6.8	9.4
	Agree	1683	44.7	45.1	54.6
	Strongly Agree	732	19.4	19.6	74.2
	Very Strongly Agree	961	25.5	25.8	100.0
	Total	3728	98.9	100.0	
Missing	System	40	1.1		
Total		3768	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	51	1.4	1.4	1.4
	Strongly Disagree	51	1.4	1.4	2.7
	Disagree	270	7.2	7.3	10.0
	Agree	1732	46.0	46.6	56.6
	Strongly Agree	732	19.4	19.7	76.3
	Very Strongly Agree	881	23.4	23.7	100.0
	Total	3717	98.6	100.0	
Missing	System	51	1.4		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Strongly Disagree	108	2.9	2.9	2.9
	Strongly Disagree	85	2.3	2.3	5.3
	Disagree	707	18.8	19.3	24.6
	Agree	1567	41.6	42.8	67.3
	Strongly Agree	567	15.0	15.5	82.8
	Very Strongly Agree	629	16.7	17.2	100.0
	Total	3663	97.2	100.0	
Missing	System	105	2.8		
Total		3768	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
	Very Strongly Disagree	71	1.9	1.9	1.9
	Strongly Disagree	49	1.3	1.3	3.2
	Disagree	317	8.4	8.5	11.8
Valid	Agree	1774	47.1	47.7	59.5
	Strongly Agree	716	19.0	19.3	78.7
	Very Strongly Agree	791	21.0	21.3	100.0
	Total	3718	98.7	100.0	
Missing	System	50	1.3		
Total		3768	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
	Very Strongly Disagree	67	1.8	1.8	1.8
	Strongly Disagree	55	1.5	1.5	3.3
	Disagree	251	6.7	6.8	10.0
Valid	Agree	1785	47.4	48.1	58.1
	Strongly Agree	699	18.6	18.8	77.0
	Very Strongly Agree	855	22.7	23.0	100.0
	Total	3712	98.5	100.0	
Missing	System	56	1.5		
Total		3768	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
	Very Strongly Disagree	79	2.1	2.2	2.2
	Strongly Disagree	66	1.8	1.8	4.0
	Disagree	461	12.2	12.6	16.6
Valid	Agree	1727	45.8	47.4	64.0
	Strongly Agree	631	16.7	17.3	81.3
	Very Strongly Agree	682	18.1	18.7	100.0
	Total	3646	96.8	100.0	
Missing	System	122	3.2		
Total		3768	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	77	2.0	2.1	2.1
	Strongly Disagree	62	1.6	1.7	3.8
	Disagree	355	9.4	9.6	13.4
	Agree	1796	47.7	48.6	62.0
	Strongly Agree	641	17.0	17.4	79.3
	Very Strongly Agree	763	20.2	20.7	100.0
	Total	3694	98.0	100.0	
Missing	System	74	2.0		
Total		3768	100.0		

APPENDIX B: WINSTEPS CONTROL FILE

```
&INST  ; THIS FILE MUST BE SAVED AS ASCII DOS TEXT BEFORE USE WITH WINSTEPS
Title="BIA 2013 partnership scale: Equated to William Fisher's calibration"
ITEM1=1
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\rdpenfie\Documents\Consulting\IndianAffairs\2013\BIA_B_Scanned_RP_112613_Cu
t.dat ; 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 = 26; 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=111000000100110000000100011
&END
q1
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q2
q3
q4
q5
q6
q7
q8
q9
q10
q11
q12
q13
q14
q15
q16
q17
q18
q19
q20
q21
q22
q23
q24
q25
END NAMES
```

APPENDIX C: Selected WINSTEPS Output

```
TABLE 1.2 BIA 2013 partnership scale: Equated to ZOU781WS.TXTe Nov 29  7:52 2013
INPUT: 3768 PERSON  25 ITEM  REPORTED: 3767 PERSON  25 ITEM  3 CATS WINSTEPS 3.74.0
-------------------------------------------------------------------------------

MEASURE    PERSON - MAP - ITEM
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                .##  |
                  .  |
  700            ##  +
                  .  |
                .##  |
                  .  |  q2
                 .#  |
                  .  |T q21
                 .# S|  q7
                 .#  |  q24
                 .#  |
                 .#  |
                 .#  |S
  600            .#  +  q25
                 .#  |  q8
                 .#  |  q23    q6
                .##  |  q20    q3
                 .#  |M q22
                .## M|  q13    q19
                 .#  |
                 .#  |  q14    q15    q17
                .##  |  q18
                .##  |  q1     q10    q12    q5     q9
  500 .############  +S q16
              .###  |  q11    q4
             .####  |
               .##  |
               .##  |
                 . S|T
                 .  |
                .#  |
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                 .  |
  400            .  +
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  300            .  +
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                    |
  200             .#  +
              <less>|<frequent>
 EACH "#" IS 43. EACH "." IS 1 TO 42
```

TABLE 3.1 BIA 2013 partnership scale: Equated to ZOU781WS.TXTe Nov 29 7:52 2013
INPUT: 3768 PERSON 25 ITEM REPORTED: 3767 PERSON 25 ITEM 3 CATS WINSTEPS 3.74.0

SUMMARY OF 3173 MEASURED (NON-EXTREME) PERSON

	TOTAL SCORE	COUNT	MEASURE	REAL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	55.2	24.6	549.3	25.9	.90	-.8	.92	-.7
S.D.	11.6	1.4	99.7	10.7	.51	2.1	.68	2.0
MAX.	74.0	25.0	768.0	91.6	3.68	6.7	8.28	7.0
MIN.	2.0	1.0	236.4	18.8	.00	-5.1	.00	-5.0

REAL RMSE 28.1 TRUE SD 95.6 SEPARATION 3.41 PERSON RELIABILITY .92
MODEL RMSE 25.8 TRUE SD 96.3 SEPARATION 3.73 PERSON RELIABILITY .93
S.E. OF PERSON MEAN = 1.8

MAXIMUM EXTREME SCORE: 547 PERSON
MINIMUM EXTREME SCORE: 47 PERSON
LACKING RESPONSES: 1 PERSON

SUMMARY OF 3767 MEASURED (EXTREME AND NON-EXTREME) PERSON

	TOTAL SCORE	COUNT	MEASURE	REAL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	57.5	24.6	585.9	37.6				
S.D.	13.1	1.4	143.6	28.7				
MAX.	75.0	25.0	836.4	101.4				
MIN.	2.0	1.0	169.3	18.8	.00	-5.1	.00	-5.0

REAL RMSE 47.3 TRUE SD 135.6 SEPARATION 2.86 PERSON RELIABILITY .89
MODEL RMSE 46.2 TRUE SD 136.0 SEPARATION 2.94 PERSON RELIABILITY .90
S.E. OF PERSON MEAN = 2.3

PERSON RAW SCORE-TO-MEASURE CORRELATION = .94
CRONBACH ALPHA (KR-20) PERSON RAW SCORE "TEST" RELIABILITY = .98

SUMMARY OF 25 MEASURED (NON-EXTREME) ITEM

	TOTAL SCORE	COUNT	MEASURE	REAL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	8666.4	3713.5	555.1	2.0	.83	-5.8	.93	-2.9
S.D.	544.0	40.5	52.1	.2	.34	6.7	.41	7.3
MAX.	9203.0	3753.0	673.0	2.8	2.05	9.9	2.23	9.9
MIN.	7056.0	3579.0	490.0	1.8	.54	-9.9	.52	-9.9

REAL RMSE 2.0 TRUE SD 52.1 SEPARATION 26.17 ITEM RELIABILITY 1.00
MODEL RMSE 1.9 TRUE SD 52.1 SEPARATION 27.17 ITEM RELIABILITY 1.00
S.E. OF ITEM MEAN = 10.6

UMEAN=553.0000 USCALE=54.1050
ITEM RAW SCORE-TO-MEASURE CORRELATION = -.94
78177 DATA POINTS. LOG-LIKELIHOOD CHI-SQUARE: 100194.92 with 74979 d.f. p=.0000
Global Root-Mean-Square Residual (excluding extreme scores): .4591

TABLE 3.2 BIA 2013 partnership scale: Equated to ZOU781WS.TXTe Nov 29 7:52 2013
INPUT: 3768 PERSON 25 ITEM REPORTED: 3767 PERSON 25 ITEM 3 CATS WINSTEPS 3.74.0

SUMMARY OF CATEGORY STRUCTURE. Model="R"

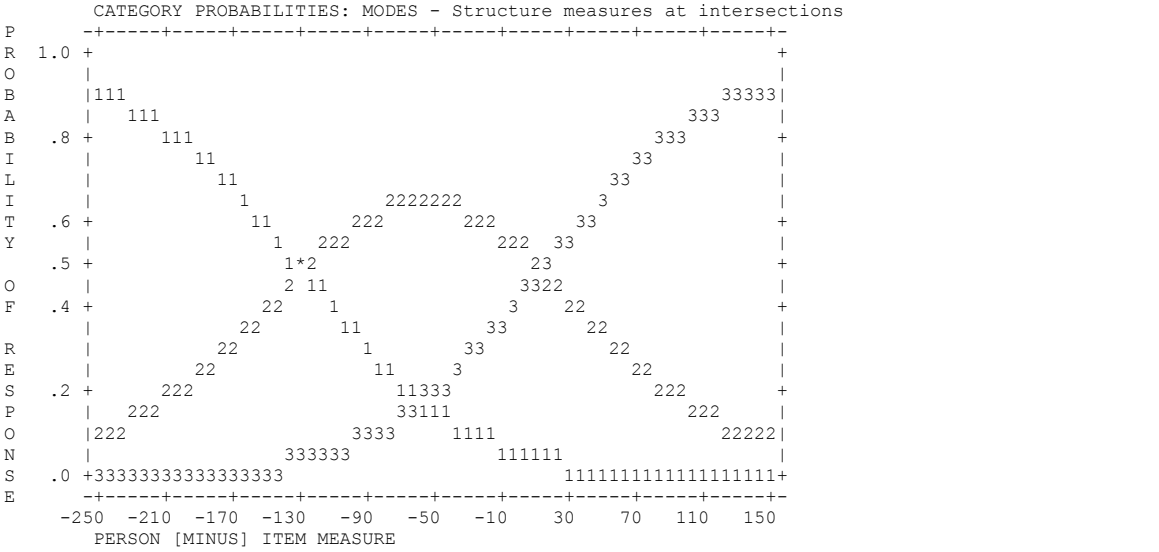
CATEGORY LABEL	OBSERVED SCORE	COUNT	%	OBSVD AVRGE	SAMPLE EXPECT	INFIT MNSQ	OUTFIT MNSQ	ANDRICH THRESHOLD	CATEGORY MEASURE	
1	1	10331	11	-136.1	-197	1.05	1.25	NONE	-190.51)	1 VS/S/Disagree
2	2	41188	44	-45.1	-29.6	.96	.90	-128.28A	-57.00	4 Agree
3	3	41318	45	96.7	93.9	.77	.82	14.28A	(76.51)	5 S/VSAgree
MISSING		1148	1	-39.5						

OBSERVED AVERAGE is mean of measures in category. It is not a parameter estimate.

CATEGORY LABEL	STRUCTURE MEASURE	S.E.	SCORE-TO-MEASURE AT CAT.	----ZONE----	50% CUM. PROBABLTY	COHERENCE M->C	C->M	RMSR	ESTIM DISCR	OBSERVED-EXPECTED RESIDUAL	DIFFERENCE	
1	NONE		-190.51)	-INF -137.33		52%	51%	.7272		-50.8%	-4657.5	1 VS/S/Disagree
2	-128.28A	.64	-57.00	-137.33 23.33	-131.78	77%	77%	.3979	1.06	22.6%	9315.5	4 Agree
3	14.28A	.53	(76.51)	23.33 +INF	17.78	80%	80%	.4286	1.17	-16.7%	-4657.9	5 S/VSAgree

M->C = Does Measure imply Category?
C->M = Does Category imply Measure?

CATEGORY PROBABILITIES: MODES - Structure measures at intersections



1 = VS/S/Disagree
2 = Agree
3 = S/VSAgree

TABLE 10.1 BIA 2013 partnership scale: Equated t ZOU781WS.TXTh Nov 29 7:52 2013
INPUT: 3768 PERSON 25 ITEM REPORTED: 3767 PERSON 25 ITEM 3 CATS WINSTEPS 3.74.0

PERSON: REAL SEP.: 2.86 REL.: .89 ... ITEM: REAL SEP.: 26.17 REL.: 1.00

ITEM STATISTICS: MISFIT ORDER

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	REAL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	DISPLACE	ITEM
2	7056	3579	673.0A	2.8	2.05	9.9	2.23	9.9	A .64	.80	43.7	68.4	-34.5	q2
1	9120	3753	507.0A	2.0	.90	-4.2	1.51	8.2	B .71	.65	74.1	69.8	26.3	q1
7	7920	3689	647.0A	2.2	1.40	9.9	1.50	9.9	C .73	.79	49.3	64.8	-47.4	q7
21	7622	3663	653.0A	2.2	1.36	9.9	1.49	9.9	D .73	.79	50.4	65.6	-38.8	q21
6	8054	3642	573.0A	1.9	1.06	2.2	1.45	9.9	E .72	.73	70.7	67.0	11.0	q6
24	7999	3646	634.0A	1.9	1.03	1.5	1.07	2.2	F .78	.78	66.9	62.4	-44.9	q24
18	8808	3728	523.0A	1.9	.74	-9.9	.96	-.9	G .77	.67	78.2	69.6	26.8	q18
3	8701	3713	564.0A	1.9	.85	-6.4	.96	-1.2	H .73	.72	74.1	67.8	-10.2	q3
4	9196	3736	490.0A	2.0	.87	-5.1	.95	-.8	I .74	.62	79.0	70.3	35.8	q4
16	9170	3737	504.0A	2.0	.73	-9.9	.90	-1.7	J .75	.64	81.2	70.0	23.5	q16
9	9098	3748	505.0A	2.0	.75	-9.9	.89	-2.1	K .76	.64	80.7	70.0	29.0	q9
11	9203	3746	492.0A	2.0	.84	-6.5	.87	-2.1	L .75	.63	81.1	70.3	35.0	q11
8	8777	3727	591.0A	1.8	.81	-8.7	.77	-8.1	M .77	.75	74.8	65.3	-40.1	q8
10	9126	3746	505.0A	2.0	.68	-9.9	.80	-3.9	l .77	.64	81.7	70.0	26.8	q10
25	8298	3694	600.0A	1.8	.71	-9.9	.74	-9.3	k .79	.75	78.4	64.4	-23.4	q25
5	9132	3731	513.0A	2.0	.67	-9.9	.70	-6.6	j .75	.66	80.0	69.9	15.9	q5
22	8506	3718	561.0A	1.9	.62	-9.9	.66	-9.9	i .79	.72	79.0	68.0	6.3	q22
12	9111	3740	511.0A	2.0	.61	-9.9	.65	-7.8	h .78	.65	83.8	69.9	21.3	q12
13	8836	3733	544.0A	1.9	.57	-9.9	.63	-9.9	g .79	.70	82.1	69.0	4.6	q13
14	8868	3730	533.0A	1.9	.62	-9.9	.63	-9.8	f .78	.68	81.0	69.4	13.0	q14
23	8605	3712	581.0A	1.8	.59	-9.9	.59	-9.9	e .80	.74	80.8	66.4	-21.3	q23
15	8967	3735	526.0A	1.9	.56	-9.9	.59	-9.9	d .79	.67	82.7	69.6	14.7	q15
19	8797	3728	550.0A	1.9	.56	-9.9	.57	-9.9	c .79	.70	80.1	68.6	.1	q19
17	9016	3746	528.0A	1.9	.55	-9.9	.52	-9.9	b .79	.68	83.0	69.5	11.1	q17
20	8675	3717	570.0A	1.8	.54	-9.9	.54	-9.9	a .80	.73	81.8	67.3	-13.8	q20
MEAN	8666.4	3713.5	555.1	2.0	.83	-5.8	.93	-2.9			75.2	68.1		
S.D.	544.0	40.5	52.1	.2	.34	6.7	.41	7.3			10.9	2.1		