Evaluation of Supplemental Education Services 2008-2009

Technical Report

Prepared for
Michigan Department of Education

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August 2010

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Acknowledgments

Public Policy Associates, Incorporated (PPA) extends its appreciation to the staff at the Michigan Department of Education (MDE) Office of Education Improvement & Innovation—Linda Forward, William Witt, and Regina Allen—for their partnership in the design and conduct of the evaluation. Other members of the MDE, the Department of Information and Technology, and The Center for Educational Performance Information also made critical contributions to the evaluation, including data support from Dave Judd, Trina Anderson, and Meghann Omo.

The Supplemental Education Services coordinators serving districts in Michigan were vital sources of information and played a key role in facilitating the conduct of the data collection. Coordinators oversaw the distribution of parent surveys and monitored teachers' survey completion. Detroit Public Schools District building coordinators similarly monitored the completion of teacher surveys.

PPA contributors to this report include Daniel Gough, Nancy Hewat, Monica Long, Nancy McCrohan, David McConnell, Nathalie Winans, Scott Southard, and consultant Lisa Marckini-Polk. Any errors in the implementation of the evaluation or interpretation of the data are the sole responsibility of PPA.

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Introduction

This report offers a technical overview of the implementation of an evaluation of Supplemental Education Services (SES) providers in Michigan for the 2008-2009 school year. This report presents detailed information on the data sources and methods serving the evaluation, and recounts the challenges in sufficiently depicting this program.

This report acts as a companion piece to a Summary Report on these 2008-2009 services, which provides a synopsis of services received in the school year. The primary products of the evaluation include provider-level reports. All evaluation reports are available online from the Michigan Department of Education (MDE).

This report is the third in a series of annual technical reports related to the assessment of the SES providers in Michigan and the performance of the students that they have served. The evaluation is conducted by Public Policy Associates, Incorporated (PPA), under contract to the MDE.

Under the No Child Left Behind Act (NCLB), the responsibilities of states are laid out for responding to schools that do not meet Adequate Yearly Progress (AYP). One of the activities intended to remediate the lack of AYP, under certain circumstances, is the provision of SES. The Michigan Department of Education is responsible for approving and monitoring providers of SES, and ensuring that providers meet quality standards. The SES provider evaluation is conducted in support of MDE's goal of monitoring the effectiveness and quality of providers. The MDE disseminates the performance data obtained in the evaluation by posting it to its Web site, and providing it to school districts in the state, which must in turn ensure that parents have this information to support their decision making in selecting a provider.

The evaluation framework and data streams used carry over from previous evaluations. The instruments and administration of the data collection were, for the most part, unchanged from the prior year of evaluation.

The evaluation methodology required the use of the following data sources:

- Michigan Educational Assessment Program (MEAP) scores. These data were used to estimate the impact of SES on student achievement in math and English language arts/reading (ELA).
- A survey of parents, which focused on perceived changes in student behaviors, SES provider communication, and overall satisfaction with tutoring.
- A survey of teachers regarding the extent and quality of provider communications, perceived improvements in student performance, and an overall assessment of providers.
- A survey of district SES coordinators in terms of how well providers met administrative requirements of their contracts, and perceptions of program implementation and program fidelity vis-à-vis the provider application.

The report is organized according to the following outline.

- *Introduction*. In this first section, an overview of the report is presented.
- *Survey Process*. This section of the report describes the source data, and the development and administration of parent surveys, teacher surveys, and district coordinator surveys.
- *Michigan Educational Assessment Program (MEAP) Scores*. The second section of the report offers an account of the analyses and reporting of MEAP data used in a statistical exploration of the impact of SES delivered in 2007-2008 on participants' 2008 math and ELA MEAP scores.
- *Provider Profiles*. The third section recounts the development of Provider Profiles, essentially a report card for each provider based on multiple data streams.
- *Recommendations*. Finally the report concludes with some recommendations relevant to the evaluation process and MDE data systems that are drawn upon to inform the evaluation.

Survey Process

Source Data

Information on Supplemental Education Services (SES) participants statewide is, for the most part, stored in the Center for Educational Performance Information (CEPI) statewide data-collection system. Some districts do use a relational database software to manage the SES program service data. Most of these districts use the Cayen system, which is a database designed to integrate information on student enrollment and provider services, and to support related administrative functions, such as invoice processing. As for CEPI, districts typically manually enter case-level information, i.e., each student's information, into the CEPI database via an online data-entry system, but larger districts are more likely to provide a download file to the Michigan Department of Education (MDE) instead due to the impracticality of entering a large volume of cases when this can be extracted from their own databases.

The MDE staff communicated with districts about protocols for entering their data in CEPI, or, in the case of districts using the Cayen system, submitting a download, due March 2009, for each student enrolled in SES. These data files formed the sample frame for the teacher and parent surveys. The CEPI system only functions to capture case data on SES participants, and due to this, districts use it only for reporting to the MDE; it is not used for their own sample management. In effect, this is a static system, rather than a live system regularly updated. Therefore the sample frame was pulled as late as feasible in the school year in order to get the most recent information possible.

The CEPI data elements used in the evaluation include student name, State of Michigan unique identification code (UIC), date of birth, gender, grade, district name and code, building name and code, provider name, tutoring subject, and the actual service hours for tutoring in math, English Language Arts (ELA), and other subjects.

The downloaded case-level CEPI and Cayen data files had minor issues such as incomplete cases, duplicate cases, and variably entered providers' names. These issues were easily resolved with successive updated data files, but time was lost from the window for fielding the surveys.

The MDE is credited with making the evaluation possible by housing the data collection system and through its efforts to gain district cooperation in entering data. Nonetheless, the SES service-delivery was both dynamic and ongoing at the time districts submitted their student lists, resulting in a sample file with notable inaccuracies. For example, the data systems did not signal cases in which students changed providers, students signed up but dropped out before services were delivered, students lost providers because the provider had dropped, and students were offered SES late in the spring or in the summer. Districts varied widely in the timeline with which they implemented SES, and in some areas, that meant that the case-level data was preliminary.

The MDE requested districts to update the final number of actual service hours at the end of summer 2009. These data were provided to Public Policy Associates, Incorporated (PPA) at the end of the calendar year, and are reflected in the Summary Report for 2008-2009.

For the Summary Report 2008-2009 cases in which zero hours of service were provided were removed from analyses of parent and teacher survey data. Specifically, there were:

- 13,736 cases in the initial sample from CEPI in spring 2009.
- 2,632 cases with missing or zero hours of service; these cases represent students who enrolled at some point, but did not get services, in the initial sample frame.
- 11,104 de-duplicated cases, matched to initial sample frame, with non-zero service hour data.

Of cases in the initial sample frame, 16% of cases did not receive services, which demonstrates the limitations of a point-in-time capture of enrollment.

Parent Survey

For the parents of students identified as SES participants, a hard-copy survey was designed in-house and delivered to parents via postal mail. The parent survey was an improved version of the previous year's instrument, with alterations being made based on input and guidance from MDE staff and a careful assessment of the prior instrument's performance. The instrument itself was printed on the front and back of one sheet of paper. It consisted of 18 questions, the last question being open-ended. The instrument was machine-readable using Remark®, a scanning software program, and was personalized using mail merge fields. The reading levels of survey materials were kept as low as feasible, and were measured at a 5th grade level for the survey and an 8th grade level for the cover letter. The cover letter was from the State of Michigan and included instructions in Spanish directing Spanish-speaking parents to call PPA's toll-free number to receive assistance in completing the survey if needed.

Prior to the surveys being mailed to parents, an electronic mailing was sent from the MDE to providers, asking them to encourage parents' participation, and to share with parents a letter from the MDE informing them that the survey was forthcoming immediately. These steps were taken to encourage parent participation. In these communications, both providers and parents were reminded that surveys should be returned directly to PPA and not to the provider or to the district. It is not known how many providers received the communication nor how many parents were reached using this method. Response rates, as discussed at the end of this section, actually declined from the prior year.

A printing services company provided printing services and physically packaged the survey, cover letter and a PPA pre-paid business reply envelope in a sealed standard-sized envelope with a machine-printed PPA return address. The envelope was personalized "To the Parent/Guardian of STUDENT NAME."

To alleviate undue burden on the largest district, PPA arranged with the subcontracted printing company and the district to mail that district's parent surveys directly, by May 1, 2009. This required the district to provide PPA a file containing home addresses.

For each of the other school districts, PPA grouped the prepared envelopes in batches organized both by building and alphabetically by student. These were then packaged and shipped to the District Coordinators with instructions for their distribution (District Coordinators also coordinated the teacher survey process, as described later in this report). District Coordinators were provided a list of all students for which there were parent surveys; this list was also sorted by building and alphabetically by student. District Coordinators were then asked to generate, match, and affix mailing labels to these envelopes. District Coordinators were reminded to also use the proper postage and place them in the mail. PPA included extra self-addressed stamped envelopes in anticipation that some parents would return their surveys directly to the schools rather than using the provided reply envelope. District Coordinators were asked to mail parent surveys so that they would be in the field by May 12, 2009 at the latest. District Coordinators were also asked to e-mail PPA when the parent surveys had been mailed, and in cases where this did not happen, progress was then verified through follow-up contact by PPA staff. PPA had previously contacted each District Coordinator by e-mail or telephone to describe the survey process and their role within it and generally to set their expectations for the evaluation.

There were some challenges in fielding the survey. As expected, some addresses were not current, and this resulted in undeliverable returned mail. However, the amount of mail returned to PPA as undeliverable was less than in previous years. While technical assistance was provided to parents, this activity did not present any undue challenge for execution. The team was well prepared to provide technical assistance, and was able to field parent questions and concerns, and to refer them as needed to the district or the MDE for concerns about specific providers. Most questions and comments pertained to the student's status with a given provider. Parents were given both a direct-dial and toll free number to the PPA offices in the survey cover letter. A Spanish version of the survey was also drafted for PPA staff, so that staff could conduct the parent survey via telephone as needed. Less than ten incoming calls to PPA were from Spanish-speaking parents requesting assistance in completing the survey.

The parent survey responses were exported from the scanning program into SPSS, where they were analyzed. The survey raw response rate was 5.8%. However, some parent surveys could not be used in the analysis for the statewide report. Cases were excluded when:

- Parents were unsure whether tutoring took place.
- Parents reported tutoring definitely did not occur.
- Parents could not identify the provider.
- Surveys were missing all data.
- Tutoring was terminated.
- Receipt of SES could not be confirmed from service hour data.

Eventually, 517 of the 802 returned surveys were used in the parent analyses for this report, which represents 64.5% of returned surveys and 3.8% of mailed surveys. Distribution of usable surveys across districts is discussed in the Summary Report. Both the raw and usable response

rates were quite a bit lower than the prior year, and is discussed further in the recommendations section of this report.

A final note about the distribution of invitations, which actually applies to both parent and teacher surveys: Participation in the parent and teacher surveys—by district—was very low, with responses from only three and four districts, respectively. However, the districts that participated in the teacher and parent surveys represent more than 95% of all the students enrolled in SES in Michigan in 2008-2009. The nonparticipating districts offer services to a very small group of students (ranging from 17 to 157 students each) compared to participating districts. Unfortunately, the result suggests that most districts did not actually distribute the parent and teacher survey invitations. Therefore, in terms of response rates, the denominators are expected to be overstated, and the response rates understated.

Anecdotally, districts have indicated that the education environment in Michigan in the recent years is one in which it is difficult to gain enthusiasm from school staff for projects; the people are characterized as demoralized due to the budgetary environment. Some schools providing SES have gone through a process in which all teachers are laid off, and must complete an application process to come back to teaching. Combined with the surveys coming at the end of the year, it is a difficult environment in which to gain compliance.

Teacher Survey

Instrument and Mode

For the teacher survey, a single instrument was administered in all districts and all schools. Based on lessons learned in the prior year and MDE staff input, minor changes were made to the prior year's instrument. Each "teacher survey" requested that the teacher consider a particular dyad of student and provider. The instrument items asked about their role in relation to the student; type of communications received from provider; changes in student behavior, demeanor, and performance; whether any changes might be attributable to the provider; and whether they would recommend the provider.

A secure Web site was used to collect the teacher survey data. This Web site was hosted and maintained by a subcontractor. Where possible, invitations to participate in the survey were sent electronically by the host site, and the subject line of the invitation read, "On behalf of the Michigan Department of Education." The body of the e-mail alerted the reader that "The Michigan Department of Education is working in partnership with Public Policy Associates, Incorporated to evaluate Supplemental Education Services (SES) providers." Contact information for PPA staff was provided in the body of the e-mail in the event that teachers required technical assistance.

Assignment and Invitations

For teacher surveys, the goal was to gather feedback on each student enrolled in SES from a teacher knowledgeable about a particular student's progress. District Coordinators and Building

Coordinators[1] played a key role in the both the assignment of teachers to particular cases and the distribution of the survey invitations.

In the case of the largest district, PPA received a data set that identified the appropriate teacher for most students. PPA then generated the e-mail addresses for each of these teachers using the district's specific e-mail address formula. Survey invitations, as well as log-in credentials, were then delivered via e-mail for all cases with an identified teacher. Teachers with known e-mail addresses received a single e-mail request, regardless of the number of students assigned to them, to log on to the secure Web site and participate in the survey process.

Hard-copy survey invitations, directing teachers to the Web site were disseminated in (1) all other districts, and (2) cases for which teachers or teacher e-mail addresses had not been identified in the largest district. These invitations, and log-in credentials were delivered to District and Building Coordinators along with instructions for their distribution. Instructions for completing the surveys were also included in the bodies of both the electronic and hard-copy invitations.

The written instructions given to the District and Building Coordinators asked them to assign the appropriate teacher for each student on their student list and deliver to that teacher the hard-copy survey invitation for each student assigned to them. Each teacher was given credentials to allow them access to the online survey system. Teachers were required to change their password when logging in for the first time.

District and Building Coordinators were also given log-in information for access to the secure site, which allowed them to monitor the progress of the teachers in their district/building. Their level of access also allowed them to assign and reassign student cases to teachers who were already in the system as well as enter teacher information to make assignments where teachers did not already have an account set up or had not already been given hard-copy invitations.

The following types of scenarios had to be managed in providing invitations to teachers:

- Known teacher name with known e-mail address
  - *Action:* PPA sets up a teacher account and sends survey invitation electronically
- Known teacher with unknown e-mail address
  - *Action:* PPA provides District or Building Coordinator with a hard-copy invitation per student.
    - Coordinator must identify teacher, and either:
      - Distribute hard-copy, or
      - Obtain e-mail address and set up account

[1] Building Coordinators (BC) are staff that are specific to Detroit Public Schools, needed due to the number of schools participating in SES. Each BC is assigned a specific school building to support the role of the DPS SES District Coordinator.

- Unknown teacher
  - *Action:* PPA provides District or Building Coordinator with a hard-copy invitation per student.
    - Coordinator must identify teacher, and either:
      - Distribute hardcopy, or
      - Obtain e-mail address and set up account

Regardless of invitation method, once teachers had logged on to the system, they were requested to personalize their generic passwords and enter valid e-mail addresses. This allowed for an additional level of security and for automated reminders to be sent via e-mail when surveys had not yet been completed. The subject line of reminder e-mails was "On behalf of the Michigan Department of Education, survey reminder" and included the number of surveys that were completed, partially completed, and yet to be completed. Reminder e-mails were sent approximately weekly with this information.

Interface

In the Web-based system, as mentioned above, a teacher account was set up in advance for each identified teacher, i.e., for those who where affiliated with a specific student and for which PPA had contact information. Accounts were also set up for District and Building Coordinators to provide a management interface permitting access to teacher account information as well as the status of each survey in their building/district. Management rights included the ability to create teacher accounts, assign surveys to accounts, and reassign surveys to another teacher as needed. PPA staff access to the system also included the right to view survey status, create Coordinator accounts, assign surveys, and reassign teachers. PPA staff were responsible for securely communicating with all parties their credentials, sometimes repeatedly, as was anticipated from previous years' experience.

Teacher Interface

The teacher interface included the following functions: listing of all the students assigned to their account with the status of each survey; ability to add students to their list by referring to any hard-copy invitations; and ability to answer a survey for each student.

Building and District Coordinator Interface

When Coordinators logged in to the system they were presented with several possible actions. Coordinator administrative rights gave them the ability to view the status of all assigned student surveys in their building/district, view the list of unassigned students, assign students to teachers, and create new teacher accounts.

There were two options for Coordinators to communicate new survey invitations. If a teacher was added and the Coordinator had an e-mail address for that teacher, an invitation was sent electronically. If the Coordinator did not have an e-mail address for a given teacher, then the Coordinator was able to print out hard-copy invitations as well as a generic password to deliver to the teacher.

Eligibility and Reassignment

Conflict of interest was a salient factor in assigning teachers to surveys. Therefore, the first survey items were designed to identify whether it was appropriate for the teacher to actually complete the survey for the student in question. To this end, teachers were asked to respond to the following statements:

- I have a conflict of interest that prevents me from objectively evaluating the provider. (Examples: I am working for the SES provider organization or have done so in the last two years; I am on the SES provider organization's board of directors; I have family or personal ties to the SES provider organization's leadership; etc.)
- This student is not enrolled in this school.
- This is not one of my students.
- This student rarely attends my class.
- I know for certain that this student rarely attended SES.
- I know for certain that this student was not enrolled in SES.

A "true" response to any of these statements prompted an automated process in which (1) the survey for that student case was automatically terminated and the student dropped from that teacher's list of assigned students, (2) the case was coded as a "return," (3) the reason for return was recorded, and (4) the Coordinator received an e-mail alerting her that a student case needed reassignment to another teacher. Online, Coordinators were able to view the return cases, the reason these cases were returned, and when appropriate, reassign the case to another teacher.

Technical Assistance and Challenges

Using the Web-based system, PPA was able to monitor building-specific response rates from surveys and to communicate progress to Coordinators as needed. PPA provided technical assistance via telephone and e-mail to both teachers and Coordinators during the data-collection phase, and offered a contact number in the e-mail invitations, hard-copy invitations, and on the Web site. PPA worked in collaboration with the Coordinators to address issues on an as-needed basis.

A variety of challenges were identified and managed, with varying success, over the course of fielding the survey.

The Web system was necessarily complicated due to having both electronic and hard-copy modes of initial invitation. This meant that some teacher accounts were created in advance by the host, some by the District Coordinator, and others were created online by the teachers after getting a hard-copy invitation. In some cases, teachers mistakenly created an additional account in the system. While the instructions were crafted to simply and concisely orient the Coordinators to the proper distribution and management of teacher accounts in two pages, there were naturally instances of confusion.

There were disadvantages to distributing hard-copy invitation letters, most notably that PPA did not know which teachers were invited to participate unless they did as requested and set up a user account. Unless teachers had accounts, automated follow-up reminders could not be sent

via e-mail. Another disadvantage was that no paper trail existed that could demonstrate whether papers had been successfully distributed by District Coordinators.

On the other hand, a main benefit of using e-mail invitations was the ability to automate e-mail reminders from the Web host. It also was convenient for teachers to reach PPA staff for technical assistance via e-mail inquiry. By necessity, district staff were asked to maintain a role in the tracking and follow-up contact with individual teachers. This effort was met with varying degrees of commitment and consistency.

The teacher survey responses were imported into and analyzed in SPSS. In nearly one-quarter of cases, teachers responded to the invitation (23.7% response rate); however, in more than 40% of these cases, the responses to the screening questions indicated a potential conflict of interest or student ineligibility, and therefore teachers were not allowed to continue on to complete the survey. A total of 1,955 (post-screening) surveys were processed online, which is a 14% rate of return. Upon inspection of data collected, a handful of cases were discarded where teachers had responded but the parents had reported that the child did not receive SES (0.2%) or where teachers had left surveys virtually incomplete. Finally, for this report, cases were excluded if student participation could not be verified by service hour data. Ultimately, 1,506 completed surveys were used in the teacher analyses for this report, which represents 11% of the initial sample frame.

District Coordinator Survey

The survey of District Coordinators was a two-page survey administered in hard-copy and printed on one sheet of paper. The instrument was improved from previous years' based on MDE staff input and lessons learned from the data collection of the prior year. Each District Coordinator was given a number of blank surveys equal to the number of providers in his or her district as reported by districts in CEPI or in their Cayen system. The hardcopy surveys were not personalized with the provider or district name, but District Coordinator were to fill in this information, and a list of providers in the district was included for reference. Instructions for completing the survey also provided Coordinators with contact information of PPA staff who could assist with questions.

The surveys were fielded at the beginning of May 2009, and due to be completed by the end of the month. Reminder e-mails were sent on May 28 and telephone calls were made on June 9 to a handful of District Coordinators who had not yet returned surveys, requesting a reply as to their status. A final reminder telephone call to outstanding districts was made the third week of June.

District Coordinators were hampered in their responses because they were not completely familiar with providers' contractual and operational information.

Unlike the teacher and parent surveys, the unit of analysis for the District Coordinator survey was the provider *contract;* District Coordinators were asked to complete a survey for each provider with whom they had contracted for service to SES participants.

The survey responses were entered into Microsoft Excel and analyzed in SPSS. The District Coordinator survey earned an 83% response rate.

Analysis of the Impact of SES on Michigan Educational Assessment Program Scores

Analysis Overview

Unlike other elements of the 2009 Supplement Education Services (SES) Evaluation, analysis of the impact of SES on Michigan Educational Assessment Program (MEAP) scores focused on services delivered in the *prior* school year (2007-2008). Evaluation of the impact of SES on MEAP scores requires both a pre- and post-services MEAP score, and for students receiving SES in the 2008-2009 school year, no post-services scores were available until the fall 2009 MEAP tests had been taken and processed. Based on the necessary timeline for various products of the MEAP analysis, the 2007-2008 school year was the most recent instance of SES delivery that could be evaluated.

The analysis of the impact of SES on MEAP scores was restricted to those students who were in grades 3 through 7 as of fall 2007. Students in other grades did not take MEAP tests in math and English language arts/reading in both 2007 and 2008 and, therefore, could not be included in the analysis.

The analysis was conducted using a hierarchical linear modeling (HLM) approach relying on a matched group of students that did not participate in SES. HLM is the most appropriate form of analysis in many types of educational research as it accommodates "nested" data: that is, where students are grouped into classrooms, school buildings, and districts and these settings are expected to influence student outcomes. Additional information about HLM and the execution of the analysis for the SES evaluation is provided in the sections that follow.

Source Data

Source data for the MEAP analysis included extracts from the 2007 and 2008 statewide research files, containing:

- Raw and scaled MEAP scores for individual students.
- Student identifying information including name, unique identification code (UIC), and school-issued student identification number (where such existed).
- Names and codes of the building and district in which the student was enrolled.
- The student's grade level.
- Demographic information including economic disadvantage status, Limited English Proficiency (LEP) status, special education status, Former Limited English Proficiency (FLEP) status (all coded "yes" or "no"), gender, and race.

These data were provided by the Michigan Department of Education (MDE) for students in grades 3 through 8 in 2007 (726,119 cases[2]) and for the same grades in 2008 (713,673 cases).

The statewide research file does not include information on whether a student received SES. As part of the broader ongoing SES evaluation for the 2007-2008 school year, PPA had compiled a data file with data on 15,077 students receiving SES in the 2007-2008 school year. The file information included the student name and UIC, grade, date of birth, and SES provider name. For most districts, data on participating SES students were reported to the State of Michigan's Center for Educational Performance Information (CEPI) data collection, and subsequently extracted from that collection for PPA's use in conducting the evaluation. The Detroit Public Schools had initiated use of the Cayen SES program for management of its SES data, and provided an extract to Public Policy Associates, Incorporated (PPA) directly.

The 2007 and 2008 statewide research files with MEAP scores were matched to one another on the basis of the student UIC. Subsequently, the SES student data was matched to the consolidated statewide research file to connect SES participants to their MEAP data.

Identifying the Sample

Many of the 15,077 SES recipients in 2007-2008 could not be considered in the analysis. Table 1 lists exclusion factors and the number of SES students dropped from the analysis at each stage.[3]

Table 1: Exclusion Factors for Analysis of SES Impact on MEAP Scores

Factors	**Number of SES Recipients Dropped** (*Total SES Recipients = 15,077*)
No UIC associated with student record	122
Student not in grades 3 – 7 in 2007	9,754
No MEAP record in 2007*	417
No MEAP record in 2008*	1,381
Retained, double-promoted, or other nonstandard grade change	247

[2] The original case count was 726,192 and 73 cases had been flagged for potential ethical issues related to the test. These were deleted.

[3] The table describes the process of eliminating students that could not be considered in the analysis, but readers interested in data limitations should note that for many students excluded, more than one factor could have been responsible. For example, a student who was retained between 2007 and 2008 might also have had missing MEAP data and been the only SES recipient with a given provider in his or her grade and building. The table describes the number of students excluded at each stage rather than the full count of students to which each exclusion circumstance applied.

Table 1: Exclusion Factors for Analysis of SES Impact on MEAP Scores	
Factors	**Number of SES Recipients Dropped** (*Total SES Recipients = 15,077*)
Missing MEAP data in 2007 or 2008 for subject in question** or no match available***	
Math	51
ELA	44
Only student with named provider in grade/building****	
ELA	720
Math	711
Total available for analysis	
ELA	2392
Math	2394

Notes:
*This condition refers to the absence of any MEAP record for the student for the given year
**This condition refers to missing math or English Language Arts (ELA) MEAP scores, although other scores may be present.
***The matching protocol matched one unique student to one unique SES recipient. In some cases, SES students in the building and grade outnumbered nonparticipants, and the available pool of students for matching was exhausted before all SES participants could be assigned a match.
****The HLM analysis of provider-specific results, controlling for school building, cannot be performed in situations where there is only one SES student in a given building and grade.

As Table 1 shows, only approximately 16% of SES recipients could be considered in the MEAP score analysis. The most important exclusion reason was student grade, which eliminated 65% of the SES participants (59% were eliminated for this reason in the analysis for the 2005-2006 school year and 76% for 2006-2007). Another 12% had missing MEAP data (only 5% were eliminated for this reason for the 2006-2007 analysis) and 5% were eliminated due to requirements of the analytic approach, which focused on both provider and building factors. Modest numbers of students were retained, double-promoted, or showed other nonstandard change of grade between the first and second years of the analysis, and modest numbers of students had a MEAP record but lacked the relevant scaled score in either 2007 or 2008.

The final count of SES students used in the analysis is shown in Table 2 by grade and subject.

Table 2: Final Count of Useable SES Student Records for MEAP Analysis		
	Useable SES Student Records	
Grade	*Math*	*ELA*
3rd grade	410	414
4th grade	353	353
5th grade	350	346
6th grade	465	463
7th grade	816	816
Totals	2,394	2,392

Matched Control Group

The analysis relied on a matched control group drawn from the residual population in the merged 2007-2008 statewide research file. The raw data, including SES students, consisted of 726,192 student records for 2007 and 713,673 student records in 2008. Several exclusions were implemented to the combined database to eliminate students inappropriate for matching, many of which were acknowledged in the section immediately prior describing rationales for the exclusion of SES students from the analysis. Exclusions for the pool of potential matches included:

- SES students
- Students retained or promoted more than once between 2007 and 2008
- Duplicate records (based on UIC)
- Records with missing UICs
- Students not attending a school building with at least one SES student in their grade
- Students with missing data for the MEAP scores in question
- Records with a notation in the "unethical" field

These exclusions reduced the number of records available for matching to 19,875 for the analysis of math scores and to 20,001 for the analysis of ELA scores.

The matching protocol was originally developed in 2007, in consultation with the MDE, and considered students' grades, buildings, baseline scaled math/ELA MEAP scores, economic disadvantage status, LEP status, and special education status. The protocol was implemented separately for math and ELA, resulting in different groups of matching students for each subject-matter area.

In order to develop the matched comparison group, Each SES participant was, by definition, matched to a student in the same grade attending the same building. Within this pool, the matching protocol selected all students with a 2007 scaled MEAP score within one point, plus or minus, of the SES student's score (math and ELA considered separately).[4] Subsequently, the process proceeded as follows:

- If more than one student was available, the protocol selected the student with the same economic disadvantage status.
- If more than one student remained available, the protocol selected the student with the same special education status.

[4] For the 2007 evaluation, the matching protocol selected the student(s) with the closest baseline MEAP score, then matched on the basis of other characteristics: if a potential match had an identical MEAP score but differed from the SES participant on other qualities, the protocol preferred that match to one in which a one-point MEAP difference existed but other qualities considered were identical.

The change was implemented in 2008 in an effort to increase the likelihood that matching students would be comparable on demographic characteristics including economic disadvantage, special education status, and English proficiency, as well as comparable on the baseline MEAP score.

- If more than one student remained available, the protocol selected the student with the same LEP status.
- If more than one student remained available, the first available match was selected without further discrimination between available cases.

These priorities were consistent with the protocol developed in 2007, in which priorities were established on the basis of bivariate correlations between the variables and the outcomes of interest—the 2006 scaled math and ELA MEAP scores—which showed an extremely strong correlation between the Year-One and Year-Two scaled scores and modest relationships for the remaining variables.

No non-SES student was matched to more than one SES student and matches were implemented in the order of the SES students' 2007 scaled scores, with those scoring lowest matched first and those scoring highest matched last. The protocol was implemented using a macro written for SPSS.

Table 3 compares the characteristics of the SES population, by grade and MEAP subject matter, to the characteristics of the matched sample. Table entries in ***bold italics*** highlight the differences between the groups of four percentage points or greater, or, in the case of baseline MEAP scores, two points or more. The most significant differences are found between SES participants and non-SES matched students in special education status in the sixth and seventh grades. Fourth grade baseline MEAP scores also show some discrepancies between the SES participants and matched students.

Table 3: Comparison of Participants and Matched Control Group on Variables Used to Construct the Match

	Percentage of Group Members With Given Characteristic							
	Economic Disadvantage		*Special Education*		*Limited English Proficiency*		**2007 Mean MEAP Scores**	
Subject/Grade	*SES*	*Match*	*SES*	*Match*	*SES*	*Match*	*SES*	*Match*
Math								
3rd grade	90	90	11	10	13	12	312.51	313.47
4th grade	***91***	***87***	11	10	9	11	***402.47***	***405.92***
5th grade	88	89	9	12	9	9	496.07	497.83
6th grade	86	86	***22***	***16***	3	4	591.56	592.10
7th grade	81	78	***18***	***14***	3	4	693.54	694.70
ELA								
3rd grade	90	89	11	10	12	10	305.36	307.14
4th grade	91	89	10	11	5	5	***396.92***	***400.18***
5th grade	88	88	9	12	3	5	496.79	498.47
6th grade	86	86	***22***	***17***	4	5	593.38	593.99
7th grade	81	79	***18***	***13***	7	6	***690.03***	***692.14***

Exploratory Analysis

A limited exploratory analysis was conducted to confirm that the independent variables had a linear relationship with the dependent variables, to confirm that the dependent variables were normally distributed, and to identify outliers in the data. Scatterplots and histograms were reviewed for evidence of nonnormal distributions, curvilinear relationships, and outliers. All histograms revealed reasonably normal distributions in the independent variables and scatterplots revealed presumptively linear relationships between independent and dependent variables. No outliers of a magnitude suggesting exclusion from the analysis were observed.

Hierarchical Linear Modeling

The analysis of the impact of SES on student academic achievement was conducted using HLM 6.04, a software program developed exclusively for hierarchical linear modeling. Michigan's SES program represents a cross-nested structure, where students are grouped in school buildings and with SES providers. Yet, all students in a school building do not necessarily use the same provider, and SES providers can and do work with numerous school buildings and districts. Accordingly, the analysis relied on the program's HCM2 model for cross-classified linear models.

The level-one model was specified as follows:

$$\boldsymbol{MATHSS\_08} = B_{0jk} + B_{1jk}(\boldsymbol{MATHSS}) + B_{2jk}(\boldsymbol{SES}) + B_{3jk}(\boldsymbol{SE}) + e_{ijk}$$

- Where
  - j = the student's home school building
  - k = the student's SES provider
  - B_0 = the intercept term
  - $B_{1,2,3}$ = the estimated impact (coefficient) associated with each independent variable
  - e = a residual or error term
  - ***MATHSS_08*** = the scaled score for math in 2008 (the dependent variable)
  - ***MATHSS*** = the scaled score for math in 2007[5]
  - ***SES*** = a dummy variable set to 1 for SES participants and 0 for non-SES matching students
  - ***SE*** = a dummy variable set to 1 for special education students and 0 for other students[6]

The level 2 model was specified as follows:

$$B_0jk = \theta_0 + \boldsymbol{SCHOOLCODE}_{00}$$

$$B_1jk = \theta_1 + \boldsymbol{SCHOOLCODE}_{10}$$

[5] This term was grand-mean centered in the analysis.
[6] The special education variable was introduced into each analysis. However, where no statistically significant relationships were present, the models were respecified to exclude special education as an explanatory variable.

$B_2jk = \theta_2 + \boldsymbol{PROVIDER}_{20}$

$B_3jk = \theta_3$

- Where
  - θ_0 = the model intercept
  - $\boldsymbol{SCHOOLCODE}_{00}$ = the unique increment to the intercept associated with the student's building
  - θ_1 = the model estimate for the impact of 2007 scaled scores on 2008 scaled scores
  - $\boldsymbol{SCHOOLCODE}_{10}$ = the unique increment to the estimate of the impact of 2007 scaled scores on 2008 scaled scores associated with a specific school building
  - θ_2 = the model estimate for the impact of SES participation
  - $\boldsymbol{PROVIDER}_{20}$ = the unique increment to the estimate of the impact of SES participation associated with a specific provider
  - θ_3 = the model estimate for the impact of special education status

More generally stated, at level 2, the intercept term was specified with random school effects, the 2007 MEAP score (prior achievement) was specified with random school effects, SES participation was specified with random provider effects, and special education status was modeled independently, without mediation by schools or providers.[7] Although other demographic variables were presumed controlled as a function of the matched control group, differences between SES participants and the control group were (for some subgroups) sizeable enough that the special education term was also incorporated in the model.

The analysis was conducted using standard default settings in HLM.

Provider Coefficients

One of the recognized benefits of using an HLM approach was that it would specify unique coefficients associated with each provider, i.e., the impact of individual providers on post-services academic achievement. These estimates are generated by HLM, but must be tested for statistical significance through additional calculations in SPSS or another appropriate software package.

HLM generates an empirical Bayes (EB) parameter estimate and an associated posterior variance (pv) for each column-level variable (here, each specific provider) in the course of executing the model analysis. Confidence intervals around the EB estimate may be generated by multiplying

[7] The 2007 analysis included an interaction term between the baseline MEAP score and SES participation—a slope effect for SES participation. An examination of the proportional reduction in error associated with each of the terms in the model demonstrated that there were virtually no explanatory gains associated with the interaction term. Accordingly, the term was dropped from all analyses, and was not reintroduced for the 2008 or 2009 analyses.

the desired Z score by the square root of the posterior variance and both adding and subtracting the resultant figure from the EB estimate. The equation for a 95% confidence interval is thus:

$$EB \pm \left(1.96 * \sqrt{pv}\right)$$

Where both the minimum and maximum associated with the confidence interval exceeded zero (positive impact) or both the minimum and maximum were less than zero (negative impact), the provider was deemed to have a significant impact on the MEAP scores of SES students in attendance.

Results of these analyses to date have found very limited identifiable impact of individual providers' delivery of SES on subsequent MEAP scores.[8] In consultation with the MDE, an analysis protocol was developed in which statistically significant provider effects were identified using a range of confidence intervals: the categories considered included "possible impact" (50% confidence interval), "plausible impact" (67% confidence interval), "probable impact" (80% confidence interval) and "highly probable impact" (95% confidence interval). The equations used to generate the upper and lower bounds for each provider-specific parameter were as follows:

- 80% confidence interval: $EB \pm \left(1.28 * \sqrt{pv}\right)$
- 67% confidence interval: $EB \pm \left(0.975 * \sqrt{pv}\right)$
- 50% confidence interval: $EB \pm \left(0.675 * \sqrt{pv}\right)$

As reported in the summary narrative, analysis of provider-specific coefficients associated with SES participation identified 11 providers and 14 instances where specific providers were associated with statistically significant impacts on their students' MEAP scores. Such impacts were seen only with respect to 6th grade math, 4th grade ELA, and 7th grade ELA; all other subject matter/grade combinations had no measurable impacts on MEAP performance for any measured provider. Of the 11 providers with any measurable SES impacts, 1 was associated with positive impacts in two subject-matter/grade combinations, 7 were associated with positive impacts in one subject-matter/grade combination, 2 were associated with both one positive and one negative impact, and one was associated with a negative impact in one subject-matter/grade combination. Two associations were identified using 50% confidence intervals, 6 with 67% intervals, 5 with 80% intervals, and 1 with a 95% interval.

[8] The original protocol, developed in consultation with the MDE, was to identify providers with significant impacts at the 95% level of confidence and classify them based on the magnitude of the estimated impact: providers with impacts in excess of 7.50 points (one-half of a standard deviation on the MEAP) would be rated as "A" providers, providers with impacts between 3.75 and 7.50 points (one-quarter to one-half of a standard deviation) would be rated as "B" providers, providers with no measurable positive or negative impacts would be rated as "C" providers, and so on into the negative ranges of coefficient estimates. Initial results showed fewer than ten instances where providers had any measurable impact for a given grade and subject level. After review of the data, MDE hoped to find a means that better discriminated among providers, and ultimately recommended a new approach relying on looser confidence standards and different verbiage to describe the nature of the impact. This approach was retained in 2008 and 2009.

Provider Profiles

A provider profile was generated for each of the 2008-2009 Supplemental Education Services (SES) providers. The profiles included general information obtained from the providers' applications, such as the tutor contact information, a description of the program, and places of service. If the provider served students, and surveys were returned, results from the parent, teacher, and District Coordinator surveys were reported. An overall rating, in the form of a letter grade, was calculated for each provider based on responses to several parent and teacher survey questions. In addition, results of the analysis of the provider's impact on the Michigan Educational Assessment Program (MEAP) math and English Language Arts (ELA) scores in 2008 for students in each of grades 3 through 7 were included.

The number of respondents and the overall results were reported for each parent, teacher, and District Coordinator survey question. For these questions, the results were presented in their original units (i.e., percent "agreeing" or "strongly agreeing," average letter grade for program quality offered by parents) and required no manipulation. However, the overall rating was constructed from several parent and teacher questions, and the teacher letter grade for effects on classroom performance was constructed from seven teacher survey items. The methods used to calculate these two items were as follows:

- *Letter Grade from Teachers for Effects on Classroom Performance.* The letter grade was derived from responses to seven scaled survey questions:
  - During the time tutoring was provided, did this student's attitude toward class improve, stay the same, or worsen?
  - During the time tutoring was provided, did this student's homework improve, stay the same, or worsen (e.g., quality, timeliness, or frequency)?
  - During the time tutoring was provided, did this student's classroom achievement improve, stay the same, or worsen?
  - During the time tutoring was provided, did this student's class attendance improve, stay the same, or worsen?
  - During the time tutoring was provided, did this student's math grades improve, stay the same, or worsen?
  - During the time tutoring was provided, did this student's ELA grades improve, stay the same, or worsen?

  Response choices for each of the above questions were "improved," "somewhat improved," "stayed the same," "somewhat worsened," and "worsened." For the analysis, responses of "improved" or "somewhat improved" were coded as 1, and all other responses coded as zero. The mean across all seven items was calculated for each respondent (the mean for cases with partial missing data was developed on the basis of the available responses), and these respondent-specific means were then averaged at the provider level. Providers in the top 20% of the distribution were assigned an "A" or 4.0, the next 20% were assigned a "B" or 3.0, and so on.

- *Overall Provider Letter Grades.* The overall provider letter grade was a weighted function of the following items:
  - Parent survey
    - "Overall, are you satisfied with this tutor?"
      - Parents could respond "yes," "no," or "not sure." The item grade was based on the percentage of "yes" responses; 90%–100% was graded as "A" or 4.0, 80%–89% was graded as "B" or 3.0, 70%–79% was graded as "C" or 2.0, 60%–69% was graded as "D" or 1.0, and below 60% was graded as "E" or 0.0.
    - "What overall grade would you give your child's tutor?"
      - Parents were asked to provide a grade for the tutor's performance overall, with response options of "A," "B," "C," "D," or "E – Failing." Responses were converted to a four-point scale and averaged for each provider.
    - The teacher letter grade for effects on classroom performance was derived as described in this section, above.
  - Teacher survey.
    - "This tutor is positively impacting this student's learning."
      - Response options included "strongly agree," "agree," "disagree," and "strongly disagree." The percentage of respondents choosing "agree" or "strongly agree" was calculated and providers in the top 20% of the distribution were assigned an "A" or 4.0, providers in the next 20% were assigned a "B" or 3.0, and so on.
  - MEAP analysis
    - *Subject/grade-specific grades:* Increases or decreases of ¼ of a standard deviation or less in the MEAP score (2.75 points, measured at the midline) that were statistically significant at the 50% or 67% confidence levels were associated with a 0.33 point increase or decrease (as appropriate) on the 4-point scale (e.g., a C became a C+). Increases or decreases of ¼ of a standard deviation or less in the MEAP score (2.75 points) that were statistically significant at the 80% or 95% levels were associated with a full-grade increase (e.g., a C became a B). Increases or decreases of ¼ or more of a standard deviation (2.76 + points) that were statistically significant at the 50% or 67% confidence levels were associated with a full-grade increase (e.g., a C became a B). Increases or decreases of ¼ or more of a standard deviation (2.76 + points) that were statistically significant at the 80% or 95% confidence levels were associated with two full-grade increases (e.g., a C became a A).
    - *Overall grade:* All providers were initially assigned a letter grade of "C" (2.0) for MEAP performance overall (including those without any data on MEAP impacts[9]). Any single statistically significant finding of positive impact on the MEAP score for any subject at any grade level resulted in a one-grade increase (from "C" to "B" or 3.0). Additional findings of positive impact resulted in an additional one-grade increase (from "B" to "A"). Statistically significant finding of negative impact were similarly managed with grade reductions imposed for each instance of a negative finding. The one exception to this rule was that, where findings of statistically significant impact were based on a 50% confidence interval—an exceedingly weak

[9] The purpose of assigning providers without any data a "C" or 2.0 was to ensure that providers without MEAP data were not advantaged by this fact. MEAP ratings for those providers with useable MEAP data were typically a "C," and in the absence of a comparable statistic for providers without data, would have exerted negative pressure on their overall grades relative to providers without useable MEAP data.

standard—provider grades were increased or reduced by a half-grade (0.5 on a four-point scale).

For the survey-based items, no minimum number of surveys was established; one completed survey was sufficient to establish a grade.

The data elements were combined as follows:

- All five items were weighted at 20%.
- No grade was calculated for providers lacking either parent or teacher survey data, or for providers with fewer than 5 total surveys between parent and teacher responses.
- Resulting average ratings on a four-point scale were converted back to letter grades using the following protocol:
  - 3.6 – 4.00 = A
  - 3.33 – 3.59 = B+
  - 3.00 – 3.32 = B
  - 2.67 – 2.99 = B-
  - 2.34 – 2.66 = C+
  - 2.00 – 2.33 = C
  - 1.67 – 1.99 = C-
  - 1.34 – 1.66 = D+
  - 1.00 – 1.33 = D
  - 0.67 – 0.99 = D-
  - Below 0.67 = Failing

Recommendations for Change

At the outset of this multi-year evaluation, it was deemed important by the Michigan Department of Education (MDE) and the Public Policy Associates, Incorporated (PPA) team to engage in ongoing assessment of the evaluation process and methods, and to apply lessons to future iterations of the Supplemental Education Services (SES) provider evaluation. It should be noted that prior to this year of evaluation, some changes had already been recommended and implemented. This report builds upon the experiences to date.

In the course of the evaluation, the team was able to implement several changes that had been identified in the prior year as recommended changes. These included: improving the functionality of the Web-based teacher survey and improving the clarity of district instructions.

Similarly, MDE made several changes that improved the team's ability to obtain information necessary to carry out the evaluation, including:

- MDE created the capacity to accept—in lieu of entering individual cases into the Center for Educational Performance Information (CEPI)—batch files from individual districts. This route, by its nature, should decrease the burden of SES documentation, and improve data quality.
- MDE staff compiled a request for competitive bids to develop and maintain a comprehensive statewide SES database. This product would serve districts statewide, and provide districts offering SES extensive advantages. In capturing both student and provider information, and serving multiple functions (e.g., tracking attendance, invoicing, and so forth) districts would use this as their own data-capture system, thereby eliminating duplication of resources and time to maintain information systems. Unfortunately this effort was pulled back from release by the Michigan Department of Management and Budget, in an effort to confirm that all the system requirements were fully understood and strictly necessary.

As discussed in the following pages additional lessons and recommendations that are based on experiences to date. The evaluation team identified several lessons in this third year of evaluating Michigan's SES program. Listed below is a series of recommendations regarding possible improvements to the evaluation protocols with attention to data quality and reducing burden on evaluation participants.

Improve the Ability to Identify in Real-Time the Pool of Students Who are Enrolled in SES.

- As noted in prior years, the ability to identify in real-time the pool of students presently enrolled in Supplemental Education Services is a critical capacity with wide-ranging impacts on the conduct of the services and the evaluation of services. It is in fact the watershed for a series of events that bear a deep relationship to data quality and low burden to survey participants.
  - CEPI continues to be a static system that is periodically updated by district staff. Therefore, aside from the point of final data entry at the close of the year, the data system can include students who have dropped out, who never received any service at all, or who

are assigned to providers who have dropped out. This type of system will never allow a precise capture of enrollment; as mentioned early in this report, about 16% of the initial sample this year, in fact, never received services. The MDE has some options to improve the identification of SES students.

1. The obvious and optimal solution is the development of a real-time database to capture case-level SES data; as mentioned previously, the MDE has made strides in this direction. This now appears to be a long-term project that will bear fruit within one to two years.
2. Another avenue would be for the MDE to obtain access to existing Cayen systems in districts that use this, to facilitate more complete and more timely downloads for sampling purposes. This presupposes that districts will make full use of the system and incorporate relevant information into the database. To date, districts have made very good use of these sophisticated systems, short of including and identifying teachers, teacher contact information, household contact information, and household language.
3. Finally, the MDE could make more concerted efforts to gain district compliance in inputting and updating data in the CEPI system to improve timeliness of data. Essential tasks would include gathering district files to upload and/or ensuring initial data entry, followed by routine and frequent updating of information.

- In addition to reflecting up-to-date enrollment in provider programs, the information system would need the number of actual service hours to date—rather than being input at the close of services—and data on drop outs and transfers to different providers.

Identify and Implement Ways to Improve Parent Participation in the Survey.

- The parent response rate decreased as compared to prior years. Reversing this trend is critical to improving data quality. Clearly a sample frame of SES participants that is clean and up-to-date would improve the accuracy of the denominator and hence the response rate. Aside from this, there are several avenues for improving the parent response rate.
  - Providers should be consulted to determine their degree of interest in, and suggestions for, improving parent responsiveness. It is to the providers' benefit that parents respond, so that findings placed in the provider profiles (report cards) are based on as large a number of respondents as possible. As noted previously, an attempt was made to engage providers in encouraging parents to participate in the survey. However, it was not possible to track receipt of this request, nor the extent to which providers were willing and able to comply.
  - The MDE and PPA should work more closely as a team in terms of district communications, with MDE establishing its authority, and PPA reinforcing messages.
    - PPA should encourage the MDE to increase the quality and quantity of communication with districts that provide SES regarding the need for high-quality and timely sample data, and for participation in the data-collection process.
    - PPA should reinforce MDE communications and establish closer working relationships with each district. To date, PPA has made contact with the districts about mid-way through the school year to ascertain the status of SES in their schools, including execution of provider contracts, start of services, expected end date of services, number of SES students, and so forth.

- PPA should consult with districts about optimal ways to reach parents and to use the means that parents of each district are most likely to respond to. For example, it may be possible to distribute survey instruments at parent-teacher conferences. The protocol should include a method by which the distribution of invitations is monitored and confirmed.
- Another possible route to increasing parent responsiveness is to send out surveys directly from PPA rather than engaging the districts to do so. This would require access to household addresses (which to date has proved difficult) and high-quality data, so that resources are not wasted on undeliverable mail.

- As a rule, responsiveness is increased in any survey by increasing the amount of communication and the quality of communication. For example, an advance letter, a second mailing to nonresponsive parents, a reminder postcard, and so on, are all advisable. To date, these protocols have been set aside in favor of reining in the costs of hardcopy surveys; because as much as 20% of a sample may be invalid, additional mailings may waste dollars. Nonetheless, the relative benefit of increased response for the dollars spent needs to be revisited. A pilot test for a segment of the sample frame is warranted to demonstrate the potential impact of additional communications to parents.
- Provide appropriate language surveys to non-English speaking households of SES students. Sending relevant language instruments could significantly improve survey response rates and data quality. This requires several steps, starting with identification of non-English speaking households of SES students, and then making resources available to implement the survey. To date, only the Detroit Public School (DPS) district has been able to share these data easily, and historically this field has had a large amount of missing data. In the current sample file, about 83.8% were English-speaking, 11.2% were missing or "other," 3.6% were Spanish, and 1.4% were specific languages that were neither English nor Spanish. In order to be in alignment with communications from the district, and to ensure that all parents of SES students have an opportunity to complete a survey, more complete household-language data is needed. Obtaining case-level household data from districts other than DPS does not appear feasible at this point.

Identify and Implement Measures to Improve Teacher Participation in the Survey.

- As with parents, an improved response rate from teachers will be possible with a cleaner sample frame of SES participants; because teachers are typically asked to complete multiple surveys, an accurate sample frame would decrease the size of each teacher's list, and remove the names of students that did not actually receive SES, which presumably would make the request more palatable to teachers. This would also increase the accuracy of the response-rate calculation because the denominator would be a more accurate reflection of true student participation in SES.
- Change the teacher survey methodology to permit, for providers serving a large number of students, a random selection of their students, in contrast to the current census approach. In the evaluation, the unit of analyses for all data streams has been the provider, and similarly, most deliverables, such as the provider profiles, demand provider-level specific information. This will require additional labor to manage the lists and requests.
- Improve the processes for identifying and inviting teacher participation; the ability to reach teachers and the response to the teacher survey are influenced deeply by these processes.

- Communicate with District Coordinators well in advance of the availability of the sample list (and hence the teacher invitations) about the need to match each student with a teacher most appropriate for assessing student progress. Engage them in figuring out how this match can be accomplished most efficiently and feasibly.
- Work with District Coordinators and principles to improve the accuracy of teacher e-mail addresses used for distributing some invitations, including how to deal with teachers who have not activated their district e-mail accounts.

- Improve the quality of communication to District Coordinators, as they hold a key role in monitoring and encouraging teacher participation.
  - This includes clear communication and making available the online data-collection system, protocols, and district coordinator module earlier in the year. Moving up the timeline would permit technical assistance to begin prior to rollout of the data collection. For example, this system can be demonstrated at the March meeting of DPS Building Coordinators, and followed up in the April meeting.
  - The process needs to be enhanced to ensure that survey invitations are actually distributed.
- Improve the quality of communication to teachers. Ensure that teachers understand what is being asked of them and the value of their participation.
  - Ask for teacher feedback on their experience with the communication to date and how it could be improved.
  - Focus on asking for their input on their students, rather than providers; teachers often are reluctant to respond because they have limited experience with the provider. Yet it is indeed the student performance that makes up the bulk of the survey items.
  - Engage highly-regarded figures to promote teacher participation. For example, this might mean principals use their communication channels to encourage teacher participation.
  - Increase teachers' comfort level with the system. For example, offer to any interested district proactive technical assistance in the form of a presentation to demonstrate the online teacher survey data-collection system.
- Maintain the high-quality, prompt technical assistance via e-mail and telephone, that is currently offered to teachers.

Make Optimal Use of Information on Quantity of Tutoring in Analyses.

- The evaluation team was able to incorporate a prior recommendation to use the quantity of tutoring—actual number of hours of service received—in the Summary Report, yielding more specific performance information.
- The service hour data, however, was not, and has not historically been available, in time to incorporate into the 2009 Provider Report Cards.
- As noted in a prior section of this report, it was hoped that the service hour data—per tutoring subject—could be incorporated and used as a ratio variable in the current contemporary MEAP scores analyses. However, data quality issues in the capture of hours per tutoring subject forced instead the use of models reflecting service as a present-or-absent variable. Should this data be improved, future MEAP models could be explored that use actual service hours per tutoring subject, to great advantage.

Consider Alternatives to Standardized Tests Upon Which Student Progress is Gauged.

- Seek measurement of individual student progress that is more immediately and directly tied to the goals of the student, as compared to MEAP scores. Although this has been recommended previously, it bears repeating: Tests that use pre- and post-service measurement of specific skills targeted in the Individual Learning Plan would be an appropriate and immediate gauge of provider effectiveness, which could be integrated into the assessment of providers. While this could not be implemented quickly nor easily by the MDE, a thorough and thoughtful dissection of steps that could lead to this outcome, resources needed, and obstacles to work through should be considered immediately.