Review of Accommodations Selection for Students with Disabilities and Limited Spanish Proficiency Students for the Pruebas Puertorriqueñas de Aprovechamiento Académico (PPAA)

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Executive Summary

Introduction

Under the No Child Left Behind Act of 2001 (NCLB), all students with disabilities (SWDs) and second language learners (ELs or LSP students)¹ must participate in annual academic content assessments in language arts and mathematics in grades 3 through 8 and high school and in academic content assessments in science at least once in each of the grade ranges 3-5, 6-8, and high school. NCLB and the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA) mandate that students with disabilities be provided accommodations as appropriate to allow for their meaningful participation in state assessments; NCLB extends these accommodation requirements to ELs/LSP students. NCLB and IDEIA require that state education agencies establish accommodation guidelines for selecting these accommodations and report publicly the number of students using accommodations during state assessments.

In response to these requirements, the number of students with disabilities and ELs/LSP students who participate in district and statewide assessment programs has greatly increased in recent years, as has the number of students using assessment accommodations (Crawford, 2007). With these increases has come greater scrutiny of the meaning of scores derived from accommodated assessment conditions. Assessment accommodations, when appropriately selected for SWDs and LSP² students, should allow these students to more accurately demonstrate their knowledge and skills; however this expectation is often based on assumptions that have yet to be tested adequately.

The Puerto Rico Department of Education (PRDE) defines accommodations as any changes to procedures or practices used to provide equal access to grade-level content for students with special needs. Their purpose is to eliminate the barriers to academic standards caused by a student's disability or language differences and increase access to academic content, without reducing the expectations for learning (Puerto Rico Department of Education, 2004).

Assessment accommodations are changes in assessment materials or procedures implemented by the test administrator to increase the accessibility of test content to a specific student population. Assessment accommodations are generally grouped into the following categories: presentation, response, setting, and timing/scheduling.

The PRDE has a set policy on accommodations to support the annual state assessment *Pruebas Puertorriqueñas de Aprovechamiento Académico* (PPAA) for SWDs and LSP students. However, the PRDE must review the implementation of its accommodations policy to ensure that all students who take the PPAA have the best opportunity to demonstrate what they know and can do. This accommodations review includes three components that correspond to the following three evaluation questions:

¹ These rules relate to students who are not proficient in the language of instruction. These students are English learners (ELs) in US states, the District of Columbia, and US territories and Spanish learners (LSP students) in Puerto Rico.

² This report interprets the NCLB legislation as it applies to students with limited Spanish proficiency (LSP) as opposed to students with limited English proficiency (LEP).

- 1. To what extent do the accommodations selected for individual students when taking the PPAA correspond appropriately to the accommodations used in instruction as indicated in students' Individualized Education Programs (IEPs) or, for LSP students, other evidence of the accommodations used in instruction?
- 2. To what extent are the accommodations selected for individual students implemented appropriately at the time of assessment?
- 3. To what extent do accommodations selected for students address the obstacles that may interfere with a student's ability to demonstrate what he or she knows and can do on the PPAA?

The present report provides a summary of the findings for the first component of the accommodations review in which researchers addressed two research questions:

- 1. To what extent do the assessment accommodations indicated in students' school records reflect those that are used in instruction?
- 2. To what extent are the assessment accommodations identified in school records aligned with those indicated in the PPAA test file?

Methodology

Researchers addressed the two research questions above by: 1) reviewing the record of assessment for the 2010-2011 administration of the PPAA that included information on the type of accommodations administered during the assessment; and 2) comparing these data to information collected from student records [IEPs for SWDs and Learning Plans (LPs) for LSP students].

Three teams consisting of regional assessment coordinators for the PPAA and the PPEA³ and one bilingual edCount researcher (three people in total) conducted site visits to 21 schools across all seven academic regions. A school sample was selected by identifying schools with high and low rates of overall accommodations use relative to the number of students in their SWD and LSP student groups, as well as schools with higher rates of use for particular accommodations. These identifiers may suggest that some accommodations may be over- or under- selected and used given the schools' student populations. The final sample included seven elementary schools, eight middle schools, and six high schools.

During the on-site visit, the PPEA regional coordinators randomly selected files for four students who participated in the PPAA during the 2010-2011 administration for each grade. They then reviewed these IEPs and LPs and recorded: 1) which accommodations were selected for instruction and assessment; 2) the individuals involved in the accommodations selection process; and 3) the disabilities noted in the file.

Data analysis encompassed two parts. First, researchers analyzed how well assessment accommodations indicated on a student's IEP matched instructional accommodations indicated on a student's IEP. For each student's IEP, researchers considered the accommodations that were indicated for assessment and also selected for instruction as aligned. To understand misalignments in the data, researchers separated accommodations that that did not match for instruction and assessment into two different categories. Researchers considered accommodations selected for instruction but not for assessment Type I

³ The PPEA is the *Pruebas Puertorriqueñas de Evaluación Alterna*, Puerto Rico's alternate assessment.

misalignment, whereas accommodations selected for assessment but not for instruction were considered a Type II misalignment.

For the second part of the review, researchers analyzed the extent to which the assessment accommodations indicated in the students' IEPs were aligned with those in the 2011 PPAA record of assessment (ROA). If the same type of assessment accommodation was indicated in both the student records and the ROA, researchers considered them to be aligned. If accommodations selected in the IEP were not in the ROA, researchers considered it Type III misalignment, whereas if accommodations selected for the ROA were not in the IEP, researchers considered it a Type IV misalignment. Researchers calculated the frequencies and percentage rates of misalignments at the student level and the school level.

Findings

- Overall, the accommodations selected for assessment as indicated in the students' IEPs were aligned
 with those selected for instruction. The largest proportions of misalignment in assessment were for
 accommodations requiring change in setting and the use of calculator. Over one third of students
 whose IEPs recommend a reading aloud accommodation during assessment did not indicate it for
 instruction. These findings suggest that if students received the selected accommodations during
 assessment, they were experiencing the use of readers without necessarily receiving this
 accommodation prior to the assessment in the classroom environment.
- At the elementary, middle and high school level there was a higher percent of accommodations
 aligned than misaligned. The level of misalignment between instructional and assessment
 accommodations was highest among elementary schools. At the middle school level students were
 the most likely to receive an accommodation during instruction and not during testing (Type I
 misalignment).
- Nearly 50% of assessment accommodations reviewed were indicated in the students' IEPs but not in the record of assessment, suggesting that students with disabilities did not received the assessment accommodations during the PPAA administration last spring as required by their IEP. The record of assessment did not collect information about over 15% of accommodations that were indicated in the sampled IEPs, including information about the use of calculator. In contrast, the record of assessment indicated that almost 11.4% of accommodations reviewed were provided during the assessment but not indicated in the student's IEPs.
- Most misalignments were found at the high school level, where 82.7% of accommodations
 examined were misaligned. Misalignments at the middle and elementary school levels were also
 higher than the proportion of aligned accommodations.

Recommendations

Given the findings of this study, researchers offer recommendations in two areas:

Provide Training to Teachers and IEP Teams (COMPU)

The PRDE should review its accommodations training to ensure that it provides educators with a clear understanding of the process for selecting and recording allowable accommodations for instruction and assessment. This training should include the purpose of accommodations, the need to align assessment accommodations with instructional accommodations, and the rules and regulations related to the selection of instructional and assessment accommodations for individual students and specific purposes.

Monitor and Evaluate Policies Related to Accommodations Decisions

The PRDE should monitor the consistency of the alignment between instructional and assessment accommodations and the accuracy with which assessment accommodations listed in the IEP are provided to students during the PPAA as listed in the ROA. The PRDE may conduct accommodations reviews during the assessment window or afterward, and the findings should inform how the COMPU records the use of accommodations for instruction and assessment on the IEP. The monitoring activities conducted by the PRDE to review accommodations may involve: 1) direct observation of test administrations and the provision of accommodations on the day of assessment; 2) on-site monitoring visits that include record reviews; and 3) interviews with students, teachers, and administrators about the selection and effectiveness of accommodations.

The PRDE can use this information to inform their policies for accommodations selection and use on a regular basis, to support good decision making, and to provide documentation to meet federal requirements. This evaluation and subsequent reports should: 1) include a timeline of analysis of findings from monitoring and assessment data (empirical evidence); 2) apply existing and new research related to best practices for accommodations; and 3) include an expert panel review of accommodation guidance and training to support continuous improvement of practices.

Review of Accommodations for the PPAA

Introduction

Under the No Child Left Behind Act of 2001 (NCLB), all students with disabilities (SWDs) and second language learners (ELs or LSP students)⁴ must participate in annual academic content assessments in language arts and mathematics in grades 3 through 8 and high school and in academic content assessments in science at least once in each of the grade ranges 3-5, 6-8, and high school. NCLB and the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA) mandate that students with disabilities be provided accommodations as appropriate to allow for their meaningful participation in state assessments; NCLB extends these accommodation requirements to ELs/LSP students. NCLB and IDEIA require that state education agencies establish accommodation guidelines for selecting these accommodations and report publicly the number of students using accommodations during state assessments.

In response to these requirements, the number of students with disabilities and ELs/LSP students who participate in district and statewide assessment programs has greatly increased in recent years, as has the number of students using assessment accommodations (Crawford, 2007). With these increases has come greater scrutiny of the meaning of scores derived from accommodated assessment conditions. Assessment accommodations, when appropriately selected for SWDs and LSP⁵ students, should allow these students to more accurately demonstrate their knowledge and skills; however this expectation is often based on assumptions that have yet to be tested adequately.

The Puerto Rico Department of Education (PRDE) defines accommodations as any changes to procedures or practices used to provide equal access to grade-level content for students with special needs. Their purpose is to eliminate the barriers to academic standards caused by a student's disability or language differences and increase access to academic content, without reducing the expectations for learning (Puerto Rico Department of Education Accommodations Manual, 2004).

Assessment accommodations are changes in assessment materials or procedures implemented by the test administrator to increase the accessibility of test content to a specific student population. Assessment accommodations are generally grouped into the following categories: presentation, response, setting, and timing/scheduling.

The PRDE has a set policy on accommodations to support the annual state assessment *Pruebas Puertorriqueñas de Aprovechamiento Académico* (PPAA) for SWDs and LSP students. However, the PRDE must review the implementation of its accommodations policy to ensure that all students who take the PPAA have the best opportunity to demonstrate what they know and can do. This accommodations review includes three components that correspond to the following three evaluation questions:

⁴ These rules relate to students who are not proficient in the language of instruction. These students are English learners (ELs) in US states, the District of Columbia, and US territories and Spanish learners (LSP students) in Puerto Rico

⁵ This report interprets the NCLB legislation as it applies to students with limited Spanish proficiency (LSP) as opposed to students with limited English proficiency (LEP).

- 1. To what extent do the accommodations selected for individual students when taking the PPAA correspond appropriately to the accommodations used in instruction as indicated in students' Individualized Education Programs (IEPs) or, for students with LSP, other evidence of the accommodations used in instruction?
- 2. To what extent are the accommodations selected for individual students implemented appropriately at the time of assessment?
- 3. To what extent do accommodations selected for students address the obstacles that may interfere with a student's ability to demonstrate what he or she knows and can do on the PPAA?

Each of the components will be implemented annually beginning in the 2011-2012 school year. The PRDE will use the results of these reviews to: 1) provide formative feedback so that practitioners can make immediate corrections and 2) inform annual decisions about training and support for improving the selection and implementation of its accommodations.

To address the first evaluation question of how well the PPAA accommodations selected for individual students correspond to their instructional accommodations as indicated in the IEPs of SWDs and the LPs for LSP students, the PRDE commissioned a joint annual review of student instructional and assessment records. This report provides a summary of the findings for this first component. The primary unit of analysis for this review is the student, but researchers also analyzed the data at the school and island-wide levels to identify locations that may need additional training or oversight on the accommodations selection process.

Validity Argument

The PRDE employs an argument-based approach to validity evaluation (Kane, 2006) to ensure that the combined evidence about its assessments contributes to a comprehensive evaluation of critical aspects of the assessment and accountability system. The US Department of Education has recognized the argument-based approach by funding projects to apply this model to state assessment systems. Using this approach, edCount worked with the PRDE to develop a detailed interpretive argument (IA) to identify specific priorities for evaluating the validity of the use and interpretation of PPAA scores.

The IA incorporates input from PRDE staff and Puerto Rico teachers who participated in focus groups during the 2009-2010 school year (see Exhibit 1). The IA also addresses US Department of Education's peer review feedback on the gaps and weaknesses of PRDE's assessment system. Major threats to the validity of the PPAA cut across the range of traditional validity concerns, including the alignment of the assessment with the standards, the quality of administration and scoring, the accessibility of the assessments to all students, and the appropriate interpretation and use of the test scores.

The PPAA accommodations review is represented in the IA under the claim that "students take the assessment under conditions that allow them to demonstrate what they know and can do in relation to academic expectations." This review addressed three specific assumptions that underlie this claim.

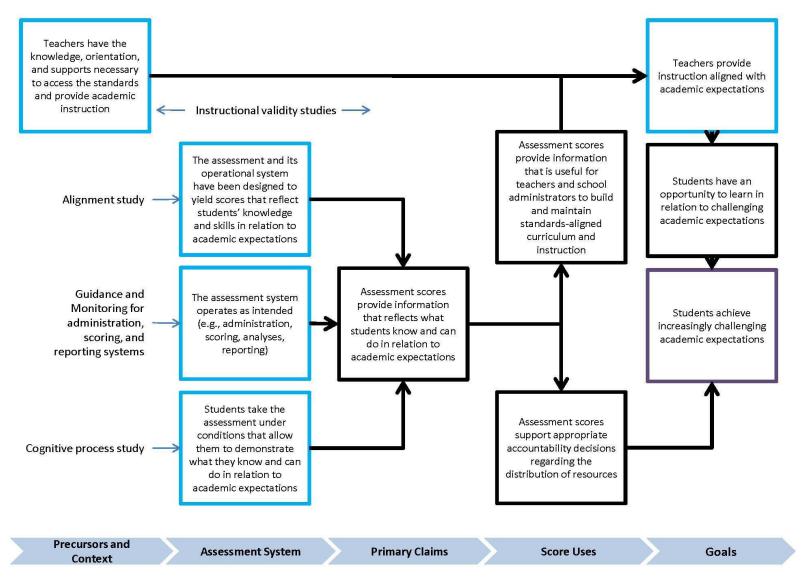
1. Students are provided with assessment accommodations based on information relevant to their individual needs that supports their learning.

- 2. PPAA accommodations are aligned to the accommodations used during classroom instruction; therefore students have opportunities to experience accommodations prior to using them during assessment.
- 3. Students are provided with assessment accommodations that have been identified in the Individualized Education Programs of students with disabilities and the Learning Plans of students who are limited Spanish proficient.

To address these assumptions, this study was guided by two research questions:

- 1. To what extent do the assessment accommodations indicated in students' school records reflect those that are used in instruction?
- 2. To what extent are the assessment accommodations identified in school records aligned with those indicated in the PPAA record of assessment (ROA)?

Exhibit 1. Interpretive Argument (IA) for the PPAA



Use of Accommodations

IDEIA (2004) requires that all states ensure that students with disabilities are included in state and local educational assessment and accountability systems. Specifically, IDEIA requires that "all children with disabilities [be] included in all general State and district wide assessment programs . . . with appropriate accommodations" (Individual with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1412, Sec. 612 (a) (16) (A)). In addition, NCLB legislation allows for accommodations to a test that allow a LSP student to accurately demonstrate what they know in a given content area (No Child Left Behind of 2001, 20 U.S.C. § 6311, Title 1, Part A, Sec. 111 (3) (C)(ix II)). These two pieces of legislation together establish the role of accommodations in general state assessments.

PRDE defines accommodations as any changes to procedures or practices used to provide equal access to grade-level content for students with special needs. Their purpose is to eliminate the barriers to academic standards caused by a student's disability or language differences. Accommodations are meant to increase access to academic content, without reducing the expectations for learning (Puerto Rico Department of Education, 2004).

Assessment accommodations are changes in assessment materials or procedures implemented by test administrators to increase accessibility of test content to a specific student population. These changes can include changes to the administration of the test (e.g., extended time), changes to the presentation mode of test items (e.g., read aloud), or changes to the student's response (e.g., the use of a scribe). Assessment accommodations are generally grouped into the following categories: presentation, response, setting, and timing/scheduling (see Appendix A for accommodations acknowledged by the PRDE for students with disabilities). Appropriate accommodations allow students to access, process, and respond to test items or a set of items on an assessment and do not reduce learning expectations for a student (Crawford, 2007).

Researchers and other experts in the field consider accommodations fair and reasonable when standardized assessment conditions do not provide an equal opportunity for all students to demonstrate achievement of knowledge and skills (Abedi & Lord, 2001; Acosta, Rivera, & Shafer Willner, 2008; Butler & Stevens, 2001; Christensen, Carver, VanDeZande, & Lazarus, 2011; Holmes & Duron, 2000; National Research Council, 2004). The effectiveness of an assessment accommodation refers to the extent to which (a) students who are deemed eligible for the accommodation perform better when they use it than when they do not and (b) performance of students who are deemed not eligible for the accommodation does not change across accommodated and non-accommodated conditions (Kieffer, Lesaux, Rivera, & Francis, 2009; Sireci, Scarpati, & Li, 2005).

Instructional accommodations are used in the classroom to improve SWDs' and LSP students' access to the general education curriculum. These accommodations must be written into IEPs of SWDs or, in Puerto Rico, into a LP⁶ for students who are LSP. These documents serve a vital role in both assigning accommodations to students and in ensuring that the correct accommodations are available to students during the test. Particularly, "the IEP embodies most of the provisions thought to be central to effective service delivery, including access to the general curriculum" (Yell & Shriner, 1997 as cited in Shriner & Destefano, 2003).

 $^{^6}$ Not all states and school districts use LPs for ELs or LSP students. In these cases, documentation of accommodations decisions may take a number of forms.

Accommodations should not only be documented in the IEP, but should be used during the learning process and as well as during assessment when available. For instance, students with visual impairments should be offered test formats identical to those used in instruction, such as same font size (Bolt & Thurlow, 2004). The same student characteristics that make accommodations necessary for fair and accurate assessment are even more important in the teaching and learning process. Aligning accommodations for instruction and assessment leads to more effective teaching and learning and should translate into improved outcomes for students (Cox, Herner, Demczyk, & Nieberding, 2006). As pointed out by researchers, "it would be inappropriate—and probably illegal— to deny the student use in assessment an accommodation that is regularly provided in instruction" (Ysseldyke et al., 2001). However, some instructional accommodations aimed at helping a student process and learn certain material might not be appropriate during assessments aimed at measuring the student's skills (Luke & Schwartz, 2007). For example, many students with a learning disability that impacts reading speed utilize screen reading software as an instructional accommodation. This instructional accommodation allows the student to keep pace with the other students when longer novels are assigned in class, and it is preferable to an extended time accommodation in this situation. However, a screen reader may invalidate test performance on a reading comprehension assessment, so this instructional accommodation may not be an allowable assessment accommodation.

Alignment of instructional and assessment accommodations as listed in the student's IEP or LP cannot be assumed. In some cases, students may be provided with assessment accommodations that are not provided in instruction or may be unwarranted (Ysseldyke et. al, 2001); in others, assessment accommodations indicated on a student's IEP may not be provided during assessment (Shriner & Destefano, 2003). An accommodations survey completed by special education teachers in six districts across four states revealed that students frequently did not receive the accommodations they needed on assessments often because, as one teacher noted "a large number of administrators are used, [so] special education teachers do not always know where each child is on test day" (Lazarus, Thompson, & Thurlow, 2006).

In addition, certain accommodations may be less likely to be implemented than others. For example, challenges associated with the implementation of some accommodations, such as certain types of assistive technology, may not be provided in instruction even though they are called for in IEPs (Rhode Island Department of Education, 2003 as cited in Crawford, 2007). Likewise, accommodations that are 'personnel-heavy', such as reading items aloud or using a scribe to record answers, may be inconsistently implemented during assessment (Shriner & Destefano, 2003).

The present study was designed to explore both the extent to which assessment accommodations that are prescribed in IEPs and LPs are actually provided to students at the time of assessment and the degree to which these accommodations align with those used in instruction.

Methodology

Researchers obtained information on accommodations use during assessment from the record of assessment (ROA) for 2010-2011 administration of the PPAA. Researchers then reviewed the instructional and assessment accommodations indicated in the IEPs or LPs for a sample of students who participated in the spring 2011 PPAA administration. Researchers conducted this review across all seven academic regions of Puerto Rico during the week of November 7-10, 2011.

Sampling

School Sample

At the beginning of the school year, the PRDE notified all schools that it would be conducting a review of the accommodations selection process in a sample of schools during November 2011. In September 2011, researchers and PRDE staff examined the PPAA ROA to identify up to three schools in each of the seven regions for inclusion in the review process. Researchers and PRDE staff used the following process to identify schools where the accommodations selection process may be faulty:

- 1. For each school, researchers divided the number of 2011 PPAA accommodations used across all students in the school by the number of SWDs and LSP students in the school, then ordered the schools by this ratio. Schools with very high ratios and very low ratios were included in the sampling pool.
- 2. For each school, researchers divided each accommodation used in that school by the number of SWDs and LSP students in that school. This ratio provided a rough indication of whether particular accommodations may have been over- or under-used in the school, perhaps because the selection process did not adequately take into account individual students' needs. Schools with higher ratios for particular accommodations were included in the sampling pool.
- 3. Researchers generated a list of 35 schools based on the results of steps 1 and 2. PRDE staff selected 21 of these schools for the accommodations review sample.

The final school sample consisted of three schools from each of the seven regions, including seven elementary schools, eight middle schools, and six high schools (see Appendix B). PRDE staff notified the selected schools a day prior to the review that their school could be visited.

Student Sample

The student sample within each selected school was drawn from those who participated in the spring 2011 PPAA test administration. Only SWDs with IEPs and LSP students with documented assessment accommodations were eligible to participate in the review. From these students, the PPEA coordinator randomly selected four files of students who participated in the PPAA during the 2010-2011 administration of the test for each tested grade.

Protocols and Recording of Student Data

Researchers developed guidelines and a protocol form to gather accommodation data for sampled students (see Appendix B); the protocol form was designed to align with the Puerto Rico IEP to facilitate completion during the school visits. Prior to the visits, researchers trained the PPEA⁷ and PPAA coordinators on the intent of the review, school visit procedures, sampling, and filling out the protocol for each student selected.

Three teams consisting of the regional coordinators for the PPEA and the PPAA and a bilingual researcher (three members on each team) conducted the school site visits to gather data from student records. The PPEA coordinators were the only members of the team who were authorized to interact with student records, while the PPAA coordinators and edCount researchers played a support role. The PPEA coordinators collected the data because they are special education specialists who work with Puerto Rico's alternate assessment and they are trained in evaluating IEPs. Upon arrival at each school,

⁷ The PPEA is the *Pruebas Puertorriqueñas de Evaluación Alterna*, Puerto Rico's alternate assessment.

the PPEA coordinator presented a letter to the school director from the PRDE informing him or her of the purpose of the visit and requiring the school director to provide the PPEA coordinator with the IEPs and LPs for SWDs and LSP students that document the accommodations decisions. The PPEA coordinator completed a separate protocol for each selected student. The PRDE coded student names prior to transferring the protocols to edCount personnel for analysis, to ensure student anonymity. For each student in the sample, the PPEA coordinator reviewed the IEPs and LPs and recorded which accommodations were selected for instruction and assessment, the individuals involved in the accommodations selection process, and students' disabilities. The PPAA coordinators and the bilingual edCount researcher observed the process and answered questions about the protocol and procedures used during the visits. Once the reviewers completed all protocols, they returned the student records to the school director.

Results

This study was designed to address two research questions.

- 1. To what extent do the assessment accommodations indicated in students' school records reflect those that are used in instruction?
- 2. To what extent are the assessment accommodations identified in school records aligned with those indicated in the PPAA test file?

Results are presented for each of these questions below, and are based on a total of 195 IEPs for SWDs and four LPs for LSPs (see Exhibit 2). Of the 195 IEP's reviewed, one student was also identified as an LSP student; however the student did not have any specific LSP accommodations in the IEP or Learning Plan, and therefore was included in the SWD group only. Of the students with IEPs, there were 14 whose records indicated no assessment accommodations required by the students, but did indicate instructional accommodations. Only one of the students in the sample received neither instructional nor assessment accommodations. Only four LSP students were included in the sample. Researchers conducted analysis of these students separately from the analysis of the SWDs.

Exhibit 2. Student Sample Demographics by Region

Region	# Students	Female	Male	SWDs	LSP Students	Elementary School	Middle School	High School
Arecibo	28	12	16	28	0	12	12	4
Arecibo	28	(42.9)	(57.1)	(100)	(0)	(42.9)	(42.9)	(14.3)
Pavamán	27	12	15	26	1	0	23	4
Bayamón	27	(44.4)	(55.6)	(96.3)	(3.7)	(0.0)	(82.1)	(14.3)
Caguac	27	8	19	27	18	11	12	4
Caguas	27	(29.6)	(70.4)	(96.3)	(3.7)	(39.3)	(42.9)	(14.3)
Цитаса	28	7	21	27	1	12	12	4
Humacao	20	(25.0)	(75.0)	(96.4)	(3.6)	(42.9)	(42.9)	(14.3)
Mayaguaz	28	8	20	28	0	12	12	4
Mayaguez	20	(28.6)	(71.4)	(100)	(0)	(42.9)	(42.9)	(14.3)
Donco	26	11	15	25	1	10	12	4
Ponce	26	(96.2)	(57.7)	(96.2)	(3.8)	(35.7)	(42.9)	(14.3)
Can luan	25	9	26	34	1	23	12	0
San Juan	35	(25.7)	(74.2)	(97.1)	(2.9)	(82.1)	(42.9)	(0.0)
Total	199	67	132	195	5	80	95	24
TULAI	133	(33.7)	(66.3)	(97.5)	(2.5)	(40.2)	(47.7)	(12.1)

Note: Numbers in parenthesis represent percentages.

Using the IDEA categories⁸, researchers identified learning disabilities (67.2%), health impairment (11.3%), speech language impairment (6.7%), and intellectual disability (3.6%) as the disabilities most commonly found in the sample. Data on the disability category were missing for five students in the sample (2.6%). The most common disabilities in the sample were in accordance with the national trends, where learning disability (37.5%), speech or language impairment (21.8%), health impairment (10.6%), and intellectual disability (7.1%) were the most common disabilities (Scull & Winkler, 2011). Nearly half of the IEPs reviewed (48.2%) indicated multiple assessment accommodations for an individual student, one third indicated single accommodations (32.7%) and 16.6% indicated no assessment accommodations (see Exhibit 3).

Puerto Rico's IEP captures instructional and assessment accommodations information separately. For instructional accommodations, the IEP provides a list of nine standard accommodations, which can be checked off by the *Comité de Programación y Ubicación* (COMPU)⁹ team responsible for making the accommodation decisions; the IEP also gives space for the COMPU team to indicate any additional accommodations that might be needed by the student. The nine standard accommodations include:

- extended time
- the use of a calculator
- use of a recording device
- use of an abacus
- change in desk location

- high technology equipment
- large print
- use of Braille
- use of audio equipment

⁸ IDEA disability categories: autism, deaf-blindness; deafness, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, specific learning disability, speech language impairment, traumatic brain injury, visual impairment, and other health impairment.

⁹ In Puerto Rico the IEP is filled out and monitored by the COMPU team.

Exhibit 3. Assessment Accommodations as Indicated on the Sampled IEPs by IDEA Disability Category

Disability	# Students	Extended Time	Change in Setting	Reader	Calculator	Change in Schedule	Monitor of Test Responses	Modified Test	Frequent Pauses	Scribe	Answer in Test Booklet	Sign Language
Learning	131	112	58	28	18	5	9	5	2	1	1	
Disabilities	(67.2)	(57.4)	(29.7)	(14.4)	(9.2)	(2.6)	(4.6)	(2.6)	(1.0)	(0.5)	(0.5)	
Health	22	16	10	4	3			1				
Impairment (e.g., ADHD)	(11.3)	(8.2)	(5.1)	(2.1)	(1.5)			(0.5)				
Speech	13	8	5	3		1	1	1				
Language Impairment	(6.7)	(4.1)	(2.6)	(1.5)		(0.5)	(0.5)	(0.5)				
Intellectual	7	6	2	2		1		1				
Disability	(3.6)	(3.1)	(1.0)	(1.0)		(0.5)		(0.5)				
Learning Disabilities /ADHD ¹⁰	4 (2.1)	4 (2.1)	3 (1.5)	2 (1.0)				1 (0.5)				
Orthopedic	3	2										
Impairment	(1.5)	(1.0)										
Aution	2	2	1	1								
Autism	(1.0)	(1.0)	(0.5)	(0.5)								
Visual	2	2	2			1						
Impairment	(1.0)	(1.0)	(1.0)			(0.5)						
Emotionally	2	2	1	1								
Disturbed	(1.0)	(1.0)	(0.5)	(0.5)								
Multiple	1	1										
Disabilities	(0.5)	(0.5)										
Deaf-Blindness	1 (0.5)	1 (0.5)										1 (0.5)
Hearing	1	1	1	1								
Impairment	(0.5)	(0.5)	(0.5)	(0.5)								
Other (Cerebral	1	1	1		1							
Palsy)	(0.5)	(0.5)	(0.5)		(0.5)							
Missing Data	5 (2.6)	5 (2.1)	4 (2.1)	2 (1.0)	2 (1.0)	2 (1.0)						
	(2.6) 195	163	88	44.0	(1.0) 24	(1.0) 10	10	9	2	1	1	1
Total	(100.0)	(83.6)	(45.1)	(22.6)	(12.3)	(5.1)	(5.1)	(4.6)	(1.0)	(0.5)	(0.5)	(0.5)

Note: Numbers in parenthesis represent percentages based on total sample (n=195).

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 $^{^{10}}$ Category includes those students who had both a learning disability and ADHD specified in their IEP.

For assessment accommodations, the IEP includes a box where the COMPU team must indicate whether the student takes the PPAA with or without accommodations. The COMPU team then writes in the selected accommodations, using the PRDE accommodation manual as guidance, but without a list of standard accommodations provided in the IEP itself. Using the PPAA record of assessment, researchers identified 12 commonly used assessment accommodations: extended time, change in setting, reader, use of calculator, change in schedule/order of the test, monitor of test responses, modified test, frequent pauses, scribe, answer in test booklet, and sign language (see Exhibit 3).

Descriptive statistics for the instructional and assessment accommodations are presented in Exhibits 4 and 5. None of the four LSP students sampled had instructional accommodations indicated in their LPs or IEPs. The mode of the instructional accommodations was four, meaning that typically the IEPs included four instructional accommodations. Among the IEPs sampled, extended time was the most common instructional accommodation (see Exhibit 4); 184 of the 195 IEPs sampled included this accommodation, representing almost 30% of all instructional accommodations. Extended time and change in desk location together accounted for 53.4% of all instructional accommodations. Although 65.5% of the instructional accommodations indicated in the sampled IEPs were on the standard list, three of the nine standard instructional accommodations (high technology equipment, use of Braille, and use of audio equipment) were not indicated for any of the students in the sample. The most common additional accommodations in the sampled IEPs were reader (17.4%) and exams taken in the resource room (15.4%).

Exhibit 4. Frequency of Instructional Accommodations Indicated on the Sampled IEPs

Type of Accommodation	Frequency	Percentage of IEPs	Percentage of IEP Instructional Accommodations
*Extended time	184	94.4	28.9
*Change in desk location	158	81.0	24.8
*Use of calculator	67	34.4	10.5
"Use of a reader"	34	17.4	5.3
"Exams taken in the resource room"	30	15.4	4.7
"Clear/individual instructions"	24	12.3	3.8
"Frequent review of material"	23	11.8	3.6
"One exam a day"	19	9.7	3.0
"Class work monitoring/assistance	14	7.2	2.2
"Modified tests"	12	6.2	1.9
"Exam divided into parts"	11	5.6	1.7
"Monitoring/guidance during exams"	11	5.6	1.7
"Repetition of instructions"	7	3.6	1.1
"Recognize student efforts"	6	3.1	0.9
"Peer-help"	6	3.1	0.9
*Use of abacus	5	2.6	0.8
"Short tests"	5	2.6	0.8
"Open book exams"	5	2.6	0.8
"Use of dictionary"	4	2.1	0.6
"Oral exams"	3	1.5	0.5
"Short tasks"	3	1.5	0.5
*Use of recording device	2	1.0	0.3
*Use of large print	1	0.5	0.2
"Use of sign language"	1	0.5	0.2
"Use of manipulative"	1	0.5	0.2
"Possibility to retake the test"	1	0.5	0.2
*High technology equipment	0	0.0	0.0
*Use of Braille	0	0.0	0.0
*Use of audio equipment	0	0.0	0.0
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Notes: Percentages of IEPs are based on the total number of IEPs sampled (n=195) and percentages of IEP Instructional Accommodations are based on the total number of instructional accommodations indicated across the 195 IEPs (n=637). Asterisks (*) indicates that the accommodation is one of the nine standard instructional accommodations listed in the IEP form. Accommodations in quotation marks are those not on the standard list and written into IEPs by the COMPU teams.

The distribution of assessment accommodations listed on the sampled IEPs encompassed a wide range of types of accommodations (see Exhibit 5). Researchers used the accommodations listed in the ROA for the 2010-2011 administration of the PPAA, which contains information on the type of accommodations provided during assessment administration, to organize the accommodations found in the sampled IEPs.

In the IEPs of 29 students, instead of listing specific assessment accommodations, the COMPU team indicated "see instructional accommodations", thus leaving these students without separate lists of instructional and assessment accommodations. In these 29 cases, researchers used the list of instructional accommodations and where appropriate, counted them as assessment accommodations. Close to 83% of the assessment accommodations indicated in the sampled IEPs corresponded to the set listed in the ROA. Extended time, change in setting, and reader accounted for 76.2% of all assessment accommodations. The other 23.8% of accommodations indicated were distributed with low frequencies across 20 accommodation types.

Exhibit 5. Frequency of Assessment Accommodations Indicated on the Sampled IEPs

Type of Accommodation	Frequency	Percentage of IEPs	Percentage of IEP Assessment Accommodations
*Extended time	163.0	83.6	42.1
*Change in setting	88.0	45.1	22.7
*Reader	44.0	22.6	11.4
"Calculator"	24.0	12.3	6.2
"Individualized/Clear and precise instructions"	24.0	12.3	6.2
*Change in itinerary or order of the exam	10.0	5.1	2.6
*Monitor of exam responses	10.0	5.1	2.6
"Modified exam"	10.0	5.1	2.6
"Provide material when student is in therapy"	4.0	2.1	1.0
*Frequent Pauses	2.0	1.0	0.5
"Small Groups"	2.0	1.0	0.5
*Scribe	1.0	0.5	0.3
*Sign Language	1.0	0.5	0.3
*Answer in test booklet	1.0	0.5	0.3
"Oral exams"	1.0	0.5	0.3
"Support from the teacher"	1.0	0.5	0.3
"Use of a computer"	1.0	0.5	0.3
*Large Print	0.0	0.0	0.0
*Braille	0.0	0.0	0.0
*Print enlargement equipment	0.0	0.0	0.0

Notes: Percentages of IEPs are based on the total number of IEPs sampled (n=195) and Percentages of IEP Assessment Accommodations are based on the total number of assessment accommodations indicated across the 195 IEPs (n= 387). Asterisks (*) indicates that the accommodation is one of the nine standard instructional accommodations listed in the ROA. Accommodations in quotation marks are those not in the ROA and written into IEPs by the COMPU teams.

The most frequently indicated assessment accommodations in students' IEPs were extended time (83.6%) and change in setting (45.1%). Other assessment accommodations included use of a reader (22.6%), use of calculators (12.3%), individualized/clear instructions (12.3%), change in itinerary (5.1%), monitor of test responses (5.1%), and modified exam (5.1%). Students with learning disabilities had the most combinations of multiple assessment accommodations as indicated by the IEP (see Exhibit 3). They were also the only students in the sample whose IEPs indicated the frequent pauses and scribe accommodation. The IEPs of students with orthopedic disabilities and hearing impairments indicated

only the extended time accommodation; however the number of students with these disabilities in the sample was very small.

Research Question 1: To what extent do the assessment accommodations indicated in students' school records reflect those that are used in instruction?

To address the first research question, researchers analyzed how well assessment accommodations indicated on a student's IEP matched instructional accommodations indicated on a student's IEP. These analyses were based on the 536 instructional and assessment accommodations indicated in the sampled IEPs where the instructional accommodation category could be matched with an assessment accommodation category. These accommodations categories included extended time, change in setting, calculator, reader, clear instructions, modified exam, oral exam, large print and sign language. Across the 195 sampled IEPs, these accommodations were used 484 times as instructional accommodations and 355 times as assessment accommodations. Researchers considered accommodations to be aligned if the accommodations that were selected for instruction were also indicated for assessment.

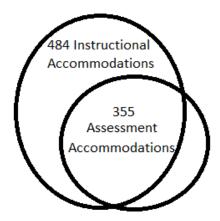
Over half (56.5%) of the instructional and assessment accommodations were aligned with one another; that is, the same accommodations were selected both for instruction and for assessment (see Exhibit 6 and Exhibit 7). There were two types of misalignments. Type I misalignments included those accommodations that were listed for instruction but not for assessment, and Type II misalignments included those accommodations that were listed for assessment but not for instruction.

Exhibit 6. Alignment between Instructional and Assessment Accommodations in the Sampled IEPs by Accommodation

	Listed as Either an	Listed as	Listed as		Misaligned Ac	commodations
Type of Accommodation	Instructional or Assessment Accommodation	Instructional Accommodation in the IEP	Assessment Accommodation in the IEP	Aligned Accommodations	Type I (instruction, not assessment)	Type II (assessment, not instruction)
Extended Time	190	184	163	157 (82.6)	27 (14.2)	6 (3.2)
Change in Setting	165	158	88	81 (49.1)	77 (46.7)	7 (4.2)
Calculator	68	67	24	23 33.8	44 (64.7)	1 (1.5)
Reader	53	34	44	25 (47.2)	9 (17.0)	19 (35.8)
Clear Instructions	39	24	24	9 (23.1)	15 (38.5)	15 (38.5)
Modified Test	16	12	10	6 (37.5)	6 (37.5)	4 (25.0)
Oral Exams	3	3	1	1 (33.3)	2 (66.7)	(0.0)
Large Print	1	1 1		0 (0.0)	1 (100)	0 (0.0)
Sign Language	1	1	1	1 (100)	0 (0.0)	0 (0.0)
All	S 536 484		355	303 (56.5)	181 (33.8)	52 (9.7)

Note: The percentages indicated in parenthesis of aligned and misaligned accommodations are based on the total number of times each type of accommodations was indicated in the sampled IEPs.

Exhibit 7. Alignment between Instructional and Assessment Accommodations in the Sampled IEPs by Accommodation



Overall, Type I misalignment (an accommodation is used for instruction but not for assessment) occurred in 33.8% of all sampled accommodations; Type II misalignment (an accommodation is used for assessment but not for instruction) occurred in only 9.7% of the cases. Thus, 77.7% of the misalignments involved accommodations used for instruction and not for assessment while 22.3% of the misalignments involved accommodations used for assessment and not instruction.

Researchers further analyzed the alignment of instructional and assessment accommodations by type of accommodation. Although the overall alignment was 56.5%, sign language and extended time were the only accommodations for which instruction and assessment indications were aligned more than misaligned. Sign language was only cited in one IEP as both an instructional and assessment accommodation and therefore its overall alignment was 100.0%. Instructional and assessment indications for extended time were aligned in 157 (82.6%) of the 190 cases where this accommodation was cited. In six cases this accommodation was cited only for use in assessment and not for instruction; extended time was cited only for instructional purposes and not for assessment in 27 cases.

All other accommodations were more misaligned than aligned. The reader accommodation was aligned 47.2% of the time, Type I misaligned 17.0% of the time, and Type II misaligned 35.8% of the time. Other accommodations misalignments heavily favored instructional but not assessment uses (Type I misalignments) and there were only small percentages of misalignment among accommodations that were selected for assessment and not for instruction. The percentages of Type II misalignment did not exceed five percent for most of the accommodations examined. The exception was clear instructions (38.5%), the use of readers (35.8%), and modified test (25.0%). All three of these accommodations were not listed as standard instructional accommodations on the Puerto Rico IEP, and were instead indicated in the "other" category.

Researchers further analyzed the distribution of aligned and misaligned accommodations by school level (elementary, middle, and high school levels; see Exhibit 8). At all three school levels there was a higher percent of accommodations were aligned than misaligned. The highest percent of alignment was at the high school level (60.3%). The highest percent of overall misalignment was at the elementary school level where 45.4% of all accommodations examined were misaligned. The middle school level had the highest percent of Type I misalignment, where 37.5% of the accommodations listed for instruction were not listed for assessment. Overall the percent of Type II misalignment was small in the sample, but it

was the highest at the elementary school level, where 15.7% of the accommodations listed in the IEPs as assessment accommodations did not match those listed in instruction.

70.0 60.3 60.0 57.0 54.6 50.0 37.5 40.0 30.2 29.6 30.0 20.0 15.8 9.5 10.0 5.4 0.0 Elementary (n=196) Middle (n=277) High (n=63) ■ % Aligned ■ % Type I misaligned (instruction, not assessment) ■ % Type II misaligned (assessment, not instruction)

Exhibit 8. Alignment between Instructional and Assessment Accommodations in the Sampled IEPs by School Level

Research Question 2: To what extent are the assessment accommodations identified in school records aligned with those indicated in the PPAA Record of Assessment?

To address the second research question, researchers first analyzed the frequencies of the assessment accommodations listed in the 2011 PPAA Record of Assessment (ROA) and the frequencies of the assessment accommodations indicated in the sample IEPs. They then analyzed the extent to which these two sets of assessment accommodations aligned with each other at the student level. That is, researchers compared the accommodations indicated in students' IEPs with those recorded as having been provided at the time of assessment. Note that a separate study in the spring of 2012 will address the degree to which accommodations indicated in the IEP actually are provided at the time of assessment.

Frequencies for the twelve assessment accommodations indicated in the ROA reveal that, as for the assessment accommodations indicated in the sampled IEPs, extended time is the most frequently cited (see Exhibit 9; frequencies for the assessment accommodations in the IEP are presented in Exhibit 5).

Exhibit 9. Frequency of Assessment Accommodations in the ROA

Type of Accommodation	Frequency	Percentage of IEPs	Percentage of ROA Assessment Accommodations
Extended time	117	60.0	53.4
Reader	48	24.6	21.9
Change in setting	30	15.4	13.7
Monitor of test responses	7	3.6	3.2
Frequent pauses	7	3.6	3.2
Answer in the test booklet	5	2.6	2.3
Change in schedule or order in the test	3	1.5	1.4
Large print	1	0.5	0.5
Scribe	0	0.0	0.0
Sign language	1	0.5	0.5
Braille	0	0.0	0.0
Print enlargement equipment	0	0.0	0.0

Notes: Percentages of IEPs are based on the total number of IEPs sampled (n=195) and Percentages of ROA Assessment Accommodations are based on the total number of assessment accommodations indicated in the ROA for the 195 IEPs (n= 219).

Researchers compared data for the twelve different types of assessment accommodations for which data was recorded in the ROA. These included extended time, change in setting, use of readers, monitor of test responses, frequent pauses, answer in test booklet, change in schedule or order of test, scribes, large print, sign language, Braille, and print enlargement equipment (see Exhibit 10). If the same type of assessment accommodation was indicated in both the student records and the record of assessment, researchers considered them to be aligned. If an accommodation selected in the IEP was not in the ROA, researchers considered it a Type III misalignment, whereas if an accommodation selected for the ROA was not in the IEP, researchers considered it a Type IV misalignment. Researchers grouped all accommodations listed on the IEPs that could not be matched to the ROA in the "other" category and counted them as a Type III misalignment.

Results reveal that 38.7% of assessment accommodations indicated in the students' IEPs were aligned to the accommodations listed in the ROA. A much higher percentage (49.9%) of accommodations were indicated in the IEP, but not in the ROA (Type III misalignment), and about 11.4% of accommodations were indicated in the ROA, but not the IEP (Type IV misalignment).

Exhibit 10. Alignment of Assessment Accommodations between IEP and ROA by Accommodation

	Listed as an				Misaligned Acc	commodations
Type of Accommodation	Assessment Accommodation in IEP or ROA	Frequency in the IEP	Frequency in the ROA	Aligned Accommodations	Type III (IEP, not ROA)	Type IV (ROA, not IEP)
Extended Time	178	163	117	102	61	15
				(57.3)	(37.4)	(14.7)
Change in Setting	91	88	30	27	61	3
				(29.7)	(67.0)	(3.3)
Reader	58	44	48	34	10	14
				(58.6)	(17.2)	(24.1)
Monitor of Test	14	10	7	3	7	4
Responses	14	10	,	(21.4)	(50.0)	(28.6)
Change in	13	10	3	0	10	3
Schedule/Order	15	10	3	(0.0)	(76.9)	(23.1)
Frequent Pauses	7	2	7	2	0	5
riequent Pauses	,	2	/	(28.6)	(0.0)	(71.4)
Answer in Test	C	1	F	0	1	5
Booklet	6	1	5	(0.0)	(16.7)	(83.3)
Carrila	4	4	0	0	1	0
Scribe	1	1	0	(0.0)	(100.0)	(0.0)
		•		0	0	1
Large Print	1	0	1	(0.0)	(0.0)	(100.0)
Cina Laurana	4	1	2	1	0	0
Sign Language	1	1	2	(1.0)	(0.0)	(0.0)
O+111	67	67	0	0	67	0
Other ¹¹	67	67	0	(0.0)	(100.0)	(0.0)
All	427	207	240	169	218	50
All	437	387	219	(38.4)	(49.9)	(11.4)

Note: The percentages of aligned and misaligned accommodations are listed in parenthesis and are based on the total of all the aligned and misaligned accommodations.

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¹¹ This category includes all the accommodations which were included in the sampled IEPs but did not match the accommodations for which data was collected by the ROA. This includes among others the use of calculator, clear/individualized instructions and modified test.

There was only one accommodation for scribe in the sampled IEPs; according to the ROA, this accommodation was not provided for that student during the PPAA administration. The ROA indicates that accommodations for large print were provided during the PPAA, despite not being indicated in sampled IEPs. When looking at the accommodations administered to more than one student, the accommodation most frequently indicated in the IEP, but not given during the exam, was the change in setting accommodation. Of the 88 IEPs in which this assessment accommodation was called for, it was provided during the assessment only 27 times. In three other cases, this accommodation was provided during the assessment but not called for in the IEP. Thus, only 30.7% of the students whose IEP teams indicated a need for a change in setting actually got that accommodation. Only 29.7% of the cases in which this accommodation was used were aligned with the IEPs. The accommodation with the highest rate of Type IV misalignment (in the ROA, but not in the IEP) was the reader accommodation. The accommodation was administered to 14 students despite not being indicated in their IEPs, while at the same time ten students in the sample whose IEPs indicated the reader accommodation did not receive it.

Although the number of cases for other accommodations was much smaller, a strong degree of misalignment emerged for several of these low incidence accommodations. The accommodation with the highest degree of misalignment was the change in schedule or order of the exam (0.0% of the accommodations were aligned). Although the accommodation was indicated in 10 IEPs, it was not provided to the students according to the ROA. At the same time the ROA indicated that three students were given this accommodation despite it not being indicated in their IEP. The ROA indicated that the answer in test booklet accommodation was provided to five students, despite not being indicated in their IEPs, while the one student in the sample whose IEP indicated this accommodation did not receive it during the test.

The sampled IEPs indicated 67 (15.3%) accommodations which could not be matched to the ROA. Researchers counted these accommodations as a Type III misalignment. However, it is important to note that because the ROA collects information only on accommodations identified above, researchers do not know if any of these additional accommodations were administered during the 2010-2011 administration of the assessment. These accommodations included the use of a calculator. According to PRDE policy the calculator is allowed on the PPAA if it is used in instruction as indicated in the IEP. The accommodation was indicated as an assessment accommodation in 24 IEPs.

Alignment of assessment accommodations as indicated in the IEP and ROA varied by school level (see Exhibit 11). Elementary schools presented the highest percentage of aligned assessment accommodations (44.4%), followed by middle schools (41.2%) and high schools (17.3%). Both middle and high schools presented high percentages of Type III misalignment (accommodation called for in an IEP but not provided during the assessment; 58.3% and 78.8% for middle and high schools, respectively). The higher misalignment at the high school level may reflect the fact that high school students have the ability to opt out of assessment accommodations on the PPAA. Elementary schools presented the highest degree of Type IV misalignment (accommodations not called for in the IEP but provided during the assessment; 19.3%).

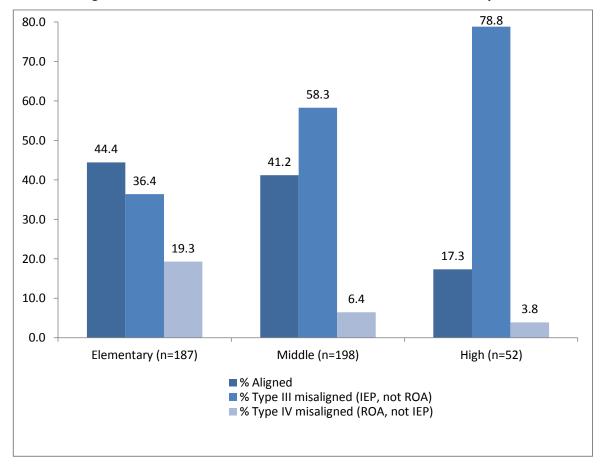


Exhibit 11. Alignment of Assessment Accommodations between IEP and ROA by School Level

Limited Spanish Proficiency (LSP) Students

There were four LSP students in the sample, all of whom had the extended time and use of bilingual dictionary indicated as assessment accommodations in their Learning Plans (LPs) (see Exhibit 12). Two LPs indicated use of glossary, highlighting instructions during tests, and reading test instructions. Other assessment accommodations indicated were change in desk location, use of calculator, change in test itinerary, and individualized reading. None of these accommodations were listed in the ROA as LSP assessment accommodations.

Most accommodations were aligned at least 50% of the time, with the exception of the use of the glossary accommodation. Although it was indicated on three Learning Plans, according to the ROA the accommodation was only provided to one of the students in the sample (Type III misalignment). Both the extended time and use of bilingual dictionary accommodations were indicated in four LPs but were only administered to three students. The highlight instructions accommodation was provided to two students despite not being indicated in their LPs (Type IV misalignment).

According to the ROA, one LSP student received accommodations during the PPAA that were not indicated in the Learning Plan, including frequent pauses, reader, scribe, and change in setting. Notably, these four additional accommodations are not LSP accommodations, but those used for SWD. Researchers could not ascertain whether these accommodations were in fact provided to the student or mistakenly marked in the ROA or on the student answer sheet.

Exhibit 12. Alignment between assessment accommodations in LPs and 2011 PPAA record of assessment (ROA) for LSP students

Type of	Listed as an Assessment	Frequency	Frequency	Aligned	Misaligned Accommodations			
Accommodation	Accommodation in LP or ROA	in the LP	in the ROA	Accommodations	Type III (LP, not ROA)	Type IV (ROA, not LP)		
Extended Time	4	4	3	3	1	0		
	·	·	-	(75.0)	(25.0)	(0.0)		
Use of Bilingual	4	4	3	3	1	0		
Dictionary	4	4	3	(75.0)	(25.0)	(0.0)		
	า	3	1	1	2	0		
Use of Glossary	3		1	(33.3)	(66.7)	(0.0)		
Highlight	4	2	2	2	0	2		
Instructions	4	2	2	(50.0)	(0.0)	(50.0)		
Read	2	2	2	2	0	0		
Instructions	2	2	2	(100.0)	(0.0)	(0.0)		
Change in	1	1	1	1	0	0		
Schedule	1	1	1	(100.0)	(0.0)	(0.0)		
Total	10	16	12	12	4	2		
Total	18	3 16	12	(66.7)	(22.2)	11.1		

Note: The percentages of aligned and misaligned accommodations are listed in parenthesis and are based on the total of all the aligned and misaligned accommodations.

Discussion

Research Question 1: To what extent do the assessment accommodations indicated in students' school records reflect those that are used in instruction?

Overall, the accommodations selected for assessment as indicated in the sampled IEPs were aligned with those selected for instruction in about 59.3% of the cases, with accommodation citation as the unit of analysis. The degree of misalignment varied considerably across accommodations. For extended time, most of the students whose IEP called for the accommodation in instruction also had the accommodation indicated for assessment (157 of 184 or about 85.3% of the students with extended time as an instructional accommodation also had extended time as an assessment accommodation).

The largest proportions of misalignment in IEP assessment accommodations were for those accommodations requiring use of a calculator or a reader; only one-third of students whose IEPs recommend these accommodations for instruction also had them indicated for assessment. Only half of the students whose IEPs indicated reader as an assessment accommodation also had this accommodation for instruction. One possible explanation for the high degree of misalignment for the reader accommodation is that the reader is not one of the nine standard instructional accommodations listed on Puerto Rico's IEP form; thus, students may not have access to this accommodation during instruction.

The level of alignment between instructional and assessment accommodations was the highest at the high school level, while the level of misalignment was highest among elementary schools (45.4% of all accommodations examined were misaligned). At the middle school level students were the most likely to receive an accommodation during instruction and not during testing (Type I misalignment).

Research Question 2: To what extent are the assessment accommodations identified in school records aligned with those indicated in the PPAA record of assessment?

With regard to the alignment between the accommodations indicated in the record of assessment (ROA) and those indicated for assessment in the IEPs, more evidence of misalignment than alignment emerged from this study with slightly over one third of all examined accommodations being aligned. Nearly half of reviewed accommodations were indicated in the students' IEP but not in the ROA, suggesting that students did not receive the assessment accommodations required by their IEP during the spring 2011 PPAA administration. In contrast, 11.4% percent of reviewed accommodations appeared in the ROA but were not indicated in the sampled IEPs, suggesting they were provided during the test administration despite not having been specified in the students' IEPs. Out of the accommodations with a high rate of incidence in the sample, the most frequently misaligned accommodation was the change in setting accommodation, which was aligned in only 29.7% cases. Only about a third of the students who required a change in setting accommodation based on their IEP actually received it. In the case of the reader accommodation, it was administered to 7.2% of the sample, despite not being indicated in their IEP. Overall in the sample the change in itinerary or order of the exam accommodation was the most misaligned. Although the accommodation was indicated on ten IEPs, it was not administered to any of the indicated students; at the same time it was administered to three other students who did not have the accommodation listed in their IEP. These findings are concerning; students who receive accommodations for the first time during assessment without having received them during instruction lack familiarity with the accommodation, which may hinder students' ability to meaningfully participate in the assessment process. Similarly, students who are accustomed to using specific accommodations during instruction should also receive them during assessment, or otherwise their performance on the assessment could be hindered.

About 15.3% of the accommodations listed in the IEPs did not match the accommodation categories listed in the ROA. Of these the most significant was the calculator accommodation which was listed as an assessment accommodation on 12.3% of the IEPs, despite not being listed as an accommodation category by the ROA. Researchers could not confirm whether these accommodations which were not captured by the ROA were administered during the 2010-2011 administration of the PPAA.

Researchers found the majority of the misalignment between the sampled IEPs and the ROA at the high school level, where accommodations in 78.8% of the IEPs did not match the ROA. There was greater rate of misalignment than alignment between IEPs and the ROA at the middle school level and elementary school level, where the misalignment between the IEPs and the ROA was over 50.0%.

Although the number of LSP students in the sample was very small (four students) researchers found that LSP accommodations were aligned for the most part, with the exception of the use of a glossary accommodation, which was not administered to two out of the three students whose LPs indicated it. The highlight instructions accommodation was administered to two students despite not being indicated on their LPs.

Recommendations

Given the findings of this study, researchers offer recommendations in two areas:

Provide Training to Teachers and IEP Teams (COMPU)

The PRDE should review its accommodations training to ensure that it provides educators with a clear understanding of the process for selecting and recording allowable accommodations for instruction and assessment. This training should encompass:

- 1. the purpose of accommodations;
- 2. the need to align assessment accommodations with instructional accommodations; and
- 3. the rules and regulations related to the selection of instructional and assessment accommodations for individual students and specific purposes.

Monitor and Evaluate Policies Related to Accommodations Decisions

The PRDE should monitor the consistency of the alignment between instructional and assessment accommodations and the accuracy with which assessment accommodations listed in the IEP are provided to students during the PPAA as listed in the ROA. The PRDE may conduct accommodations reviews during the assessment window or afterward, and the findings should inform how the COMPU records the use of accommodations for instruction and assessment on the IEP. The monitoring activities conducted by the PRDE to review accommodations may involve: 1) direct observation of test administrations and the provision of accommodations on the day of assessment; 2) on-site monitoring visits that include record reviews; and 3) interviews with students, teachers, and administrators about the selection and effectiveness of accommodations.

The PRDE can use this information to inform their policies for accommodations selection and use on a regular basis, to support good decision making, and to provide documentation to meet federal requirements. This evaluation and subsequent reports should: 1) include a timeline of analysis of findings from monitoring and assessment data (empirical evidence); 2) apply existing and new research related to best practices for accommodations; and 3) include an expert panel review of accommodation guidance and training to support continuous improvement of practices.

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Appendix A: Puerto Rico Assessment Accommodations according to Accommodations Manual

Visual Accommodations	Tactile Accommodations	Auditory Accommodations	Multisensory Accommodations	Modified Forms of Response	Environmental and Location Accommodations
Large-print version	Braille	Human reader	Videotapes and video descriptions (a descriptive narrative of key visual elements)	Scribe	Reduced distractions to the student
Equipment to enlarge text	Tactile graphics	Cassette or CD	Screen reader program	Word processor	Reduced distractions to other students
Sign language		Books on tape	Visual keys (for students who are blind/hard of hearing)	Voice to text	Change of location to help with physical access or use of special equipment
		Recorded books	Annotations, outlines, and instructions	Braille or electronic Braille notebook	Time and itinerary accommodations
		Equipment to amplify sound	Materials that "speak" (classroom materials with auditory components)	Note-takers (another student or an electronic note-taker)	Extended time
				Recorder	Frequent or multiple pauses
				Answer in the test booklet	Change of itinerary or order of activities
				Test answer supervision (to ensure the student correctly chooses their answer on the answer sheet)	
				Materials or equipment used to solve or organize answers	
				Equipment to make calculations	
				Grammatical and spelling tools (such as a dictionary)	
				Visual organizers	
				Graphic organizers	

Appendix B: Data Collection Protocol

Núm. de Estudiante:								Fecha:			
Coordinador de PPAA:		Coordinado	r de PPEA:				O	Observador de edCount:			
Información sobre la escu	ela										
Región	Arecibo	Bayamón		Caguas		Humacao		Mayagüez		Ponce	San Juan
Nombre de la escuela		-			1						
Director de la escuela											
Información demográfica	del estudiante										
Género	Femenino			Masculino							
El grado del estudiante durante la administración de las PPAA 2010 - 2011.	3 grado	4 grado		5 grado		6 grado		7 grado		8 grado	11 grado
PEI, Plan 504 o Plan LLE	PEI			Plan LLE							
	Fecha del Plan:			Fecha del Pla	n:						
PEI											
Indique el impedimento (sección III.B)											
Acomodos que necesita	Tiempo adicion	al		Uso de ábaco)			Uso de letra	a ag	randada	
el estudiante	Uso de calculad	ora		Ubicación de	l pu	pitre		Uso del Bra	ille		
(sección VI.F)	Uso de grabado	ra		Equipos de a	lta t	ecnología		Uso de aud	io		
	Otros:			-							

	Programa de Medición Regular			Evaluación Alterna		
Programa de Medición por el cual se evaluará el progreso académico y funcional del estudiante (sección VI.G)	Sin acomodos		Con acomodos Indique cuáles:	Alineada con estándares de aprovechamiento alternos (portfolio)		
Plan LLE	J .					
Tipo de acomodo recomendado (Anejo 6)						
Alternativa instruccional (Anejo 6)						
Personas responsables por los acomodos documentadas en el PEI, el Plan 504 o en el Plan LLE						
Puesto / Título		Comentarios				
Comentarios Generales:						

Appendix C: Data Collection Guidelines

Introducción

Son varias las leyes federales que atienden la provisión de los acomodos a los/as estudiantes con impedimentos con impedimento y estudiantes con Limitaciones Lingüísticas en Español (LSP). La Ley No Child Left Behind Act de 2001 (NCLB), establece el desarrollo de los estándares académicos y requiere el evaluación anual en las áreas académicas de Español, Inglés como Segundo Idioma, Matemáticas y Ciencias, creando un sistema de responsabilidad completo. La reautorización del 2004 de la ley Individuals with Disabilities Education Act (IDEA)requiere que se realice una determinación sobre los acomodos y que se garantice el acomodo de acuerdo al PEI y el Plan LSP, durante la administración de las pruebas. Además, se deberá presentar información sobre la cantidad de estudiantes que utilizan estos acomodos durante las pruebas.

El uso de los acomodos durante las PPAA le permite a los/as estudiantes con impedimentos y estudiantes (LSP) que facilita un mejor desempeño. Con el propósito de garantizar el uso apropiado de los acomodos durante el desarrollo de los programas educativos de los/as estudiantes con impedimentos y estudiantes (LSP) es necesario tomar en cuenta las necesidades específicas y las características de cada estudiante. Los acomodos ofrecidos durante la PPAA se agrupan generalmente en las siguientes categorías:

- 1. Acomodos para estudiantes con impedimentos
 - Acomodo de presentación (por ejemplo: letra agrandada, lenguaje de señas, braille y lector)
 - Acomodo para responder (por ejemplo: anotador, responder en el folleto de la prueba y monitor para la respuesta de la prueba)
 - Acomodo de ambiente y lugar (por ejemplo: un pupitre especial, en el hogar del/de la estudiante, en un salón separado de los/as otros/as estudiantes, etc.)
- 2. Acomodos para estudiantes con Limitaciones Lingüísticas en Español (LSP)
 - Tiempo extendido
 - Lector/a de instrucciones
 - Marcar las instrucciones con un marcador
 - Uso de diccionario bilingüe
 - Uso de glosario
 - No requiere acomodo

EL Manual de Acomodos 2004 y la Carta Circular de LSP del Departamento de Educación de Puerto Rico proveen las alternativas de acomodos para ser utilizada durante el proceso de enseñanza y aprendizaje y el sistema de medición (PPAA) para estudiantes que están registrados en educación especial y estudiantes LSP. El DEPR tiene la responsabilidad de garantizar la aplicación de estas normas, para asegurarse que todos/as los/as estudiantes que toman las PPAA tienen la mejor oportunidad de demostrar lo que saben y lo que pueden hacer.

Esta verificación del proceso de selección de los acomodos, incluye tres componentes, los cuales serán utilizados para:

- a) proveer retrocomunicación a los/as profesionales, tomando acciones correctivas inmediatas,
- b) informar las decisiones anuales relacionadas con adiestramientos y asistencia técnica, con el fin de verificar el uso adecuado de los acomodos.

La primera parte del proceso de revisión de la selección de los acomodos, y la cual se atiende en esta verificación, va dirigida a identificar cómo los acomodos seleccionados para los/as estudiantes específicos durante la administración de las PPAA, corresponden con sus acomodos durante el proceso de enseñanza y aprendizaje. El plan "Accomodation Review for PPAA 2011-2012" del DEPR para la verificación de estas normas fue desarrollado por el DEPR con la asistencia de edCount, LLC. El plan de verificación incluye los procedimientos a seguir durante las visitas de las escuelas. edCount, LLC adiestrará sobre los procedimientos a los/as coordinadores/as del DEPR, quienes realizarán las visitas en las escuelas. El personal a cargo de esta visitas será el coordinador/a de las PPEA, el coordinador/a de las PPEA y un/a empleado/a bilingüe de edCount. El/La coordinador/a de las PPEA será la persona responsable de acceder a los expedientes de los/as estudiantes para la verificación y registro de la información. El resto del equipo observará y dará apoyo en este proceso.

Revisión de los acomodos, Componente 1: Correspondencia entre los acomodos durante las PPAA y los acomodos durante la enseñanza y aprendizaje.

Los/as coordinadores/as del DEPR conducirán las visitas a las escuelas para verificar los registros de los acomodos utilizados durante las pruebas y la enseñanza de aquellos/as estudiantes con impedimentos con un Programa Educativo Individualizado (PEI) y los estudiantes con LSP quienes participaron en la administración de las PPAA en el 2010–2011. Se recogerá información necesaria para revisar cómo los acomodos seleccionados para los/as estudiantes específicos durante la administración de las PPAA corresponden con los acomodos utilizados durante su proceso de enseñanza. El DEPR seleccionará las escuelas específicas en cada Región Educativa de Puerto Rico y los/as coordinadores/as del DEPR seleccionarán los/as estudiantes específicos/as al llegar a la escuela. Los/as empleados/as de edCount servirán de observadores durante las visitas a las escuelas.

La hoja de cotejo para la revisión de los acomodos

La hoja de cotejo preparada para la revisión de los acomodos contiene las tareas específicas necesarias para prepararse, llevar a cabo y culminar cada una de las visitas a las escuelas; y la cual guiará a los/as coordinadores/as del DEPR y a los/as observadores/as de edCount. Las tareas están definidas en los anejos 1 al 3. Al completar las visitas a las escuelas en las siete Regiones Educativas de Puerto Rico, los/as empleados/as de edCount analizarán los datos obtenidos y desarrollarán un informe que contenga recomendaciones para el DEPR sobre la selección, administración y verificación de los acomodos utilizados durante la administración de las PPAA y durante el proceso de enseñanza y aprendizaje.

Anejo 1. Preparación para las visitas de revisión de los acomodos.

Tarea
Conocer y comprender el propósito de las visitas a las escuelas y de los
procedimientos a llevarse a cabo.
Adiestrar a los/as coordinadores/a acerca de los procedimientos utilizados durante
la visita y sobre cómo llenar el formulario.
Comprender el proceso por el cual se seleccionan los/as estudiantes y los planes
(PEI/ plan educativo LSP) de los/as estudiantes seleccionados.
La Subsecretaria de Asuntos Académico emitió un memorando sobre la
verificación de los acomodos para las PPAA al sistema de Educación Pública.

Anejo 2. Realizar las visitas de revisión de los acomodos.

Tarea
Llegar a la escuela a la hora establecida.
Presentarse en la oficina del/de la director/a de escuela.
Registrarse en la hoja de llegada/salida de la escuela.
Reunirse con el/la director/a de la escuela para presentar el objetivo de la visita,
proveerle el acuerdo de confidencialidad y describir los procedimientos utilizados
durante la revisión de los expedientes.
Los/as Coordinadores/as de PPEA, son los únicas personas autorizadas a trabajar
con los expedientes. El propósito es verificar la documentación que indica los
acomodos utilizados durante las PPAA y durante los procesos de enseñanza y
aprendizaje.
Obtener información sobre el área designada por el/la director/a para el proceso
de verificación de los expedientes.
En ningún momento se pueden sacar los expedientes de los/as estudiantes fuera
del área designada para verificación. En ningún momento los expedientes pueden
ser sacados de la escuela.
Tratar a todos los/as empleados/as de la escuela con respecto y cortesía.
Enfocar las preguntas y la atención sólo en los temas relacionados con los
acomodos.
Completar un protocolo de verificación para cada estudiante seleccionado/a.
Dicho documento se incluye en los materiales provistos.

Anejo 3. Culminación de la visita de verificación de los acomodos

Tarea
Devolver los expedientes de los/as estudiantes al/a la director/a de la escuela.
Reunirse con el/la director/a escolar o los/as administradores de la escuela, si éstos lo solicitan.
Presentarse en la oficina del/de la director/a escolar para registrar su salida de la escuela.

Appendix D: Description of School Sample

School	School Level	Reason for Sampling
1	"Segunda Unidad"	High rate of overall accommodations
2	"Segunda Unidad"	High rate of overall accommodations
3	High School	Low rate of overall accommodations
4	Middle School	Low rate of overall accommodations
5	High School	Low rate of overall accommodations
6	Middle School	High ratio for particular accommodations-LSP Extended time
7	Elementary	High rate of overall accommodation
8	Middle School	High ratio for particular accommodations-LSP Extended time
9	High School	Low rate of overall accommodations
10	Elementary	Low rate of overall accommodations
11	High School	Low rate of overall accommodations
12	Middle School	High ratio for particular accommodations-LSP Extended time
13	Elementary	This school was selected at the last minute since the previous school was unable to participate during data collection.
14	"Segunda Unidad"	Low rate of overall accommodations
15	High School	High ratio for particular accommodations-LSP Extended time
16	High School	Low rate of overall accommodations
17	Elementary	High rate of overall accommodation
18	Middle	High ratio for particular accommodations-LSP Extended time
19	Elementary	High rate of overall accommodation
20	Elementary	High rate of overall accommodation
21	Middle school	High ratio for particular accommodations-LSP Extended time

Note: "Segunda Unidad" are K-9 schools in Puerto Rico.