# Indicators of Student Achievement and Quality Programming 2014-15

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# Lancaster-Lebanon Intermediate Unit 13:  Indicators of Student Achievement & Quality Programming

## Introduction

Lancaster-Lebanon Intermediate Unit 13 (IU13) is an educational service agency with offices in Lancaster and Lebanon, Pennsylvania, that is committed to providing outstanding programming and professional development designed to improve student achievement. These services are provided through instruction to students in classes taught by IU staff and support provided by IU13 consultants that is designed to improve the skills of the educators that work with students.

As part of its ongoing commitment to continuous improvement, IU13 has developed a data collection system that will be used to identify, gather and reflect on key areas of student learning and the impact of IU13 programming and services. Identified indicators include multiple types of information such as demographic, perceptual and achievement/student learning data that have been selected to provide the most complete representation of the impact of IU13 services. Information was gathered from those programs that provide direct instruction to students (Early Childhood, Special Education Services, Adult Education, and Nonpublic Services) or offer professional development for educators responsible for teaching students in districts or IU-operated classes (Curriculum and Instruction Services). When available, similar data for multiple years will be reported; however, in cases where multiple-year data is not available, single-year data will be reported, with additional data added over time.

Indicators were selected by program supervisors based on how well data aligned with three defined criteria.  They include: 1) representation of the trend of student learning, attainment of desired goals such as graduation, or observable changes in behaviors; 2) representation of the quality of services and/or the satisfaction levels of the recipients of services; and 3) availability of the data in an accessible format at a system level vs. individual student level. While the list of data indicators selected by the supervisors to be represented in 2014-15 is extensive, it is not designed to be exhaustive at this point in time. It is hoped by all those involved that the indicators selected initially are just a beginning of the list of data to be collected, and that the reliability and validity as well as the depth of data will only increase in future years.

## Types of Data

Definitions of the types of data categories to be used by IU13 were designed as per the recommendations of Victoria Bernhardt, Ph.D., well-known for her work in school data analysis. In her book "Data Analysis for Continuous School Improvement" (2013), Dr. Bernhardt suggests using multiple measures of data including the following:

1. **Demographics on a school, student, and staff level**: This includes information such as enrollment, attendance, graduation rates, gender, etc. For the purposes of this report, demographic information will be shared when it is relevant to understanding the trends or outcomes identified.

2. **Perceptions**: This includes values, beliefs, attitudes and observations. Since much of the success of IU13 is related to the value of its services by its users, surveys and other feedback loops were collected and synthesized at a system level.
3. **Student Learning**: Both standardized and formative assessments are included in this category. Measures of student achievement from both IU classes and district classes where teachers received extensive and/or ongoing technical assistance and training were included.
4. **School Processes**: Descriptions of school programs and processes tell us about how we work and its relevance to issues that may be uncovered through data analysis. This type of data was gathered on a very limited basis and is not used in this report; however, it will become more relevant as the other types of data are analyzed and questions arise regarding root causes of identified issues.

By analyzing information from a variety of sources as well as different types of information, it is believed that a more accurate and complete picture of IU13 and its services will be provided. Ultimately, the analysis of the data will be used to answer two questions: 1) Is IU13 providing quality instruction to the students it serves that result in improved student achievement and 2) Is the professional development and training offered by IU13 of high quality and effectiveness, resulting in more highly trained educators who will in turn, impact student achievement? These questions will be considered across programs and age of learners, from early childhood to adulthood.
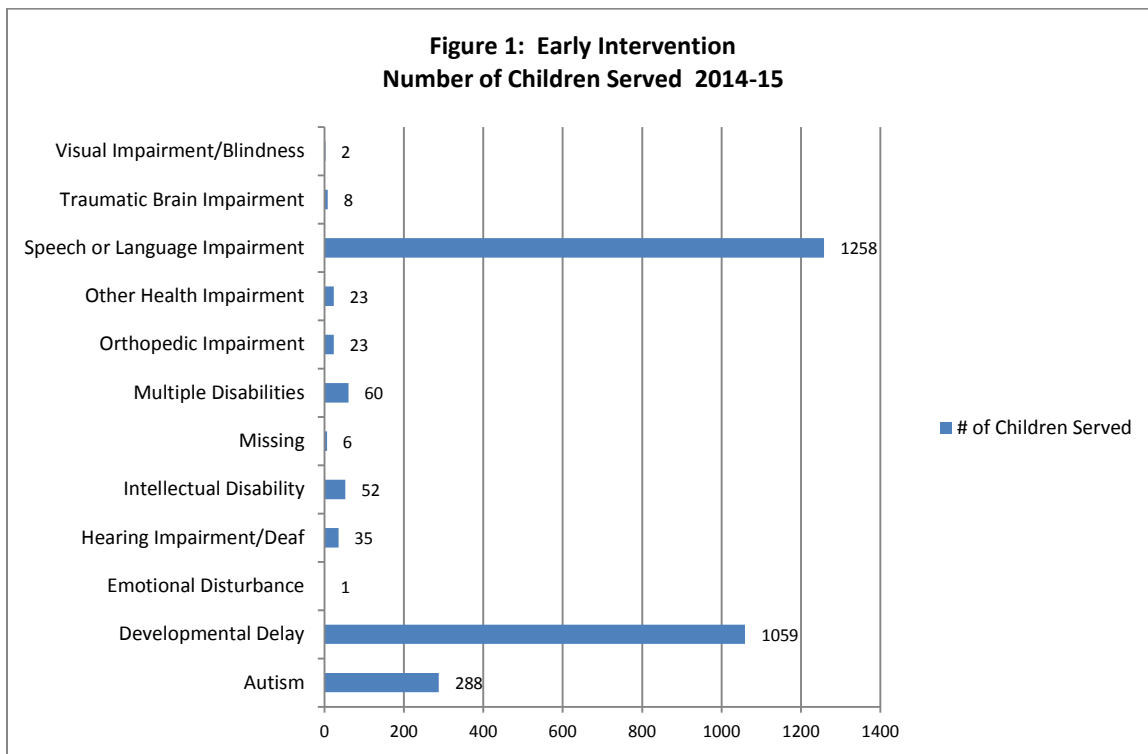
## Analysis of Data

***Is IU13 providing quality instruction to the students it serves that result in improved student achievement?***

### Early Childhood Programs

IU13 provides instruction to eligible students in its Early Childhood and Preschool Early Intervention program, including Early Childhood and Head Start, Pre-K Counts and Early Intervention services for children identified with special needs. These programs serve children from infants to preschool and are designed to strengthen and encourage early literacy, social development, resourcefulness and self-sufficiency through positive learning experiences.  IU13 is currently partnering with six Lebanon County school districts to deliver the Early Head Start, Head Start and Pre-K Counts programs as well as families of children with special needs in Lancaster and Lebanon counties.

#### Demographic Information
IU13 continues to impact a significant number of young children through its Early Intervention and Early Childhood programs. Data gathered through June 2015 indicates that IU13 has served a total of 2,815 children in the Early Intervention program in 2014-15.  This is an increase of 52 children served from 2013-14 (2,763 children).

**Figure 1:  Early Intervention Number of Children Served  2014-15**

| Category | # of Children Served |
|---|---|
| Visual Impairment/Blindness | 2 |
| Traumatic Brain Impairment | 8 |
| Speech or Language Impairment | 1258 |
| Other Health Impairment | 23 |
| Orthopedic Impairment | 23 |
| Multiple Disabilities | 60 |
| Missing | 6 |
| Intellectual Disability | 52 |
| Hearing Impairment/Deaf | 35 |
| Emotional Disturbance | 1 |
| Developmental Delay | 1059 |
| Autism | 288 |

The three most common eligibility categories continue to be Speech/Language Impairment (1,258 children), Developmental Delay (1,059 children) and Autism (288 children).   In the Early Childhood program, 495 children were served.  Of these 495 children, the breakdown by race included 432 children identified by parents as white, 24 children as black or African American, 36 children as bi or multi-racial and 3 children as Asian.  Three hundred and sixty-seven children were identified as having English as their primary language, with 115 students having Spanish as their primary language, 10 children having Arabic as their primary language, 2 children with Hindu as their primary language and 1 child having Haitian/Creole as his/her primary language. In the Early Childhood program, 128 children/pregnant mothers were served, with 113 children/mothers identifying themselves as white, 14 as African-American, and 1 as biracial.  Primary languages identified included English (94), Spanish (23), Arabic (10) and Hindu (1).
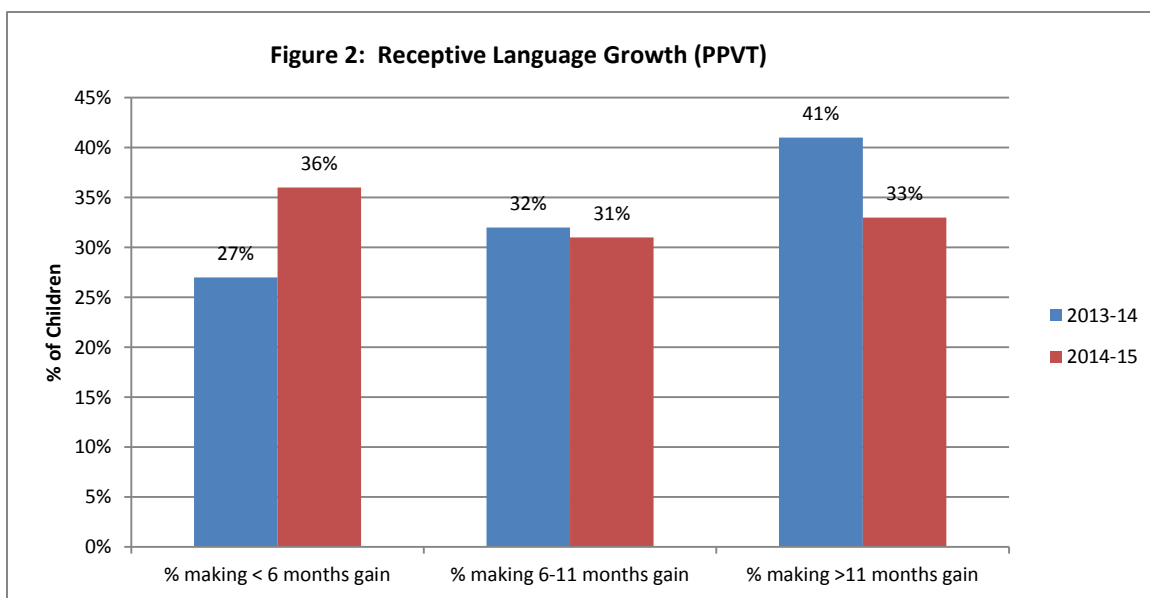
## Achievement/Student Learning

The curriculum and instruction provided by IU13 programs for young learners are designed to support the growth of early literacy and math skills and other key developmental areas including physical, cognitive, language and social abilities. Assessment of these skills in young children can be challenging since these learners are not developmentally ready for the demands of the types of assessments indicated for older students. Assessment at this level includes a variety of types of assessments and is accomplished over time to provide the most reliable and valid measure of their skill levels (Helm, 2014). IU13 has selected several types of assessments to use in tracking the impact of programming on achievement level. They include:

- **Peabody Picture Vocabulary Test (PPVT)** – The PPVT is an optional assessment that is administered by a trained assessment team to increase inter-rater reliability. It is given as a pre-test (within the first 45 days of school) and as a post-test. Only the matched scores of those three and four year old children who took the assessment in the fall and again in the spring are used for reporting results.
- **IPT Early Literacy** – The IPT Early Literacy assessment is an early literacy assessment that targets key skills for literacy development. The skills include alphabet recognition, phonological awareness and beginning sounds. Children were assessed in the fall, spring and winter to assess their growth in these critical areas.
- **Teaching Strategies Gold** – Teaching Strategies Gold is an authentic assessment based on anecdotal notes, and student performance and evidence. This is a required assessment for the PA Pre-K Counts Grant managed by IU13. The assessment is based on 38 research-based objectives that include predictors of school success and are aligned with the Common Core State Standards, state early learning guidelines, and the Early Childhood Child Development and Early Learning Framework. The objectives are organized into 10 areas of development and learning including broad developmental areas, content areas, and English language acquisition. These assessment areas are Social-Emotional, Physical, Language, Cognitive, Literacy, Mathematics, Social Studies, Science and Technology, and the Arts.

## *Indicators of Student Learning*

**Peabody Picture Vocabulary Test (PPVT) Results**

Results of the PPVT are shown in **Figure 2**. Of the 271 children enrolled in the Head Start and Pre-K Counts program that were evaluated, 217 had a fall and spring PPVT score (80%). Of the 217 with a fall and spring score, 77 had an IEP (35%) and 52 of the 217 children were identified as having English as a Second Language (24%). The program-wide growth average was 9 months gain in receptive language skills, with 83 of the children scoring at the appropriate age equivalent score or above.

**Figure 2: Receptive Language Growth (PPVT)**

| Category | 2013-14 | 2014-15 |
|---|---|---|
| % making < 6 months gain | 27% | 36% |
| % making 6-11 months gain | 32% | 31% |
| % making >11 months gain | 41% | 33% |

A complete breakdown of the children's levels of receptive language skills as measured by the PPVT is shown in **Figure 3:**



Figure 3: PPVT Percentile Ranks Early Learners 2014-2015
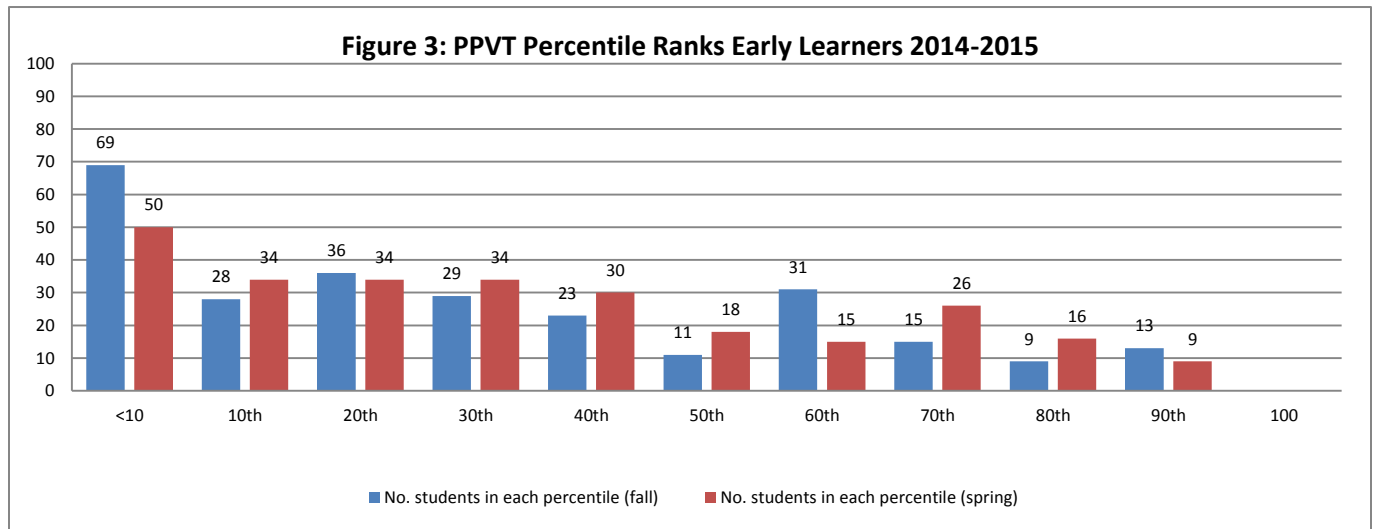
In the fall of 2014, 185 children were demonstrating receptive language skills below the 50th percentile. This number decreased to 182 children in the spring 2015 assessment. Even more importantly, the number of children with receptive language skills at the lowest levels of performance (10th percentile and lower) decreased from 97 to 84 children while the number of children at the 50th percentile and up increased from 79 children to 84 children.

**IPT Early Literacy Results**

This assessment was administered to three and four year old children participating in the program. The group consisting of three year olds was assessed on their alphabet recognition skills during the fall, winter, and spring assessments, their phonological awareness during the winter and spring assessments and beginning sounds during the spring assessment. Four year olds were assessed on each of the three skills during all three assessment periods. The order of the skills assessed mirrors the development of early literacy skills in children. Results of these assessments are shown in **Figure 4:**



Figure 4: IPT Early Literacy Benchmarks 2014-15
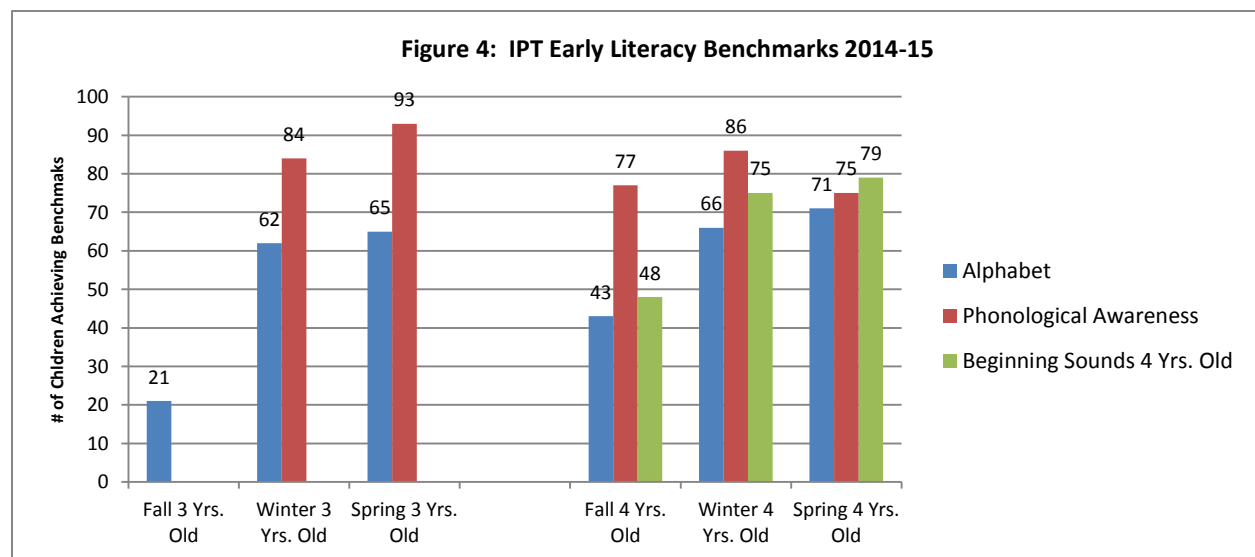
**Teaching Strategies GOLD**

The Teaching Strategies GOLD assessment uses multiple data points that include student performance and anecdotal notes from teachers which are then compared to the expected levels of development in key target areas based on the child's age. **Figure 5** indicates the number of children who were evaluated to be within the appropriate target range indicated as per their chronological age.  Children were assessed in the fall, winter and spring with the expectation that the number of students performing in the specific skills domain would increase as a result of their preschool experiences. This indeed proved to be the case, with all six areas showing significant upward trends in skills. Math skills in particular showed dramatic growth with more than four times the number of children reaching the expected levels of development from the initial to final assessment.



Figure 5: Teaching Strategies GOLD Data 2014-15
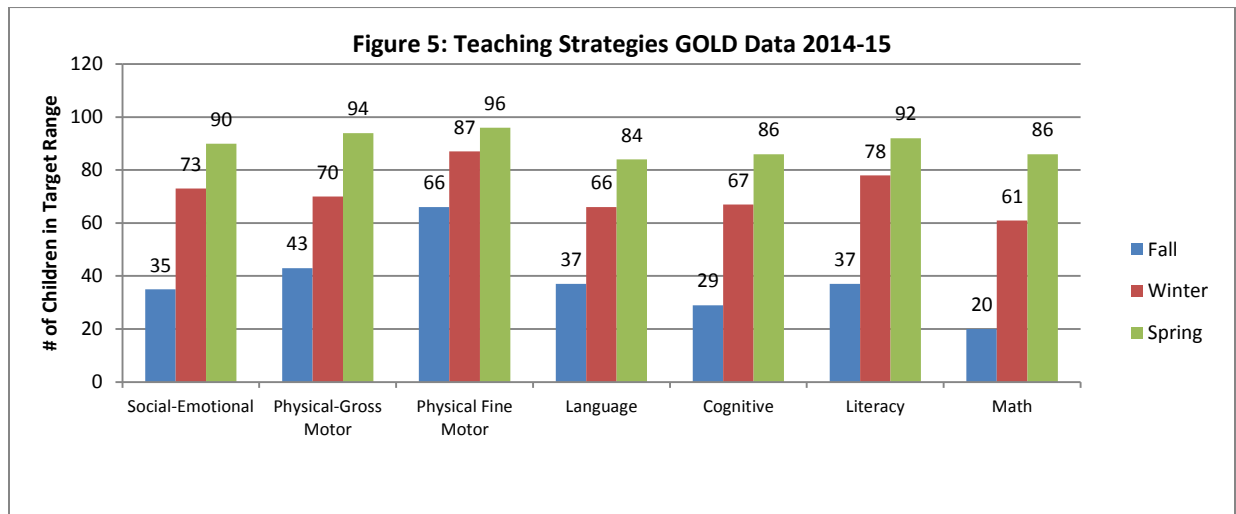
**Discussion:**

Based on a review and examination of the 2014-2015 student data, including summative data measures from the Peabody Picture Vocabulary Test IV and Teaching Strategies GOLD, language development emerges as an area of focus for improvement, even more strongly than in previous years. Oral language development is the foundation for all other learning and has been identified as a critical component of later reading success. Additionally, oral language is the basis for communicating and building relationships with adults and peers.   All 271 children captured in the 2014-2015 data reports are considered language learners as they are within the range of three to five years of age, a period of time when children are still developing their first language. The PPVT report specifies that approximately one-quarter of the students are considered dual language learners. The high incidence of dual language learners suggests the need to focus on instructional strategies to support dual language learners. The strategies to be implemented in 2015-16 will include the following:

- Assess and improve teachers' understanding of language development and dual language learners through coaching and professional development
- Evaluate classroom environments including the classroom schedule, furniture arrangement, and materials to promote interactions and use of language
- Align and adapt curriculum, identify key vocabulary for each unit, select texts that support children's understanding of the vocabulary and plan for contexts where children can use new vocabulary in meaningful and natural ways

- Assess instructional support provided to children. Instruction should occur in different settings but predominantly in small groups or with individual children to increase student engagement and feedback. Instructional strategies should be determined based on each student's preferred mode of learning and interests
- Improve teachers' use of progress monitoring and data to better understand student needs

## Perceptual Data

Parent involvement is critical to the development of early learners and is a key component of the services in the Early Learners program. IU13 collects information on its families' satisfaction with these services through a yearly survey of parents. This is also required as part of the Head Start state grant and Pre-K Counts grant by Pennsylvania's Office of Childhood and Early Learning (OCDEL). The most recent information available is reported in **Table 1**. Updated information will be included as it becomes available.

**Table 1: OCDEL Generated Family Survey Data:**

| Lancaster-Lebanon IU13 | Sent | Returned | Non-delivered | IU13 Survey Return Rates | | | Statewide Return Rates | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2013-14 | 2012-13 | 2011-12 | 2013-14 | 2012-13 | 2011-12 |
| **Preschool Program** | 1559 | 276 | 131 | 19% | 20% | 22% | 18% | 19% | Not Available |

| Satisfaction Ratings | 2013-14 | 2012-13 |
|---|---|---|
| IU13 % Agree | 89% | 90% |
| State % Agree | 88% | 88% |
| IU13 Average Satisfaction Rating* | 4.8 | 4.9 |
| State Average Satisfaction Rating* | 4.8 | Not Available |

*Ratings are based on a 6-point scale -1 "Very Strongly Disagree" – 6 "Very Strongly Agree"

Though the sampling is based on a small segment of the population served, the satisfaction ratings for IU13 programs are consistent with the average satisfaction ratings for the state and show that, overall, the families served are satisfied with the services they receive.

This satisfaction is supported by additional survey data collected as part of the Head Start grant requirements. In this survey, parents were asked to respond to a series of statements reflecting various aspects of the program. These included questions dealing with classroom environment, parent-teacher communication, and connections with community resources. One hundred twenty-seven surveys were returned from the 288 children in the program. Of those, the majority strongly agreed or agreed with the following statements presented to them on the survey:

- They found the classroom warm and inviting
- They felt the teacher had a system of regular communication
- They knew they could communicate with their teacher by email or phone if needed
- They were able to talk with their teacher before and after school

Ninety-four percent of respondents felt the program helped to connect them with services in the community and 94% felt they understood their role as their child's first teacher. Ninety-six percent felt their teacher was interested in what they had to say about their child's needs.

The results of the survey suggest that the participating families feel positively about the program and that the program continues to meet its goal of creating strong connections with the students and their families.
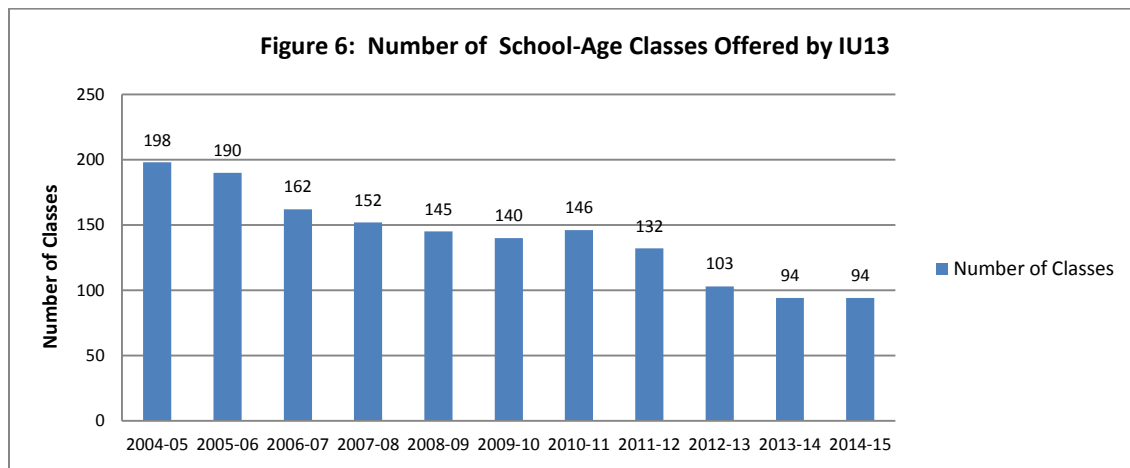
## School-Age Programs

IU13 provides direct instruction and support to students with special needs who require individualized education plans (IEPs) in the Lancaster and Lebanon counties in grades kindergarten through high school. These include a variety of classes including emotional support, life skills, diagnostic kindergarten, autistic support, basic occupational skills (BOS), school-to-work, deaf/hard of hearing support and multiple disabilities. In addition, IU13 provides supplemental services to students with IEPs including physical, occupational and speech and language therapies; job training services; autism itinerant services; and hearing impaired/visually impaired itinerant services.

### Demographic Information

IU13 currently operates classes in both Lancaster and Lebanon counties. As local districts have assumed more responsibility for the direct instruction of their at-risk students, primarily those students with mild to moderate disabilities, the number of classes offered by IU13 has decreased. The trend is displayed in **Figure 6.** This number includes students in:

- Autistic Support
- Diagnostic Kindergarten
- Emotional Support
- Hearing Impaired Support

- Life Skills Support
- Multiple Disabilities Support
- School to Work/BOS

**Figure 6: Number of School-Age Classes Offered by IU13**

| Year | Number of Classes |
|------|-------------------|
| 2004-05 | 198 |
| 2005-06 | 190 |
| 2006-07 | 162 |
| 2007-08 | 152 |
| 2008-09 | 145 |
| 2009-10 | 140 |
| 2010-11 | 146 |
| 2011-12 | 132 |
| 2012-13 | 103 |
| 2013-14 | 94 |
| 2014-15 | 94 |

Accordingly, the number of students in school-age IU13 classes has also decreased as shown in **Figure 7,** though the most recent data suggests a leveling off of the number of classes offered and students served.

**Figure 7: Number of Students Served in School-Age IU13 Classes**

| Year | Number of Students |
|------|--------------------|
| 2004-05 | 2179 |
| 2005-06 | 2037 |
| 2006-07 | 1674 |
| 2007-08 | 1552 |
| 2008-09 | 1338 |
| 2009-10 | 1360 |
| 2010-11 | 1378 |
| 2011-12 | 1265 |
| 2012-13 | 915 |
| 2013-14 | 834 |
| 2014-15 | 838 |
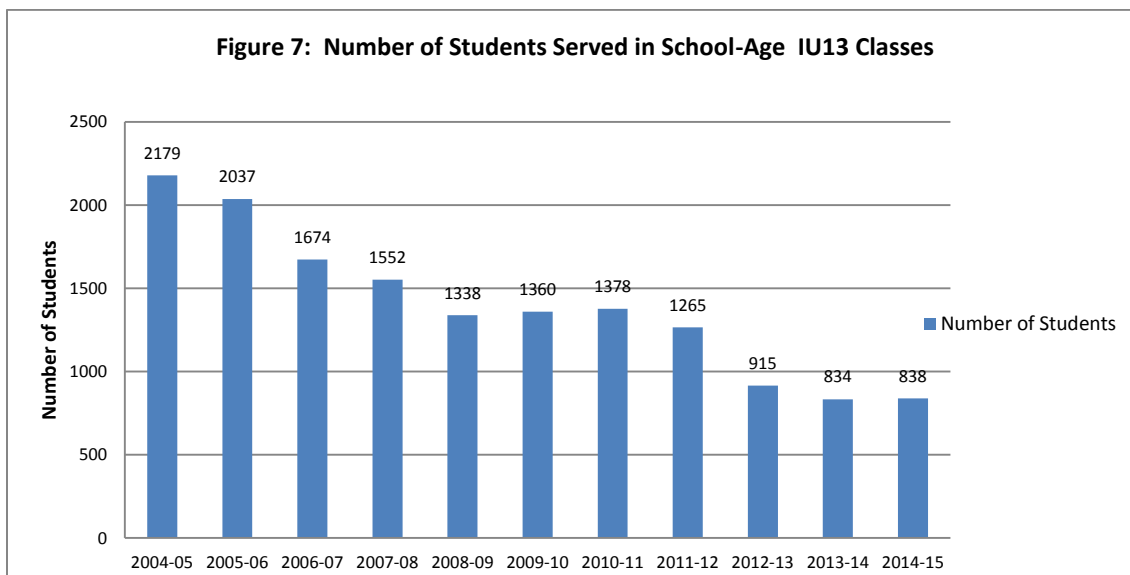
This trend has resulted in an increased focus on delivering best practices in the classrooms in a cost-effective manner.

**Figure 8** shows the demand for School-age itinerant services over the past 11 years. IU13 provides services to students in the following itinerant programs:

- Autistic Support
- Blind/Visually Impaired
- Deaf/Hard of Hearing Support
- Job Training

- Learning Support at Lancaster County CTC
- Occupational Therapy
- Physical Therapy
- Speech/Language Therapy

10

**Figure 8: Number of Students Served in
School-Age Itinerant Programs**

| Year | Number of Students |
|------|-------------------|
| 2004-05 | 5,208 |
| 2005-06 | 6,164 |
| 2006-07 | 5,838 |
| 2007-08 | 5,795 |
| 2008-09 | 6,768 |
| 2009-10 | 7,124 |
| 2010-11 | 6,751 |
| 2011-12 | 6,254 |
| 2012-13 | 6,039 |
| 2013-14 | 6,066 |
| 2014-15 | 5,765 |

(Y-axis: Number of Services Provided)
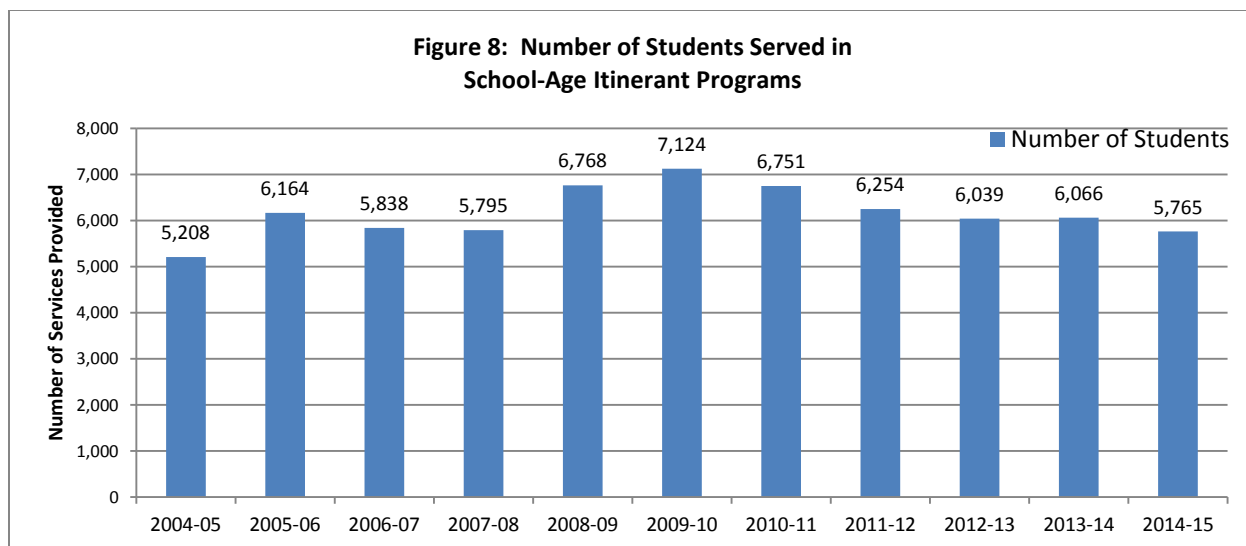
**\*Numbers represent total number of services provided. Students receiving more than one service are counted more than once.**

While the demand for itinerant services peaked in 2009-10, IU13 continues to provide districts with a significant number of services, in spite of increased competition from outside vendors.
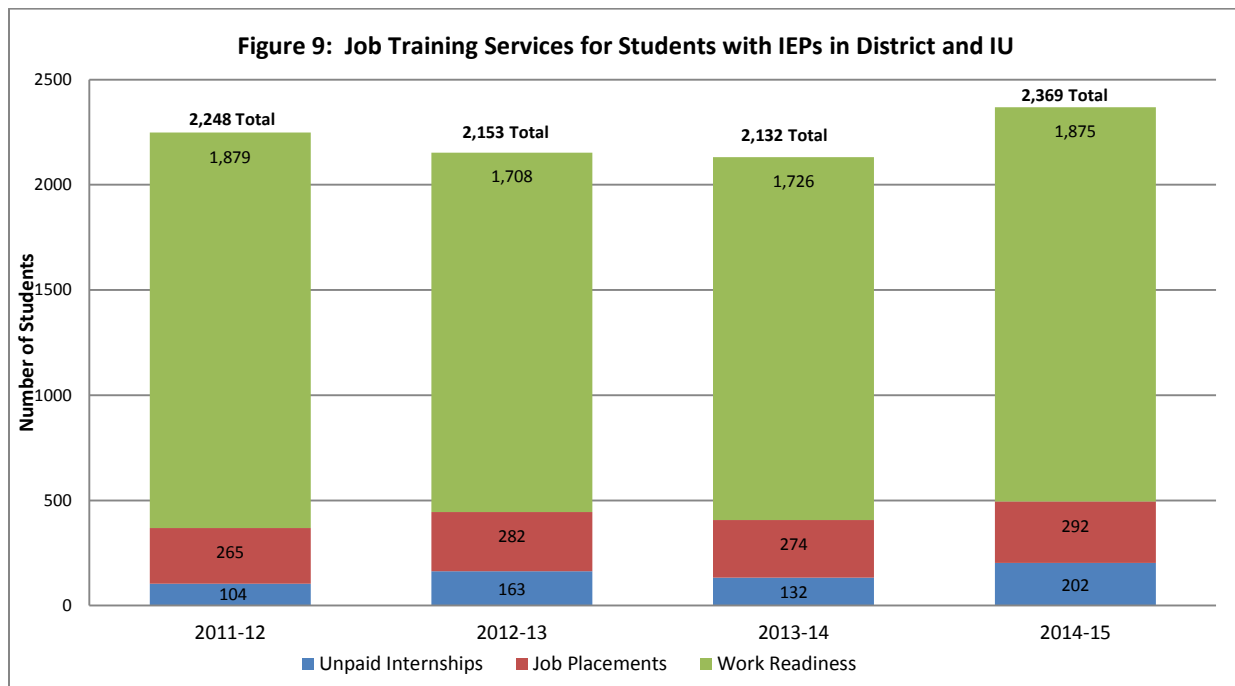
**Graduation Rates**

One of the goals of the school-age programs is to have students complete their IEP and academic goals and earn their high school diplomas. Students enrolled in the Lancaster County Career and Technology Center (LCCTC) who receive supports from IU13 are a key target group. In 2014-15, students that attended the Lancaster County CTC and received support from IU13 graduated at a high rate, with 235 out of 238 students graduating in 12 years.  Two students were non-traditional seniors (13th or 14th year students), also graduating in 2014-15. One student did not graduate as planned, instead deciding on a 13th year and is now set to graduate in 2015-16.

**Due Process Hearings**

One of the important indicators of a quality special education program is the number of due process hearings that have occurred during the school year. Due process hearings take place when parents and school districts are unable to resolve differences over a student's individual education program. These events are expensive, time-intensive and can erode the partnership between families and schools; therefore, tracking the number of due process hearings is an important indicator of how parent-school partnerships are proceeding.  IU13 had only been involved in two due process hearings in 2014-15, both of which were resolved in the district/IU's favor.  As a result, IU staff has been able to stay focused on positive relationships with parents and the program has avoided the costs associated with multiple hearings.

**Job Placement of Students**

IU13 provides transition services to students with disabilities in both district and IU-operated classes. Job trainers work closely with IEP teams and community partners to provide students with needed experiences and support as they transition classroom skills to the workplace environment through job placements and internship experiences. These services continue to be highly in demand as shown in **Figure 9,** with the number of students served increasing by 237 students during the past year.

**Figure 9: Job Training Services for Students with IEPs in District and IU**

Chart data — Number of Students (stacked bar chart):

| Year | Unpaid Internships | Job Placements | Work Readiness | Total |
|------|-------------------|----------------|----------------|-------|
| 2011-12 | 104 | 265 | 1,879 | 2,248 Total |
| 2012-13 | 163 | 282 | 1,708 | 2,153 Total |
| 2013-14 | 132 | 274 | 1,726 | 2,132 Total |
| 2014-15 | 202 | 292 | 1,875 | 2,369 Total |

■ Unpaid Internships  ■ Job Placements  ■ Work Readiness

## Achievement/Student Learning

The instruction provided to students served in IU13 classes is determined by a team of educators, parents and designated educational partners resulting in an IEP. Each IEP includes achievement levels, progress monitoring targets and exit criteria. Because of the varied nature of IEPs, it has been difficult to establish system wide methods of tracking program success. State assessments are not tracked by IU13 classes and are reported to school districts, not IU13.  In addition, many of the students served by IU13 have IEP goals which include social and emotional, communication, and daily living skills goals. Because of this, during 2014-15, IU13 special education program supervisors established common data indicators that will be gathered on a yearly basis to track the quality and success rate of IU services. These identified indicators included:

- Number of recommendations to have students return to a Less Restrictive Environment (LRE):
  - o IU13's goal is to transition students back to their home district or to a LRE as they improve academically and behaviorally and to prevent the need for students to seek out a more restrictive setting due to a decline in their IEP progress. Though yearly data may vary based on individual student needs, this information will continue to be tracked in future reports to allow for possible trend analysis.
- Progress on designated assessments aligned to select program goals. The following assessments were used:
  - o **The Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP)**: Based on B.F. Skinner's analysis of verbal behavior, established developmental milestones and research from the field of behavior analysis, the assessment contains 170 measurable learning and language milestones that are sequenced and balanced across three developmental levels. The skills assessed include mand, tact, echoic, intradermal, listener, motor imitation, and independent play, social and social play, visual perceptual and matching-to-sample, linguistic structure, group and classroom

skills, and early academics (Sundburg, 2008). This assessment was used in the Autistic Support program and is aligned to the desired outcomes of the program.

- o **NOCTI**:  The NOCTI assessments are designed to measure technical skills at the occupation level (i.e., Accounting, Carpentry, and Pre-Engineering). The assessments measure aspects of occupational competence such as factual and theoretical knowledge and target students who have completed secondary and post-secondary programs. These assessments were used with students attending the Lancaster County Career and Technology Centers (CTCs).
- o **DIBELS Next (Dynamic Indicators of Basic Early Literacy Skills):**  DIBELS Next is a set of procedures and measures for assessing the acquisition of a set of K-6 literacy skills, such as phonemic awareness, alphabetic principle, accuracy and fluency, vocabulary, and comprehension. Assessed skills vary by grade and skill level and are designed to match the growth in the complexity of skills needed to become a fluent reader.  DIBELS Next was used to measure the developing literacy skills of students in the Diagnostic Kindergarten classes operated by IU13.  For more information, refer to https://dibels.uoregon.edu/assessment/dibels/index .
- o **Diagnostic Kindergarten Early Reading and Math Criterion Referenced Assessments:** The Diagnostic Kindergarten program has developed a series of criterion referenced assessments to use with students in their program. These assessments are designed to measure the accumulation of key kindergarten skills in math and reading, and are used to monitor student progress in conjunction with other classroom assessments.

## *Indicators of Student Learning*

**Number of recommendations to return to a less restrictive environment (LRE):** During 2014-15, 68 students were recommended by the IEP team to return to a less restrictive environment. **Table 2** shows the baseline data detailed by program assignments:

| Table 2:  Number of Recommendations to Return to a Less Restrictive Environment | | | | |
|---|---|---|---|---|
| **Program** | **Number of Students Returning to Less Restrictive Environment (LRE)** | | | |
| | **2013-14** | | **2014-15** | |
| | **Returned to LRE** | *Total Students Served* | **Returned to LRE** | *Total Students Served* |
| Community School East or West | 20 | *132* | 15 | *132* |
| Diagnostic Kindergarten | 12 | *20* | 12 | *21* |
| Emotional Support (Lancaster Co.) | 1 | *80* | 4 | *71* |
| Life Skills (Lancaster Co.) | 2 | *47* | 0 | *61* |
| Catholic Charities | 2 | *17* | 4 | *23* |
| Deaf/Hard of Hearing | 3 | *40* | 2 | *34* |
| MEC Emotional Support (Now Valley Road) | 5 | *31* | 3 | *39* |
| MEC Autistic Support (Now Valley Road) | 3 | *15* | 1 | *17* |
| Fairland | 3 | *48* | 3 | *45* |
| Autistic Support (School Based) | 7 | *111* | 9 | *113* |

| | | | |
|---|---|---|---|
| Lebanon County ES, Life Skills Support, and Multiple Disabilities (All Emotional Support Students) | 12 | *101* | 4 | *97* |
| Lancaster Multiple Disabilities Support | 0 | *78* | 0 | *76* |
| **TOTAL** | **70** | ***720*** | **57** | ***729*** |

**VB-MAPP Achievement Data:**

IU13 provides direct instruction to students with autism in partnership with the Lancaster and Lebanon school districts. Ninety students in 16 IU autistic support classes were assessed at the beginning and end of the year using the VB-MAPP. Students gained an average of 12.51 milestones which is within the state average range. This suggests that the students in the program are making gains aligned with students in similar programs statewide.
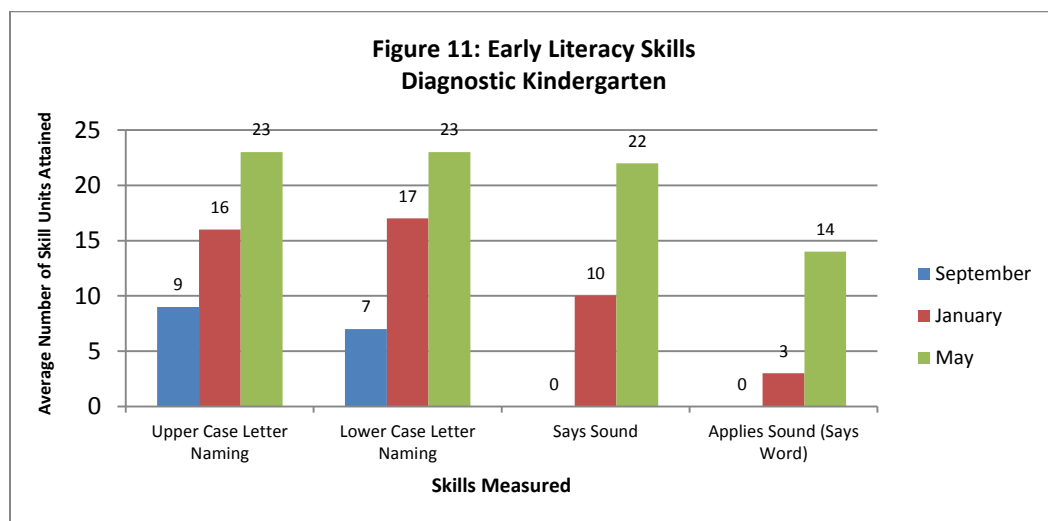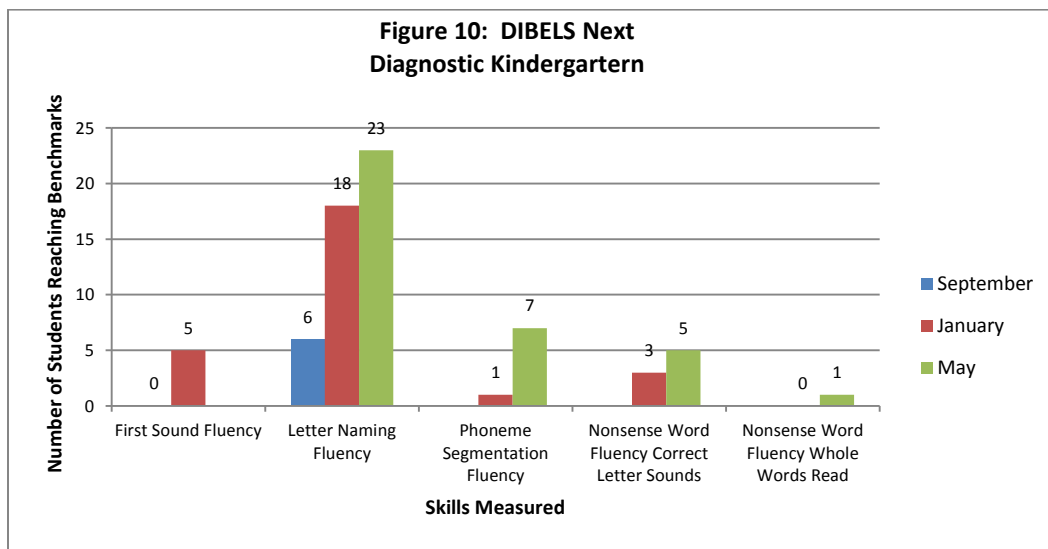
**NOCTI Achievement Data:**

IU13 provides direct instruction and support to students with Individualized Education Plans (IEP) enrolled in the Lancaster County Career and Technology Center (LCCTC) programs. The service also includes ongoing consultation with the LCCTC educators and administrators.  Students participating at the Lancaster County CTC were given the NOCTI at the completion of their program as a measure of their skill accumulation. The NOCTI assessments are designed to assess students' skills in comparison to real-life job-specific skill expectations. **Table 3** shows the results for the most recent skill ratings of IU13 students in the program:
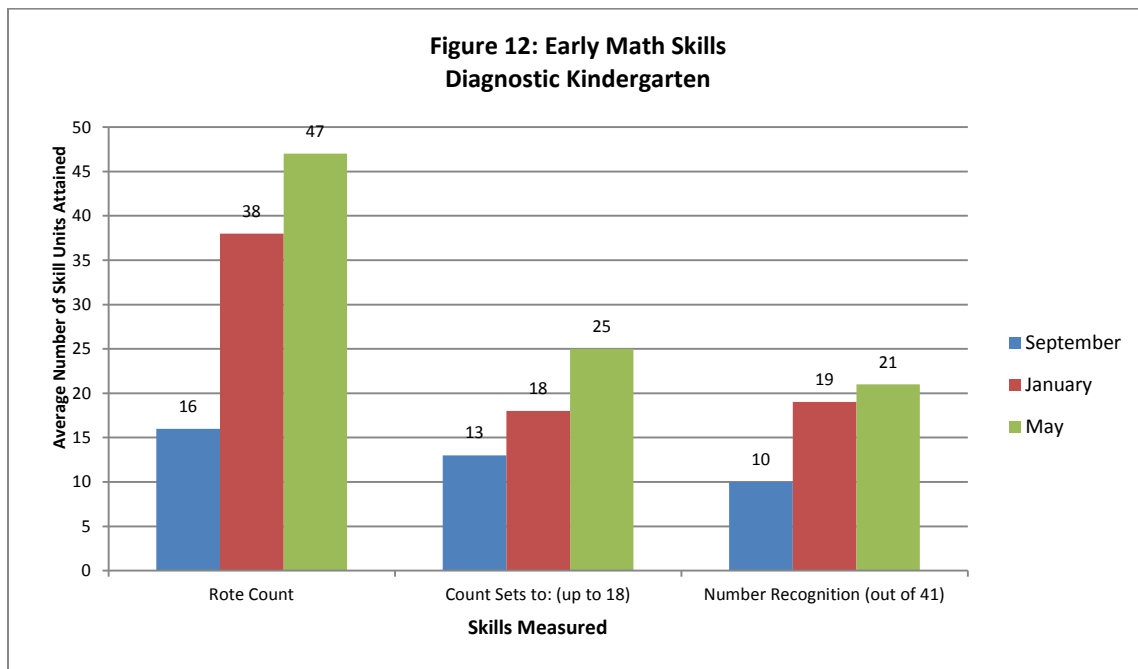
| Table 3:  NOCTI Scores for IU13 Students at the Lancaster County CTC 2014-15 | | | | |
|---|---|---|---|---|
| **Lancaster CTC Campus** | **Total # of IU 13 Students Taking NOCTI** | **Number of IU13 Students Passing NOCTI** | **Number of IU13 Students Scoring in the Competent Range** | **Number of IU13 Students Scoring in the Advanced Range** |
| Mount Joy | 56 | 49 (88%) | 8 (16%) | 41 (84%) |
| Brownstown | 68 | 62 (91%) | 12 (19%) | 50 (81%) |
| Willow Street | 64 | 56 (88%) | 15 (27%) | 41 (73%) |
| All Students | 188 | 167 (89%) | 35 (11%) | 132 (79%) |

IU13 students consistently demonstrated a high success rate on the NOCTI exam, suggesting that their accumulation of job-specific skills will serve them well in their selected occupation.

**DIBELS Next and Early Reading and Math Achievement Data:**

The Diagnostic Kindergarten program helps educators and parents determine the nature of a young child's learning disabilities. This program provides a developmentally appropriate environment that fosters intellectual, social, and emotional growth. The emphasis in the program is on concept formation, language development and the development of auditory, visual and motor skills.  Students enrolled in the program were assessed in September 2014 and January and May 2015, using DIBELS Next (**Figure 10**) and criterion referenced tests of early literacy and math skills developed by the program (**Figure 11** & **Figure 12**). These figures indicate the number of students meeting the appropriate benchmarks for each skill indicated for DIBELS Next and the average number of skill units attained as measured by the Early Literacy and Early Math program assessments.
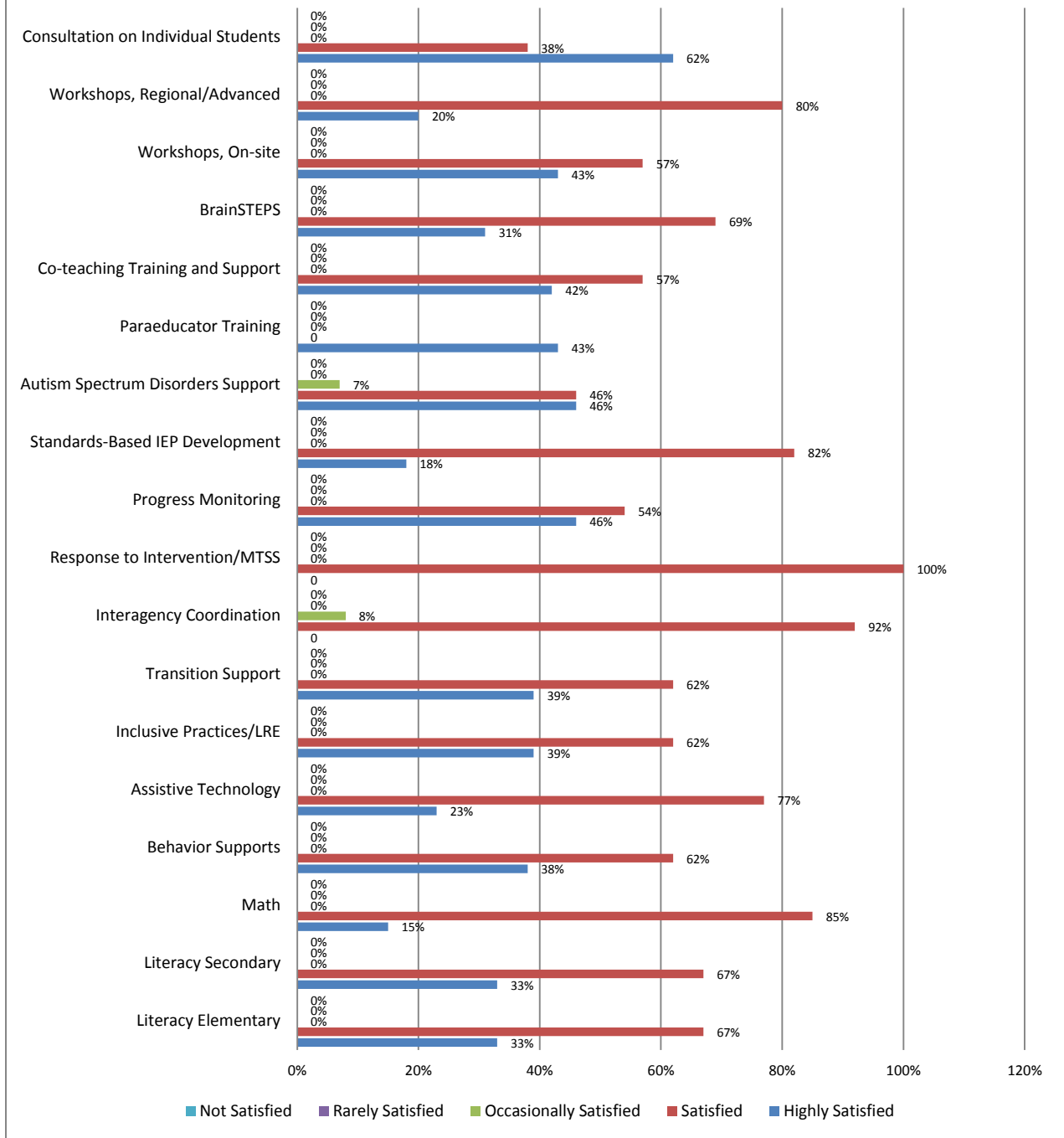


Figure 10:  DIBELS Next Diagnostic Kindergartern



Figure 11: Early Literacy Skills Diagnostic Kindergarten

**Figure 12: Early Math Skills Diagnostic Kindergarten**

Throughout the course of the school year, the number of students in the program that were able to reach expected benchmarks increased significantly.

## Perceptual Data

District special education supervisors were surveyed at the end of the 2014-15 school year to assess their satisfaction with the staff development team supports and services provided to them by IU13 staff. Since IU13 supports these services through the use of district IDEA funds, it is important that the supervisors believe that these professional development supports meet their needs and are of high quality. Each supervisor was asked to only rate those services that had been used by his or her district during the school year. While this resulted in a smaller sample size, it was felt that this was a more accurate representation of the quality of services. Responses from the district supervisors are listed in **Figure 13**.

**Figure 13: ECSES Staff Development Team Supports and Services Satisfaction 2014-15**

Consultation on Individual Students: 0%, 0%, 0%, 38%, 62%
Workshops, Regional/Advanced: 0%, 0%, 0%, 80%, 20%
Workshops, On-site: 0%, 0%, 0%, 57%, 43%
BrainSTEPS: 0%, 0%, 0%, 69%, 31%
Co-teaching Training and Support: 0%, 0%, 0%, 57%, 42%
Paraeducator Training: 0%, 0%, 0%, 0, 43%
Autism Spectrum Disorders Support: 0%, 0%, 7%, 46%, 46%
Standards-Based IEP Development: 0%, 0%, 0%, 82%, 18%
Progress Monitoring: 0%, 0%, 0%, 54%, 46%
Response to Intervention/MTSS: 0%, 0%, 0%, 100%
Interagency Coordination: 0, 0%, 0%, 8%, 92%
Transition Support: 0, 0%, 0%, 0%, 62%, 39%
Inclusive Practices/LRE: 0%, 0%, 0%, 62%, 39%
Assistive Technology: 0%, 0%, 0%, 77%, 23%
Behavior Supports: 0%, 0%, 0%, 62%, 38%
Math: 0%, 0%, 0%, 85%, 15%
Literacy Secondary: 0%, 0%, 0%, 67%, 33%
Literacy Elementary: 0%, 0%, 0%, 67%, 33%

Legend: Not Satisfied, Rarely Satisfied, Occasionally Satisfied, Satisfied, Highly Satisfied

**\*Percentages may not add up to 100% because of rounding.**

While the responses were not inclusive of all the special education directors, those directors that did respond indicated they were satisfied with services, with no responses indicating dissatisfaction with services.

In addition, IU13 department and program directors are highly rated by both district supervisors and IU13 supervisors of special education, based on the most recent survey data (November, 2014).

## Adult Education

In addition to services to early learners and K-12 students, IU13 offers GED and English as a Second Language Services (ESL) to adult learners in Lancaster and Lebanon counties.  These classes provide adults with the necessary skills to pass the GED examination and with the language and employability skills needed to prepare students to succeed in their community and the workplace. Parents can also participate in family literacy classes which are designed to benefit whole families.  Adult education data is released to IU13 on a one-year delay to ensure data quality. Information included in this report reflects the most recent data available to the program (2013-14).

### Demographic Information

During the 2013-14, 2003 students participated in Adult Education classes, an increase of 83 students from 2012-13.  One thousand, one hundred and sixty-eight students were female, and 835 students were male, with the average age being 27 years old.

**Table 4** shows the number of students enrolled in each type of contract offered by Adult Education services as per each type of contract as well as the percentage of students enrolled compared to contracted numbers. This is important information to track, as funding is frequently tied to meeting contracted enrollment.  Failure to meet the required deliverables may result in reduced or eliminated funding for the following years.

| Table 4: Adult Education Enrollment Data and Completion Rates 2014-15 | | | |
|---|---|---|---|
| **Contract** | **Contract Goal** | **2013-14 Enrollment** | **% of Contracted Number (Goal of 100%)** |
| Federal/State Adult Education | 1082 students | 1117 | 103% |
| English Language Civics | 53 students | 51 | 96% |
| Family Literacy | 87 families | 91 | 105% |

### Achievement/Student Learning

The Adult Education program at IU13 has a well established reputation as a leading provider of educational services. On key indicators tracked by the Pennsylvania's Division of Adult Education, IU13 is ranked as one of the top ten providers in the state in the area of educational function level (EFL) gains (**Table 5).**

| Table 5: Adult Education Learning Gains | | |
|---|---|---|
| **Contract** | **2013-14 Learning Gains** | **Comparison to Other State Agencies** |
| Federal/State Adult Education | 53% | 8th/55 |

| | | |
|---|---|---|
| English Language Civics | 47% | 8th/17 |
| Family Literacy | 49% | 9th/21 |

In addition to exceptional learning gains, IU13 has also exceeded the state standard in the areas of employment, GED attainment, job retention and transition to post-secondary. **Figure 14** outlines the comparison of each of the critical areas:
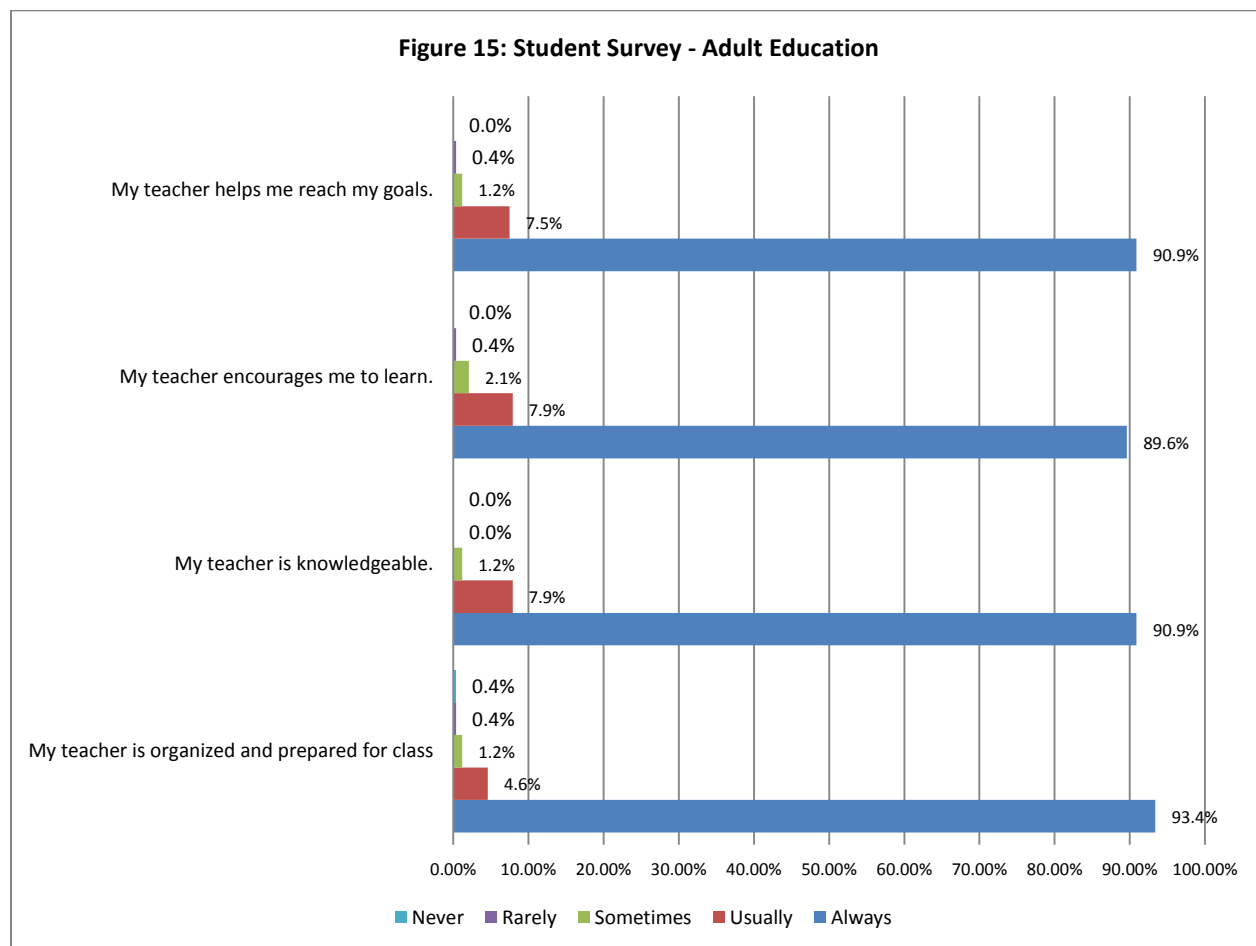
**Figure 14: Comparison of Learning Gains**
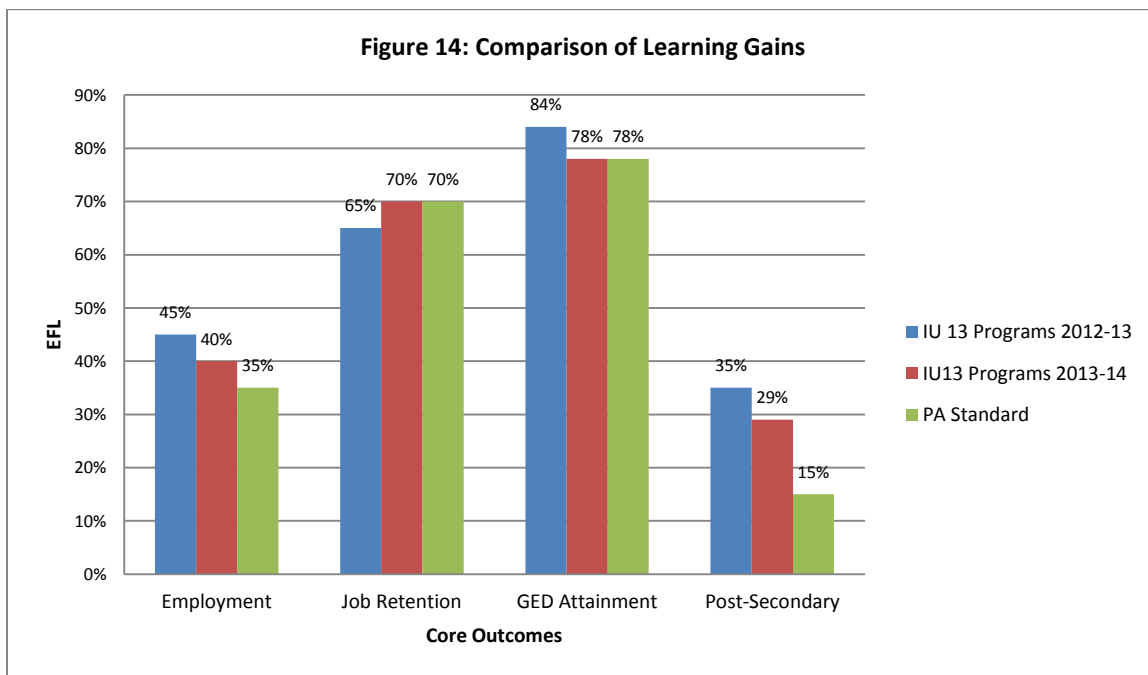


**Discussion:**

The federal law which provides funding for Adult Education was recently renewed, with an increased emphasis on transitioning adult learners to postsecondary school and employment. IU13 met or exceeded all of the Core Outcomes, most of which are focused on postsecondary and employment, indicating that the program is well-positioned to meet the demands of the renewed federal law.

Due to the complexity of the lives of adult learners, it is difficult to determine the number of classes needed to fulfill student contractual agreements. However, enrollment numbers were very close to the target of 100% in all three primary contracts. IU13 learning gains in the primary federal/state contract were higher than both the English Language Civics and Family Literacy contracts, which has not always been the case. All contracts show above average learning gains when compared to other Adult Education agencies. The program has a goal of achieving at least 50% in learning gains for all contracts in future years. Additional English Language Civics options will be made available to boost student enrollment.

## Perceptual Data

The Adult Education program annually asks students to complete surveys regarding their satisfaction with the services they received. Two-hundred and forty-one responses were analyzed. As shown in **Figure 15**, the students indicated a high level of satisfaction with their teachers.

**Figure 15: Student Survey - Adult Education**

My teacher helps me reach my goals.
- 0.0%
- 0.4%
- 1.2%
- 7.5%
- 90.9%

My teacher encourages me to learn.
- 0.0%
- 0.4%
- 2.1%
- 7.9%
- 89.6%

My teacher is knowledgeable.
- 0.0%
- 0.0%
- 1.2%
- 7.9%
- 90.9%

My teacher is organized and prepared for class
- 0.4%
- 0.4%
- 1.2%
- 4.6%
- 93.4%

Legend: ■ Never ■ Rarely ■ Sometimes ■ Usually ■ Always

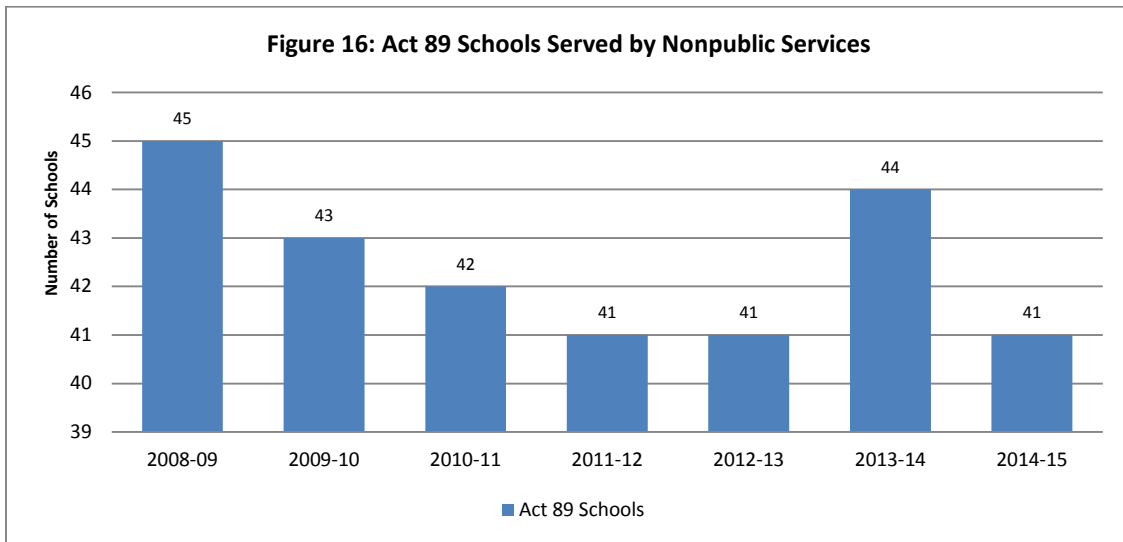**\***Percentages may not add up to 100% because of rounding.

All of the data suggests that IU13 continues to provide services to adult learners that meet or exceed the state standards, and are highly valued by its clients.
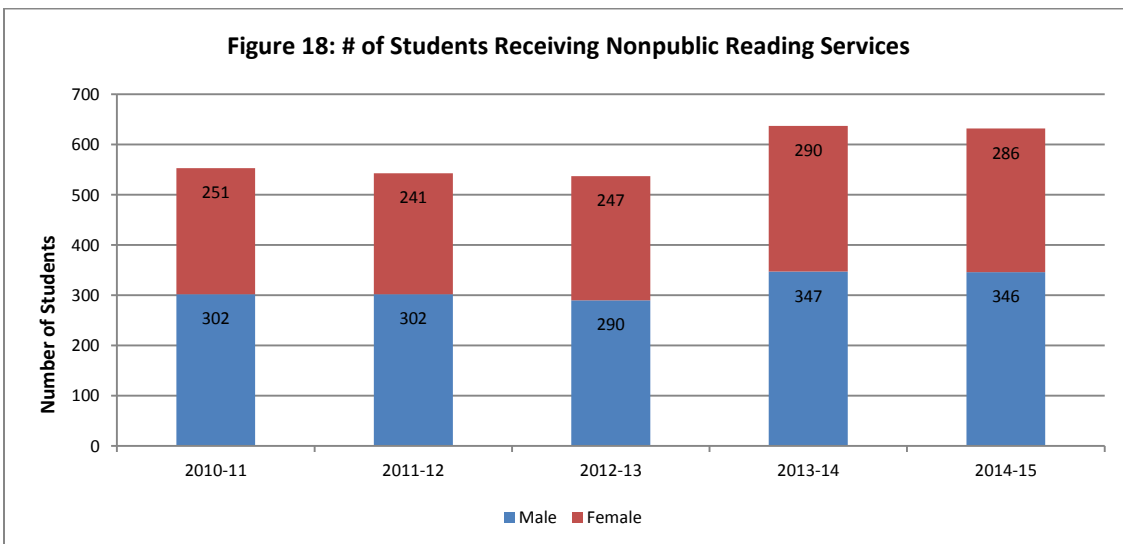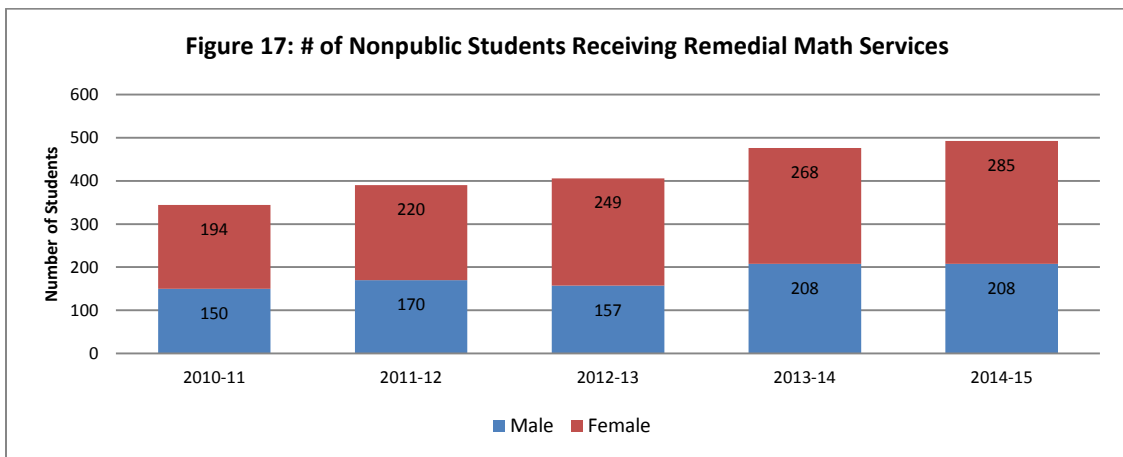
## Nonpublic Services

IU13 provides remedial and support services to eligible Lancaster and Lebanon county students who attend nonpublic schools through the use of Act 89 state funds and Title I federal funds. Title I services are provided on behalf of local school districts. Act 89 regulations require that intermediate units provide equitable services to students attending nonpublic schools. Reading and math specialists, speech and language therapists, school counselors and psychologists work directly with identified students to improve their academic and social/emotional functioning.

### Demographic Information

IU13 has consistently provided services to students in more than 40 nonpublic schools. **Figure 16** shows the trend in the number of schools served over the past seven years.

**Figure 16: Act 89 Schools Served by Nonpublic Services**

Number of Schools

- 2008-09: 45
- 2009-10: 43
- 2010-11: 42
- 2011-12: 41
- 2012-13: 41
- 2013-14: 44
- 2014-15: 41

■ Act 89 Schools

A breakdown of the number of students receiving reading and math remedial services is detailed below in **Figure 19** (remedial math services) and **Figure 20** (remedial reading services):

**Figure 17: # of Nonpublic Students Receiving Remedial Math Services**

Number of Students

| Year | Male | Female |
|------|------|--------|
| 2010-11 | 150 | 194 |
| 2011-12 | 170 | 220 |
| 2012-13 | 157 | 249 |
| 2013-14 | 208 | 268 |
| 2014-15 | 208 | 285 |

■ Male ■ Female

**Figure 18: # of Students Receiving Nonpublic Reading Services**

Number of Students

| Year | Male | Female |
|------|------|--------|
| 2010-11 | 302 | 251 |
| 2011-12 | 302 | 241 |
| 2012-13 | 290 | 247 |
| 2013-14 | 347 | 290 |
| 2014-15 | 346 | 286 |

■ Male ■ Female

In addition, 416 students received speech and language services, an increase of two students from the prior year, 53 psychological referrals were conducted (down 23 students from 2013-14) and 11 consultations were made. The decrease in psychological referrals was most likely related to limited availability of staff during the first half of the school year due to a key team member's extended leave of absence.

## Achievement/Student Learning

Nonpublic reading and math specialists work directly with students that are identified as having below grade level skills in reading and math. The services consist of pullout small group programs. As a measure of student learning, IU13 uses three types of benchmark assessments to develop appropriate instructional strategies and to monitor growth of student learning. These assessments include:

- **DIBELS (Dynamic Indicators of Basic Early Literacy Skills) Next**
- **4Sight Benchmark Assessments:** 4Sight Benchmarks are assessment tools designed for grades 3-11 that are aligned to the PSSA math and reading tests in both content and format. The benchmark tests are designed to give feedback on how students would perform if given the PSSA test on that particular day. Students are given the assessments three times during the school year to track progress toward the eligible content of the Pennsylvania Standards.
- **Act 89 Assessments for Math:** The Act 89 Assessments for Math were developed and normed locally by IU13 staff, aligned with the PA Core, and designed to measure student performance in grades K-8. They are administered three times per year.

**Table 6** lists the number of students assessed at the beginning of the year (BOY), middle of the year (MOY), and end of year (EOY). Numbers vary due to students entering and exiting services.

| | DIBELS Next | | | Act 89 | | | 4Sight Math | | | 4Sight Reading | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Table 6: Number of Students Assessed** | | | | | | | | | | | | |
| **Grade Level** | BOY | MOY | EOY | BOY | MOY | EOY | BOY | MOY | EOY | BOY | MOY | EOY |
| **Kindergarten** | 91 | 95 | 94 | NA | 41 | 44 | NA | NA | NA | NA | NA | NA |
| **First Grade** | 118 | 125 | 113 | 55 | 67 | 67 | NA | NA | NA | NA | NA | NA |
| **Second Grade** | 98 | 93 | 80 | 67 | 73 | 71 | NA | NA | NA | NA | NA | NA |
| **Third Grade** | 74 | 77 | 54 | 62 | 64 | 58 | 65 | 64 | 58 | 74 | 77 | 59 |
| **Fourth Grade** | 59 | 66 | 60 | 59 | 61 | 60 | 59 | 61 | 60 | 59 | 66 | 60 |
| **Fifth Grade** | 41 | 41 | 38 | 47 | 50 | 47 | 47 | 50 | 48 | 41 | 41 | 38 |
| **Sixth Grade** | 20 | 21 | 20 | 23 | 22 | 23 | 23 | 22 | 23 | 20 | 21 | 19 |
| **Seventh Grade** | NA | NA | NA | 27 | 27 | 21 | 30 | 27 | 21 | 10 | 11 | 7 |
| **Eighth Grade** | NA | NA | NA | 19 | 21 | 20 | 23 | 21 | 20 | 10 | 10 | 10 |

## Measures of Student Learning

**Reading**

**DIBELS Next**

Results for each grade are listed below in **Figures 19a-g**. Each figure lists the number of students whose skills are assessed to be in each level of intervention. These include **Intensive** (requiring the highest level

of intervention), **Strategic** (requiring a strategic level of intervention), and **Core** (continued instruction in the core curriculum is appropriate). Since the goal of the remedial services is to remediate skills so that students are functioning closer and closer to grade level as the year progresses, it is expected that students' skill levels should be moving toward **Core** levels, with the resulting trend in students increasing in **Strategic** and **Core** levels as the year progresses. Measured skills included First Sound Fluency (FSF); Phoneme Segmentation fluency (PSF); Nonsense Word Fluency (NWF); DIBELS Oral Reading Fluency (DORF) and Accuracy. For a more detailed explanation of the methodology and identified skills assessments, please refer to the DIBELS website https://dibels.uoregon.edu/.

**Figures 19a-g:  DIBELS Next Reading Assessment Results Nonpublic 2014-15**



Figure 19a:  Kindergarten - DIBELS



Figure 19b: Grade 1 - DIBELS
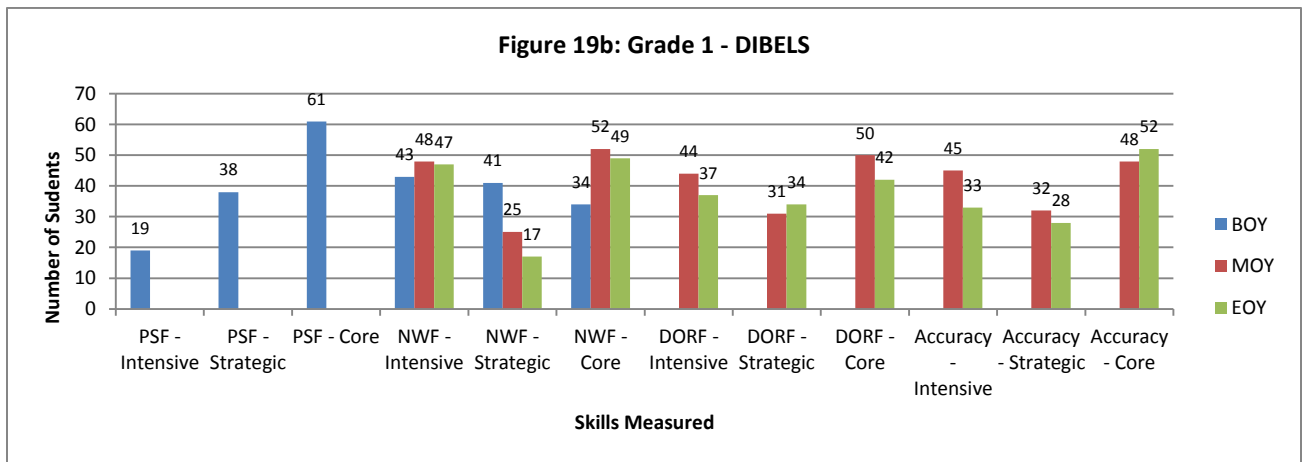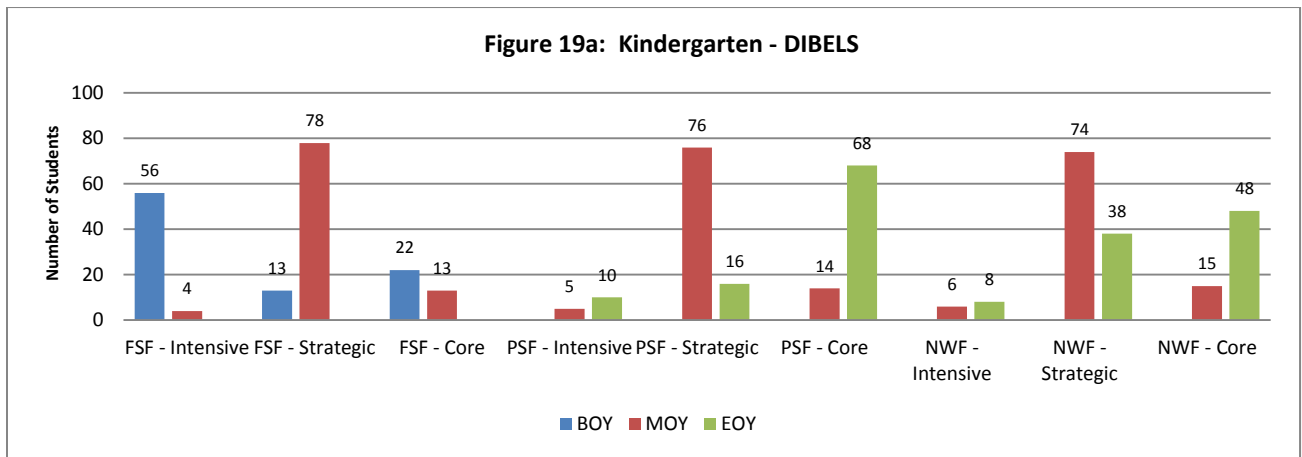
**Figure 19c - Grade 2 DIBELS**



Number of Students

Legend: BOY, MOY, EOY

NWF - Intensive: BOY 31
NWF - Strategic: BOY 35
NWF - Core: BOY 32
DORF - Intensive: BOY 48, MOY 31, EOY 24
DORF - Strategic: BOY 30, MOY 24, EOY 33
DORF - Core: BOY 20, MOY 38, EOY 23
Accuracy-Intensive: MOY 15, EOY 13
Accuracy-Strategic: MOY 23, EOY 26
Accuracy-Core: MOY 55, EOY 41
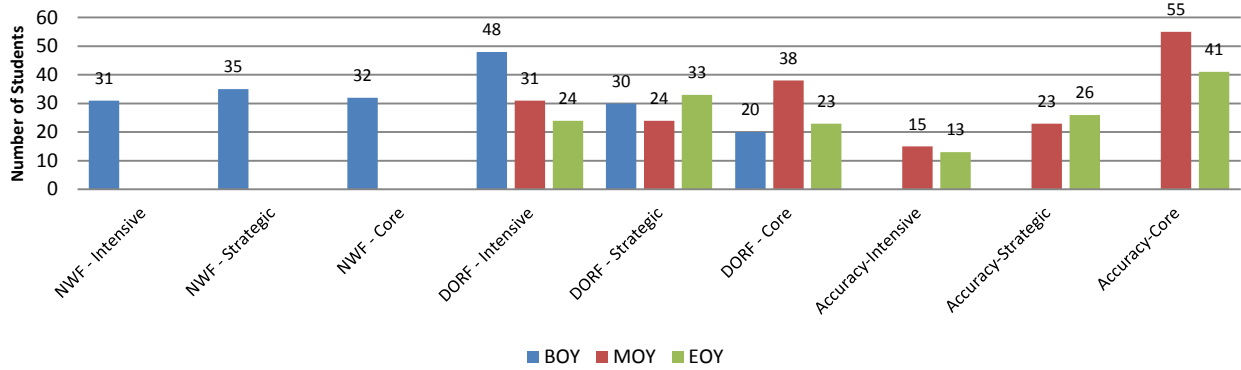
**Figure 19d: Grade 3 DIBELS**



Number of Students / Skills Measured

Legend: BOY, MOY, EOY

DORF - Intensive: BOY 25, MOY 19, EOY 16
DORF - Strategic: BOY 17, MOY 26, EOY 22
DORF - Core: BOY 32, MOY 32, EOY 16
Accuracy-Intensive: BOY 17, MOY 13, EOY 15
Accuracy-Strategic: BOY 26, MOY 22, EOY 12
Accuracy-Core: BOY 31, MOY 42, EOY 27
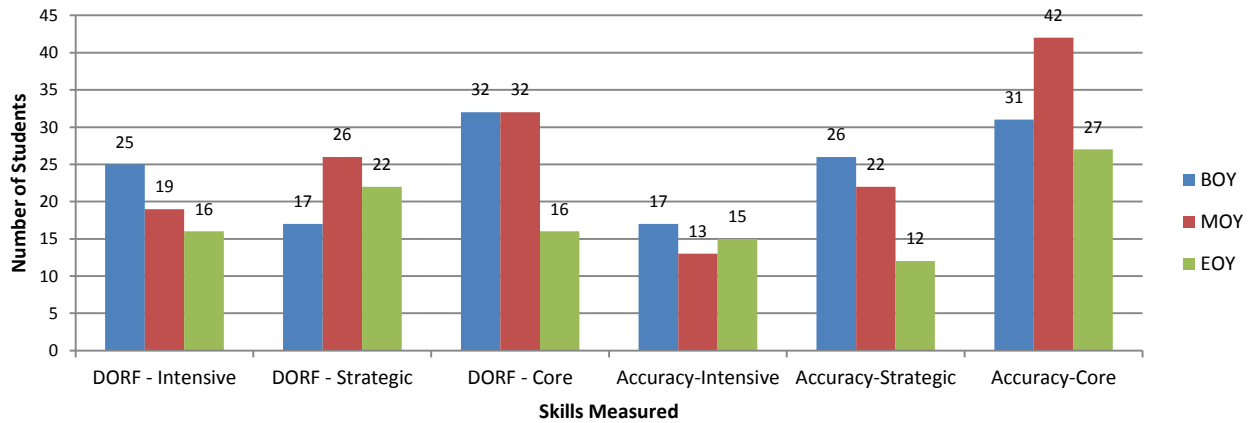
**Figure 19e: Grade 4 DIBELS**



Numbers of Students / Skills Measured

Legend: BOY, MOY, EOY

DORF - Intensive: BOY 26, MOY 18, EOY 18
DORF - Strategic: BOY 19, MOY 29, EOY 23
DORF - Core: BOY 14, MOY 19, EOY 19
Accuracy-Intensive: BOY 22, MOY 6, EOY 3
Accuracy-Strategic: BOY 16, MOY 20, EOY 26
Accuracy-Core: BOY 21, MOY 40, EOY 31
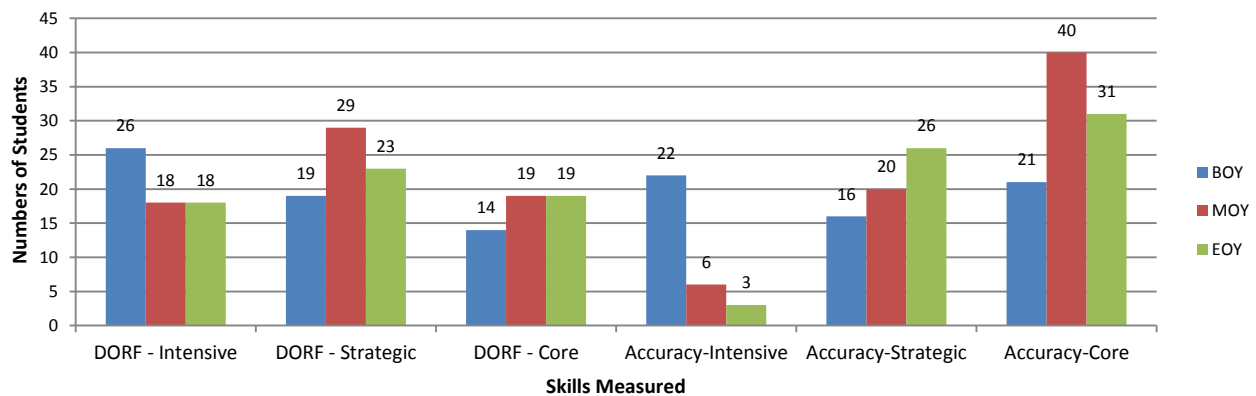
Figure 19f: Grade 5 DIBELS
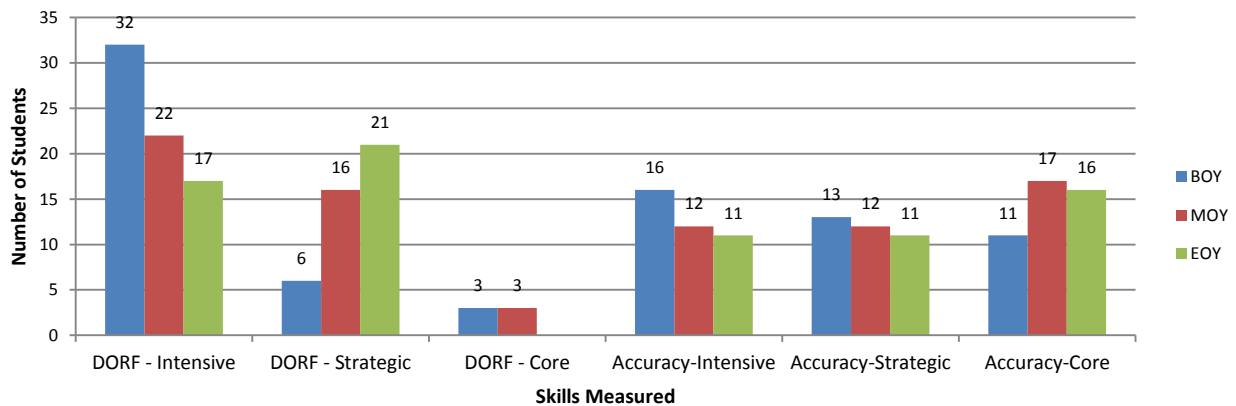


Figure 19g: Grade 6 DIBELS
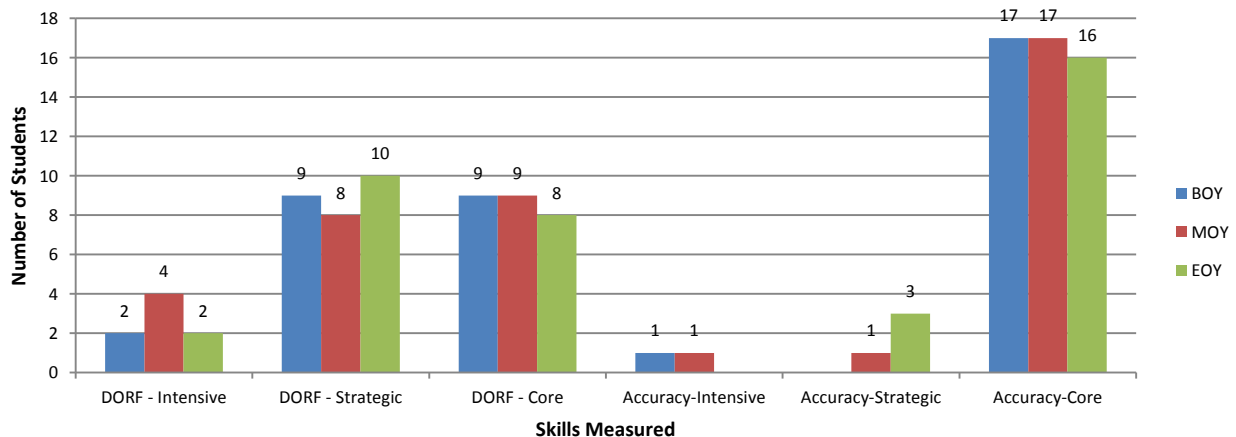
### 4Sight Benchmark Assessments

4Sight Benchmark Assessments were developed to assess how a student would perform on Pennsylvania's state assessment, the Reading and Math PSSAs. Since participation in state assessments is voluntary for nonpublic schools, the 4Sight Benchmark Assessments provide an opportunity to compare students' skills with the expectations of the eligible content of the Pennsylvania Standards. Similar to the DIBELS assessments, it is expected that students will move from Below Basic levels to Proficient levels throughout the course of the year. More detailed information on 4Sight Benchmark Assessments can be found at the website https://test.successforall.org/ .

The 4Sights were given in both reading and math to those students receiving remedial services from IU13 staff. The results are shown in **Figures 20a-f** (reading) and **Figures 21a-f** (math).

**Figures 20a-f: 4Sight Benchmark Assessments Results Reading Nonpublic 2014-15**



Figure 20a: Grade 3 4Sight - Reading
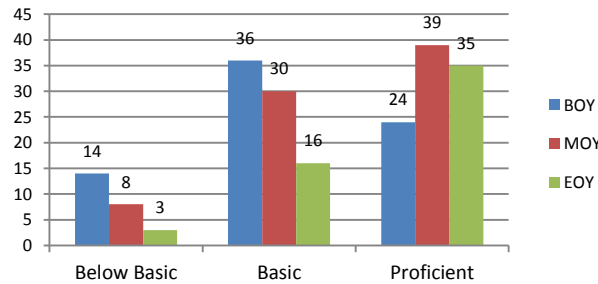


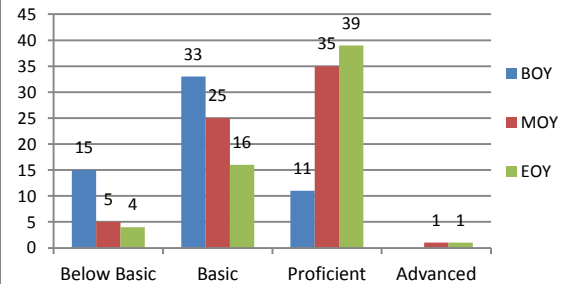Figure 20b: Grade 4 4Sight - Reading
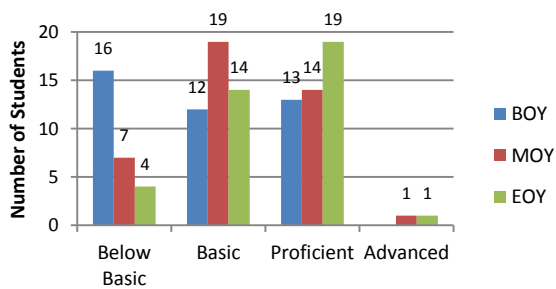


Figure 20c: Grade 5 4Sight - Reading



Figure 20d: Grade 6 4Sight - Reading



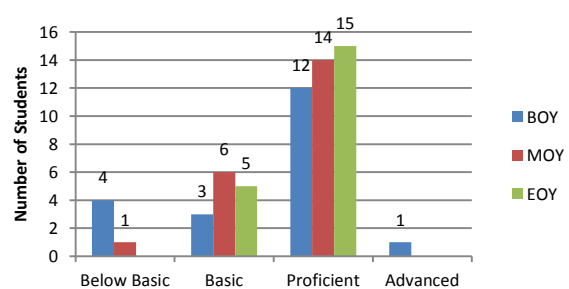Figure 20e: Grade 7 4Sight - Reading



Figure 20f: Grade 8 4Sight - Reading
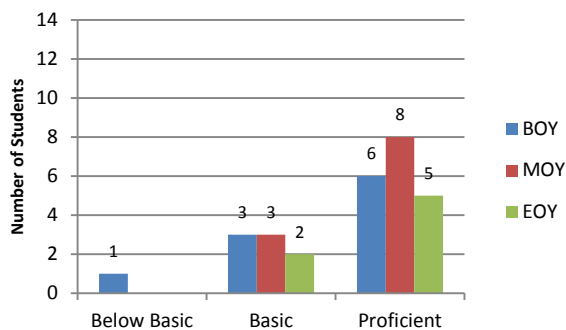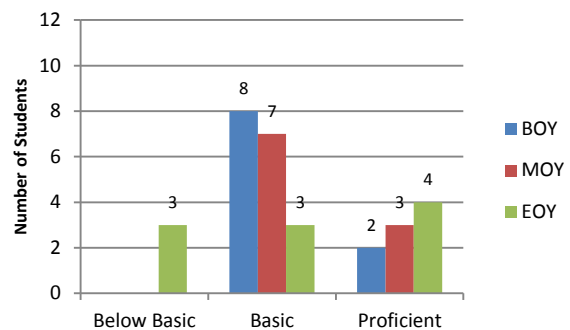
Figure 21a: Grade 3 4Sight - Math



Figure 21b: Grade 4 4Sight - Math



Figure 21c: Grade 5 4Sight - Math



Figure 21d: Grade 6 4Sight - Math



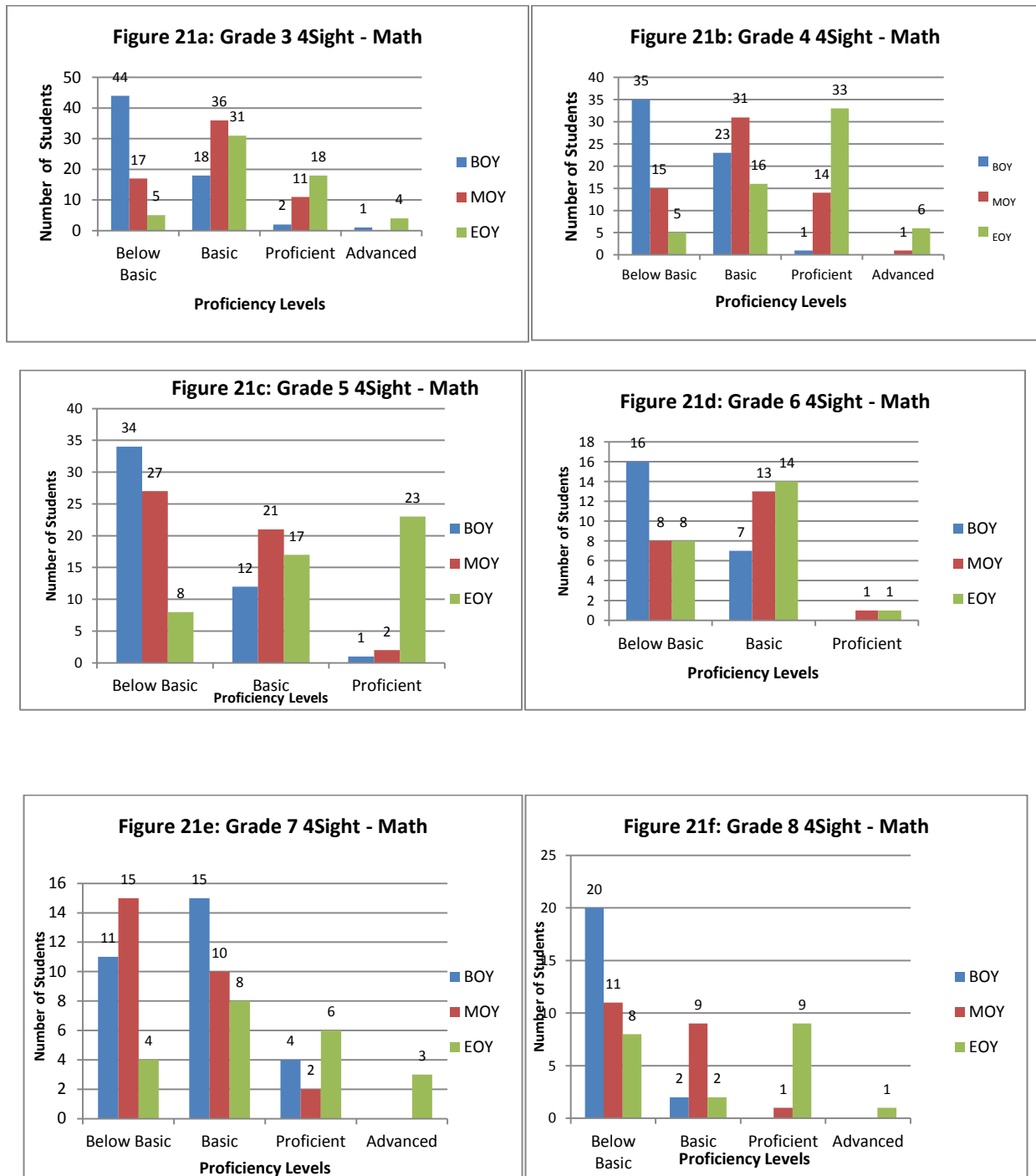Figure 21e: Grade 7 4Sight - Math



Figure 21f: Grade 8 4Sight - Math

## Act 89 Math Assessments

Students were also given the Act 89 Assessments for Math, a locally developed assessment aligned with the PA Core Standards, to measure performance in in grades K-8. They are administered three times per year. Results are listed in **Figures 22a-i Act 89 Math Assessments K-8 2014-15:**
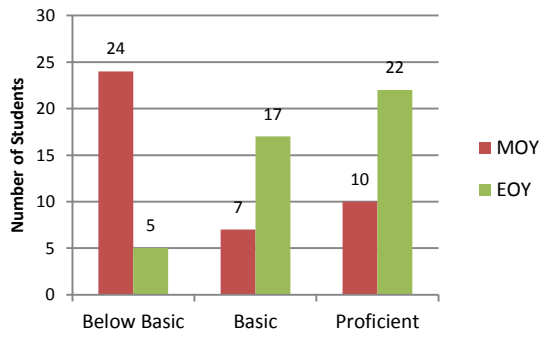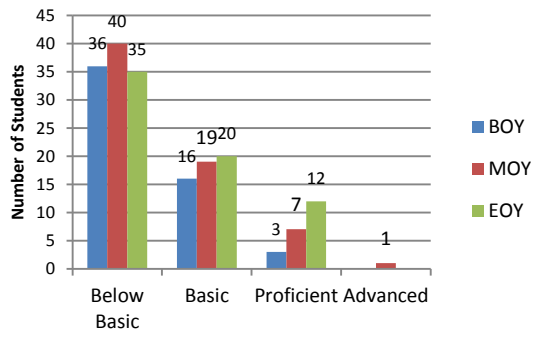
## Figure 22a: Kindergarten Act 89

**Number of Students** (y-axis)

Categories: Below Basic, Basic, Proficient

- MOY
- EOY

| | MOY | EOY |
|---|---|---|
| Below Basic | 24 | 5 |
| Basic | 7 | 17 |
| Proficient | 10 | 22 |

## Figure 22b: Grade 1 Act 89

**Number of Students** (y-axis)

Categories: Below Basic, Basic, Proficient, Advanced

- BOY
- MOY
- EOY

| | BOY | MOY | EOY |
|---|---|---|---|
| Below Basic | 36 | 40 | 35 |
| Basic | 16 | 19 | 20 |
| Proficient | 3 | 7 | 12 |
| Advanced | | 1 | |

## Figure 22c: Grade 2 Act 89

Categories: Below Basic, Basic, Proficient, Advanced

- BOY
- MOY
- EOY

| | BOY | MOY | EOY |
|---|---|---|---|
| Below Basic | 37 | 39 | 39 |
| Basic | 23 | 19 | 10 |
| Proficient | 6 | 14 | 22 |
| Advanced | 1 | 1 | |

## Figure 22d: Grade 3 Act 89

Categories: Below Basic, Basic, Proficient, Advanced

- BOY
- MOY
- EOY

| | BOY | MOY | EOY |
|---|---|---|---|
| Below Basic | 38 | 34 | 33 |
| Basic | 16 | 16 | 10 |
| Proficient | 6 | 14 | 15 |
| Advanced | 2 | | |

## Figure 22e: Grade 4 Act 89

Categories: Below Basic, Basic, Proficient, Advanced

- BOY
- MOY
- EOY

| | BOY | MOY | EOY |
|---|---|---|---|
| Below Basic | 43 | 33 | 32 |
| Basic | 14 | 18 | 18 |
| Proficient | 2 | 9 | 10 |
| Advanced | | 1 | |

## Figure 22f: Grade 5 Act 89

Categories: Below Basic, Basic, Proficient

- BOY
- MOY
- EOY

| | BOY | MOY | EOY |
|---|---|---|---|
| Below Basic | 32 | 23 | 17 |
| Basic | 14 | 18 | 13 |
| Proficient | 1 | 9 | 17 |

**Figure 22g: Grade 6 Act 89**



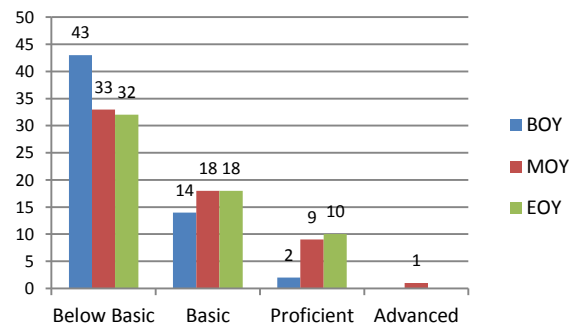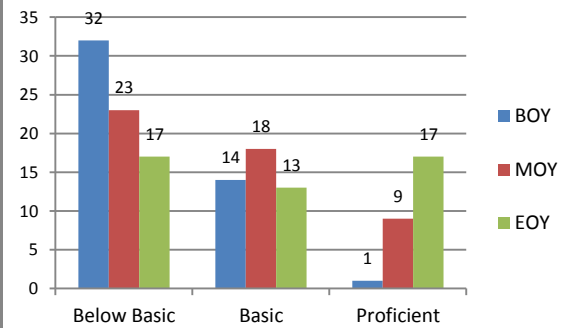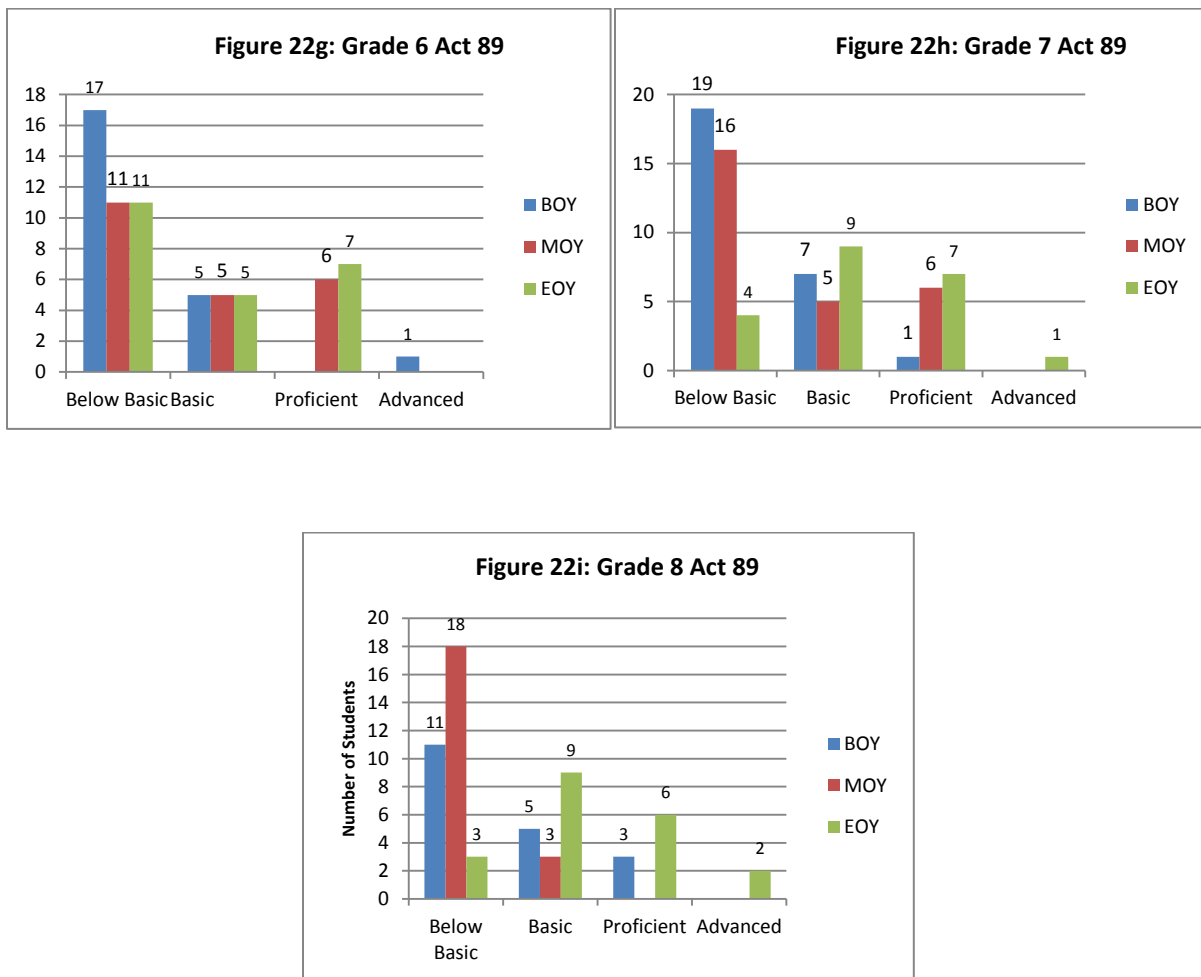**Figure 22h: Grade 7 Act 89**



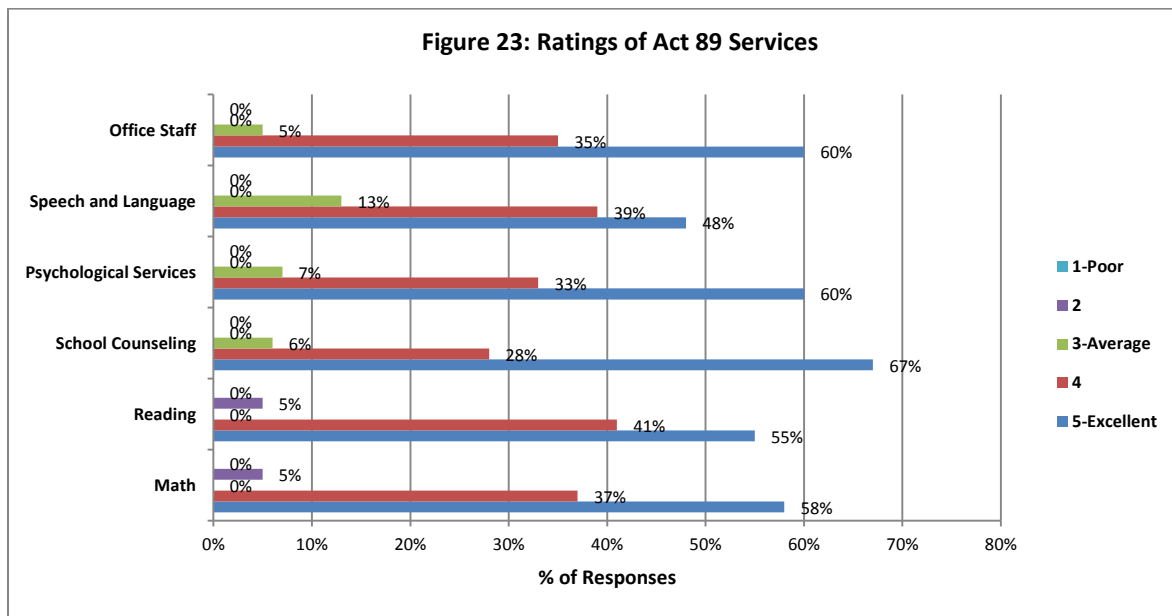**Figure 22i: Grade 8 Act 89**

**Discussion:**

The analysis of the reading data by the Nonpublic team indicated that, overall, students showed progress in gaining initial literacy skills. Recommendations for 2015-16 include strategically addressing text structure and multisyllabic words as well as Tier 2/3 vocabulary, providing strong, explicit decoding strategies for Intensive students; and working on text complexity starting in the younger grades.

For math, the analysis of the data by the Nonpublic team indicated that further instruction needs to ensure that first graders grasp the concept of inverse operations (+/-). Other recommendations for 2014-15 include reviewing the pacing of the lessons, and including elements of balanced math and spiral reviews to keep concepts current, with the use of probes to ensure mastery of concepts. It was also noted by the team that, due to the recent alignment of the PA Core Standards, middle school students are missing some critical math skills and they will need these gaps to be filled. Suggestions for next year include the use spiral skills and daily math reviews to revisit skills.

## Perceptual Data

Nonpublic administrators were surveyed regarding their satisfaction with Nonpublic Act 89 and related services. The results of the survey are indicated below in **Figure 23:**

**Figure 23: Ratings of Act 89 Services**



Horizontal bar chart showing % of Responses for six service categories, rated 1-Poor, 2, 3-Average, 4, 5-Excellent.

| Service | 1-Poor | 2 | 3-Average | 4 | 5-Excellent |
|---|---|---|---|---|---|
| Office Staff | 0% | 0% | 5% | 35% | 60% |
| Speech and Language | 0% | 0% | 13% | 39% | 48% |
| Psychological Services | 0% | 0% | 7% | 33% | 60% |
| School Counseling | 0% | 0% | 6% | 28% | 67% |
| Reading | 0% | 5% | 0% | 41% | 55% |
| Math | 0% | 5% | 0% | 37% | 58% |

*Percentages may not add up to 100% because of rounding

Overall, ratings on the surveys show a consistent rating of satisfaction with services by the nonpublic administrators, suggesting that the staff is meeting the designated needs of the schools and their students.  Any ratings of a "3" or lower are followed up with a personal phone call to the nonpublic administrators to discuss ways to improve services.

## Curriculum and Instruction

IU13 Curriculum and Instruction (C & I) services are designed primarily to improve the skills of district and IU13 teachers and administrators as they interact and instruct their students.  IU13 curriculum and instruction consultants bring expertise in multiple content areas including literacy, STEM, instructional technology, and gifted services, and also serve as the conduit between PDE initiatives and school districts. Services offered include workshops, instructional coaching, and technical assistance as well as curriculum, instructional and assessment audits.

In addition to these services, in 2011, IU13 developed Lancaster-Lebanon Virtual Solutions (LLVS) in collaboration with local districts.  This online program was designed to support school districts that wished to offer a full-time online classroom experience to their students.  This program was specifically developed to provide an alternative to those students who, for various reasons, would in the past enroll in cyber charter school to meet their educational needs. LLVS works with school district personnel to provide a full range of classes taught by Pennsylvania-certified teachers, to provide computers and internet services to students, and to provide technical assistance to students, parents, and district staff. The program is run in collaboration with other intermediate units across the state. Students who participate in the program continue to be enrolled in their local districts and, upon completion of the required coursework, receive a diploma from said district.

### Demographics

Over the past several years, the Curriculum and Instruction staff has offered numerous marketplace services to IU13 districts. These services are available to schools on a fee-for-service basis; thus allowing
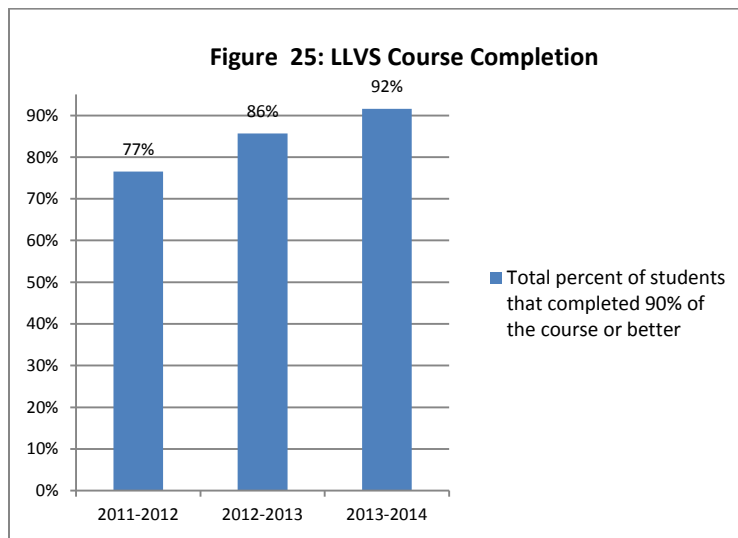
educators to choose those offerings which best meet their particular needs. All 22 districts, plus the two Career and Technology Centers, purchased services from the C&I program during the 2014-15 school year. School District of Lancaster was the largest purchaser of C&I services, with Hempfield, Cornwall-Lebanon, Lebanon, and Manheim Central rounding out the list of top five purchasers. LLVS has maintained a consistent number of districts participating in the program over its four-year history, with twelve Lancaster and Lebanon school districts participating. In 2014, York City School District joined LLVS, bringing the total number of school districts utilizing the services to thirteen.  The number of actual course enrollments over the past four years has steadily increased, showing the increasing popularity of online learning, as shown in **Figure 24**:
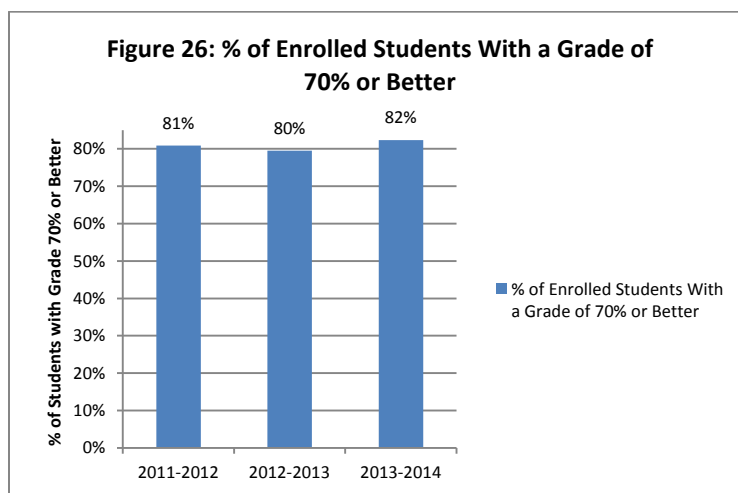


**Figure 24: Total LLVS Course Enrollments**
**Course Parts  (9 - Week Courses)**
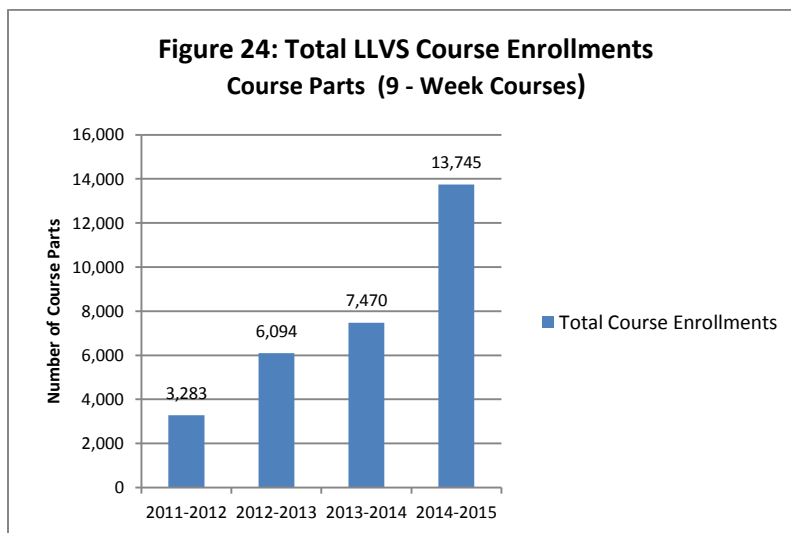
### Achievement/Student Learning

**Lancaster Lebanon Virtual Solutions (LLVS)**

Students who participate in LLVS courses are provided instruction by teachers employed by the online content provider.  LLVS, therefore, is not directly responsible for the learning gains on its enrolled students. Instead, LLVS provides districts and students with services that are designed to maximize learning opportunities.  These services include, but are not limited to, support to district mentors who interact with students to make sure they are being successful in an online environment, help desk assistance to students should they encounter any technical difficulties, and a job-alike group designed to provide a forum for networking and professional development.  It is believed that all of these services will result in better outcomes for students, both in the course completion rate and passing grades. Data from the first three years of LLVS support this belief (2014-15 data will be available in Fall 2015).  Course completion is an important component of online learning. Without proper support, students can easily become frustrated with this more independent method of learning. Course completion rates have steadily increased over time, with over 90% of students taking LLVS courses completing at least 90% of their courses in 2013-14. This continual increase is shown is **Figure 25**:

**Figure 25: LLVS Course Completion**

Total percent of students that completed 90% of the course or better

- 2011-2012: 77%
- 2012-2013: 86%
- 2013-2014: 92%

Over three-quarters of the students enrolled in LLVS classes received a 70% or better for their final grade, a consistent trend over the three years, as displayed in **Figure 26**:

**Figure 26: % of Enrolled Students With a Grade of 70% or Better**

% of Enrolled Students With a Grade of 70% or Better

- 2011-2012: 81%
- 2012-2013: 80%
- 2013-2014: 82%

**Professional Development and Consultation Services:**

IU13 consultants rarely provide direct instruction to students. Their task instead is to influence student achievement by training educators on best practices and assisting them in the implementation of these practices at the classroom, building, and district level. As a result, the selection and analysis of the designated data have been designed to answer the second analysis question:

*Is the professional development and training offered by IU13 of high quality and effectiveness, resulting in more highly trained educators who will in turn, impact student achievement?*

The C & I team strives to provide expert services to increase their impact on IU13 teachers and students. One measure of this quality is demonstrated by their participation in the Literacy Design Collaborative (LDC). LDC is a national non-profit organization that partners with national, state and regional educational agencies to promote the use of a framework for teachers to implement the Common Core Standards, and in Pennsylvania, the PA Core Standards for literacy across content areas. Participants are

trained in the LDC framework and supported as they develop high-quality instructional modules that promote rigor in the classroom. The modules are evaluated for quality by the LDC organization through a rigorous jurying process. Modules deemed "good-to-go" are acknowledged as having met the standards of the LDC framework and maintaining the integrity of the process.  More information on the LDC Framework and the jurying process are available at http://ldc.org/.  As part of its partnership with LDC, the C & I team provides training, consultation and support to school districts, with the goal of developing these high quality modules.

**Figure 27** shows a breakdown of the number of "good-to-go" modules developed by LDC partners. Teachers supported by IU13 have developed a significant number of the total number of these modules, tied for third in terms of the number of modules recognized.  This is particularly impressive, since the top two producers are a result of statewide efforts (Kentucky and Georgia) rather than a region such as Lancaster and Lebanon counties.



Figure 27: Number of "Good-To-Go" Modules Developed by LDC Partners
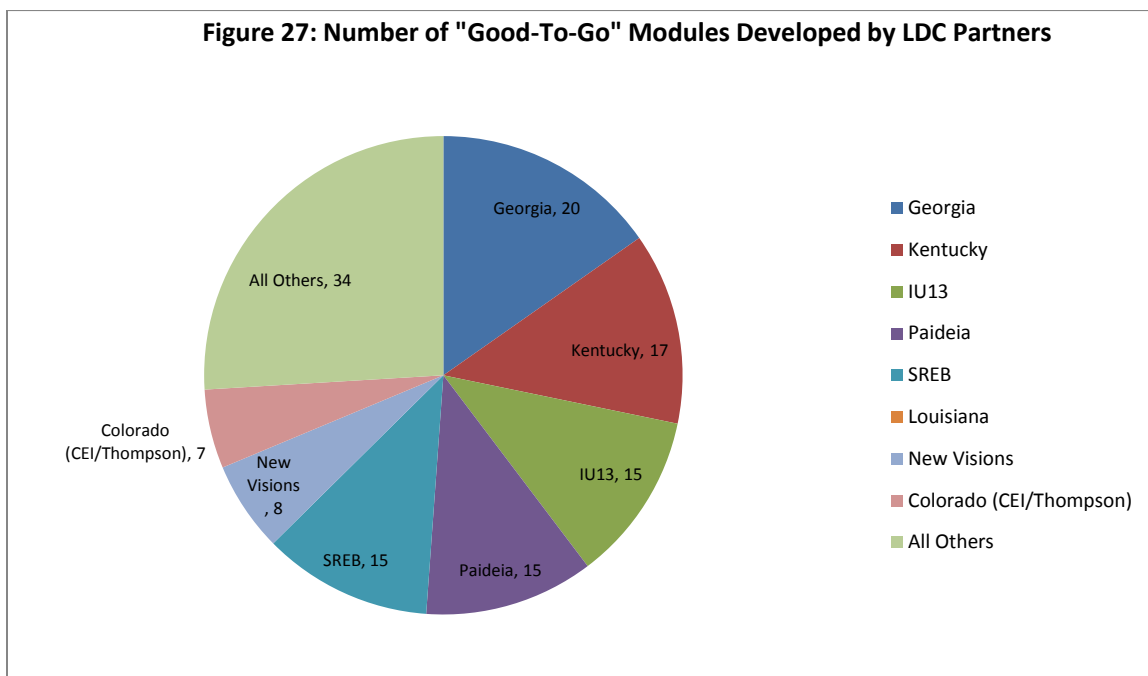
The data suggests that IU13 teachers have the skills and knowledge to produce modules that meet the desired benchmarks of quality.

In addition to the LDC module data, it was decided that measures of student learning would also be collected from those instances where IU consultants had ongoing relationships with teachers and administrators to more accurately correlate results with services. The C&I team hypothesized that this would be a better representation of the correlation between outcomes and services since consultants would have the opportunities to train, model and offer feedback to teachers in a more comprehensive fashion than through the provision of a one time workshop or observation.  Two projects were identified to include in the analysis. They include:

- **Reading Apprenticeship (RA) -** Reading Apprenticeship is a research-based approach to reading instruction that helps adolescents develop the knowledge, strategies, and dispositions they

need to become more engaged, powerful readers. Reading Apprenticeship instructional routines and approaches are based on a framework that describes classroom life in terms of four interacting dimensions that support reading development. These dimensions draw upon social, personal, cognitive and knowledge-building skills and strategies that are used to assist students as they approach reading tasks. Findings cited in this report are drawn from the research synopsis **2014-2015 Reading Apprenticeship Student Growth Analysis** (Galbraith, 2015) found in Appendix A.

- **Math Science Partnership Grant Program (MSP)** – The IU13 MSP grant program is an action-research study designed to measure the impact of targeted professional development for educators on student achievement in math and science. By increasing the content knowledge and pedagogical skills of participating teachers, it is hypothesized that student achievement in the targeted concepts and standards should increase. Developed in partnership with local colleges, school districts, and community agencies, each MSP program is a three-year project, funded by the U.S. Department of Education and administered by the PA Department of Education. Secondary math, science and technology-education teachers participate in a summer 80-hour STEM Institute designed to deepen content knowledge and pedagogy. During the subsequent school year, participating teachers work as building-based professional learning communities, receive instructional coaching from one of the IU13 STEM consultants, and participate in three days of professional development.  Information shared in this data report is drawn from data analysis done in September 2014, based on the first year of the IU13 second MSP grant (July 2013 – June 2014).

Assessments used as part of the two research designs include:
- **Curriculum Embedded Reading Assessment  (CERA)** -  A formative assessment developed by West End's Strategic Literacy Initiative, the rubric measures three specific areas:
    - **Metacognitive Conversation:** How does the student monitor his/her comprehension and make adjustments to get back on track?
    - **Using Cognitive Strategies**: To what degree does the student use strategies to focus on and take control of reading?
    - **Building Knowledge**: How does the student mobilize, build, and revise schema to increase knowledge about content, text, language, and disciplinary discourse?
    The assessment is part of the Reading Apprenticeship framework. Details can be found at the Reading Apprenticeship website at http://readingapprenticeship.org/.
- **Reformed Teaching Observation Protocol (RTOP) -** RTOP is an observation tool designed to measure changed in classroom instruction in math or science.
- **Keystone Exams** – These end-of-course assessments are required for Pennsylvania students completing Algebra I and Biology coursework.  More information on the Keystone Exams can be found at the PDE SAS portal (http://pdesas.org/).
- **Pennsylvania System of School Assessments (PSSAs)** – The Pennsylvania state assessments assess student proficiency levels in reading and math in Grades 3-8 and in science Grades 4 & 8. More information on the PSSA exams can be found at the PDE SAS portal (http://pdesas.org/).

- **Classroom Diagnostic Tools (CDTs)** – These formative assessments are used voluntarily within public schools, and aligned to the content of the PSSA and Keystone Exams. Numeric scores are categorized into achievement bands that can help teachers monitor student progress and identify gaps in understanding for given content. More information on the CDTs can be found on the PDE SAS portal (http://pdesas.org/).
- **Pennsylvania Value-Added Assessment System (PVAAS)** – This analysis of achievement data measures student growth, in certain tested areas. More information on PVAAS can be found at https://pvaas.sas.com.
- **Danielson Domains** – Domains 1 and 3 are two of the areas of teaching effectiveness from Charlotte Danielson's Framework for Teaching that are included in the Pennsylvania Department of Education's Classroom Teacher Rating Tool. Domain 1 examines aspects of planning and preparation; Domain #3 examines aspects of classroom instruction.
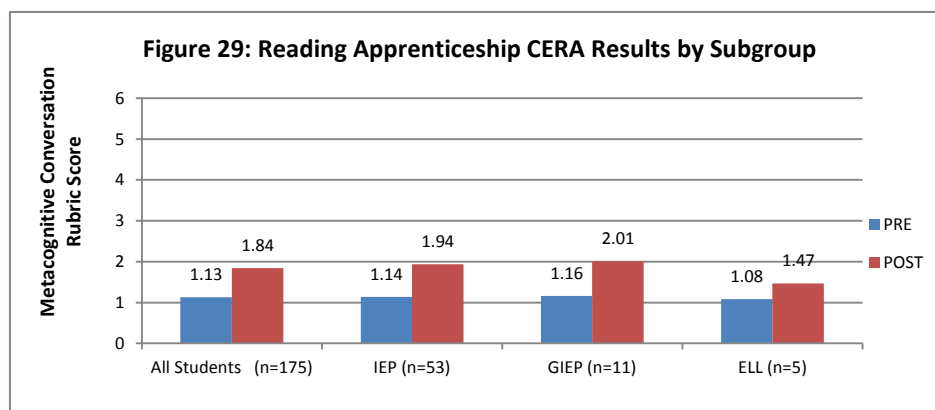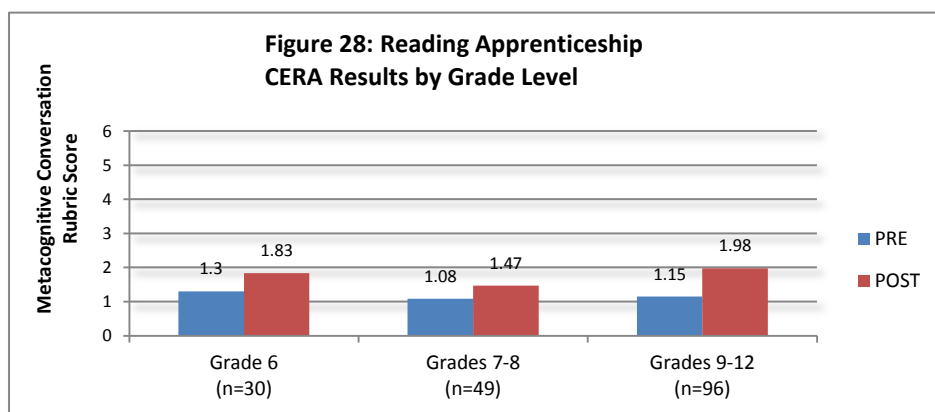
**Reading Apprenticeship Student Growth Analysis Design**

During the 2014-15 school year, seven school teams comprised of 23 teachers and five administrators from two school districts began the IU13 Reading Apprenticeship training in October and completed it in May. All 23 teachers formatively assessed their students using the CERA, but only eleven teachers completed all aspects of the pre/post CERA with a total of 175 students so that it could be used for this analysis. For the purpose of examining student growth, students' pre and post responses were scored using the three performance levels both on the annotations and the question responses for only the metacognitive conversation category on the CERA rubric for a total of six possible score points.

The results of the CERA are intended to show student growth that resulted from teacher implementation of the RA Framework®. One of the limitations to this analysis is that teachers implemented the RA Framework in their classrooms to varying degrees. The teachers' self-report of their implementation indicated that while 53% of the group implemented 11+ lessons, 12% implemented 9-10 lessons, 18% implemented 7-8 lessons, and 18% implemented 6 or fewer lessons.

## *Summary of Results*

**Figures 28** and **29** represent the total pre/post mean results on the CERA. The total mean performance of students from pre-assessment administration (blue) to the post-assessment administration (red) clearly shows that all students made gains from the pre to the post administration within the six-month training period. However, with a maximum score of 6, there is certainly room for continued improvement.

**Figure 28: Reading Apprenticeship CERA Results by Grade Level**



**Figure 29: Reading Apprenticeship CERA Results by Subgroup**

It is important to note that the sample size for GIEP and ELL students was so small that these results cannot be generalized into other contexts; however, this is in line with WestEd's continued research that shows that all students can benefit from Reading Apprenticeship strategies.

The most significant gains occurred on the student annotations portion of the assessment (Gain = .84). On the pre-assessment, a majority of students had little experience with annotating the text while reading and made few markings. On the post-assessment, more students marked and annotated the text as they read which may be the result of teacher modeling and implementation of an RA active reading strategy called "Talking to the Text." The gains in the Metacognitive Conversation category are indicative of students becoming more aware of their own reading processes. On the post-implementation survey, one teacher in the training group noted, "[Students] are now more aware of their reading strategies and their own reading behavior and how they approach a text. They will use these strategies to approach difficult-to-read texts in their academic careers." Another teacher wrote, "The students have started engaging with the course text and concepts in a deeper and more meaningful way. However, there is still much that I will be tweaking and adding to for next year."

**Math Science Partnership Evaluation Design**
Teachers participating in the project were administered written tests of content knowledge given at the start and end of the summer institute to measure gains in content knowledge, and again in the spring to measure retention of gained knowledge. The Reformed Teaching Observation Protocol form (RTOP) was also used during classroom observations four times per year, to measure changes in teaching practice.

Teacher classroom practice was also measured by examining Danielson Domains 1 and 3 from teachers' end-of-year evaluations; Domain 1 examines aspects of planning and preparation; and Domain 3 examines aspects of classroom instruction.

PSSA/Keystone Exam student data was also used as appropriate, dependent on grade levels and content areas. PSSAs and Keystones for Math and Science are only administered in specific grades and after the completion of aligned courses. PSSA/KE data was supplemented by scores from the Classroom Diagnostic Tools (CDTs), and PVAAS growth data was also examined. It should be noted that because of the design of the study, the most recent data that is available at the time of this report is data from school year 2013-14. In addition, all that is available from Year 1 of the study is observational data; therefore, conclusions that can be drawn at this time are limited. A full analysis of the project's impact on teachers and students will not be possible until the end of the project cycle in fall 2016, when multiple years' worth of data can be compiled for analysis.

### *Summary of Results*:

As measured by the written tests, 50% of math teachers and 57% of science teachers had a statistically significant gain in content knowledge during the Summer Institute. Math and science teachers showed statistically significant improvements between the first and last RTOP observations, both in overall score and for scores in the five sub-areas measured: lesson design and implementation, propositional pedagogic knowledge, procedural pedagogic knowledge, classroom culture promoting communication and interactions, and classroom culture promoting positive student/teacher relationships. Additionally, all (100%) math and science teachers were rated as proficient or higher on both Danielson Domains examined.

Student data was inconclusive, in part due to small sample size; while MSP teachers taught approximately 5,200 students during the 2013-14 school year, only 17% of math students and 19% of science students had PSSA/Keystone Exam data available at the time of the report. Less than half (40%) of students of math teachers were rated Proficient or Advanced on the 2014 Math PSSA/KE, but a majority (69%) of students of science teachers were rated Proficient or Advanced on the 2014 Science PSSA/KE. CDT scores were only submitted for students in Algebra 1, Biology, Chemistry, and Grade 7 science, and those scores closely resembled the breakdown of scores for the 2014 PSSA/KE.

Using PVAAS data, the MSP project compared student projections of whether a student would score Proficient or Advanced on the 2014 PSSA/KE with students' actual PSSA/KE scores. Particularly for students in $9^{th}$ and $10^{th}$ grades, actual proficiency levels exceeded projected levels by a significant amount, suggesting that teachers' participation in the MSP project contributed to students' higher-than-predicted growth in and math and science. Results are shown in **Table 7:**

**Table 7:  PVAAS Projections vs. Actual Proficiency Levels for Students of MSP Teachers, 2013-14.**
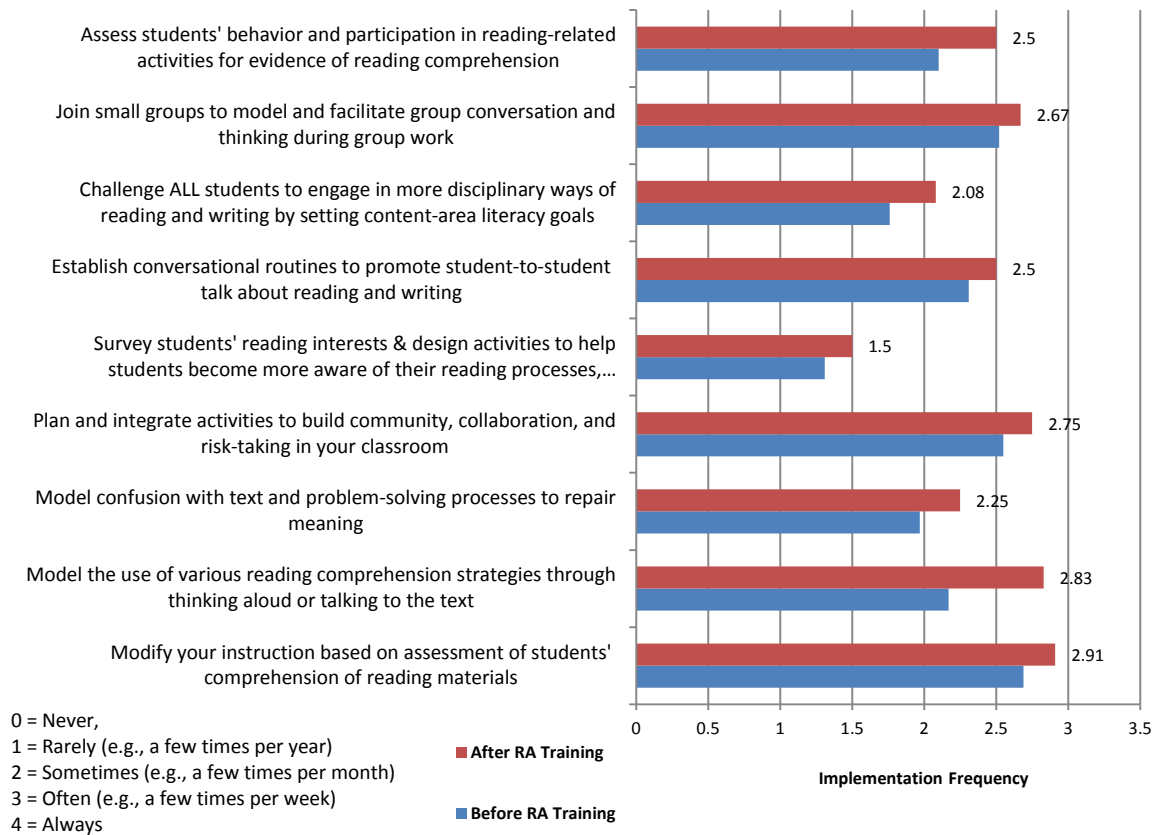
| MATH | | | SCIENCE | | |
|---|---|---|---|---|---|
| **% Projected** Proficient or Advanced | **Actual %** Proficient or Advanced | | **% Projected** Proficient or Advanced | **Actual %** Proficient or Advanced | |
| **40%** | **43%** | | **49%** | **69%** | |
| Grade level | % Projected | % Actual | Grade Level | % Projected | % Actual |
| 8th Grade | 64% | 46% | NA | NA | NA |
| 9th Grade | 41% | 48% | 9th Grade | 48% | 57% |
| 10th Grade | 12% | 29% | 10th Grade | 50% | 77% |

## Perceptual Data

**Reading Apprenticeship Post Training Survey Results**

On the post-implementation survey, teachers were asked to indicate the frequency of certain instructional literacy practices both prior to the training and following the training. As a result of their participation in the Reading Apprenticeship training, teachers reported the following changes in their practices shown in **Figure 30**:
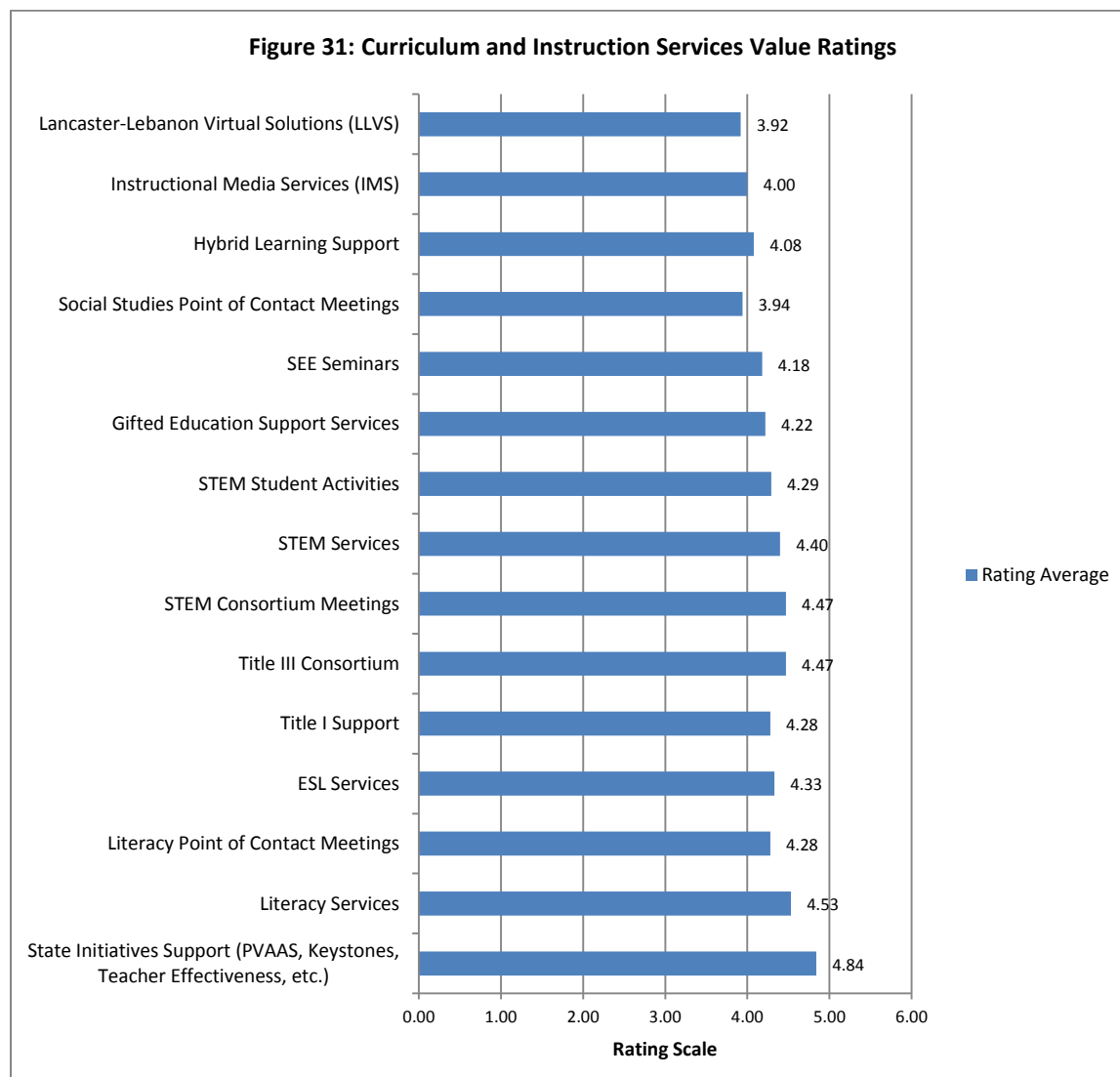
**Figure 30: Teacher Perceptions of Changes in Their Own Instructional Practice**

| | | |
|---|---|---|
| Assess students' behavior and participation in reading-related activities for evidence of reading comprehension | After RA Training | 2.5 |
| Join small groups to model and facilitate group conversation and thinking during group work | | 2.67 |
| Challenge ALL students to engage in more disciplinary ways of reading and writing by setting content-area literacy goals | | 2.08 |
| Establish conversational routines to promote student-to-student talk about reading and writing | | 2.5 |
| Survey students' reading interests & design activities to help students become more aware of their reading processes,… | | 1.5 |
| Plan and integrate activities to build community, collaboration, and risk-taking in your classroom | | 2.75 |
| Model confusion with text and problem-solving processes to repair meaning | | 2.25 |
| Model the use of various reading comprehension strategies through thinking aloud or talking to the text | | 2.83 |
| Modify your instruction based on assessment of students' comprehension of reading materials | | 2.91 |

0 = Never,
1 = Rarely (e.g., a few times per year)
2 = Sometimes (e.g., a few times per month)
3 = Often (e.g., a few times per week)
4 = Always

After RA Training
Before RA Training

**Implementation Frequency**

Specific teacher comments included *"I realized the importance of metacognition in the reading process. It is something I will be emphasizing from day one next year when I go over the class expectations and common course activities"* and *"I am able to see the benefits of literacy training across genres and how to track one's own reading strategies and skills. I am able to see where I am not teaching certain skills and where we struggle as a class."*

**Additional Perceptual Data**

In addition to the project perceptual data discussed previously, the curriculum and instruction consultants provided general marketplace and grant-funded trainings and services on a variety of topics that were attended by multiple districts. While these types of trainings are less likely to result in teacher change than sustained assistance provided to school districts, district ratings provide an overall view of satisfaction with the quality of the services. Lancaster and Lebanon curriculum coordinators were surveyed at the end of the 2014-15 school years regarding their level of satisfaction with the services provided by the C&I team. Using a scale of 1-5 (1 = not valued; 5 = highly valued), the average rating for the curriculum and instruction services provided is shown in **Figure 31.**

**Figure 31: Curriculum and Instruction Services Value Ratings**

| Service | Rating Average |
|---|---|
| Lancaster-Lebanon Virtual Solutions (LLVS) | 3.92 |
| Instructional Media Services (IMS) | 4.00 |
| Hybrid Learning Support | 4.08 |
| Social Studies Point of Contact Meetings | 3.94 |
| SEE Seminars | 4.18 |
| Gifted Education Support Services | 4.22 |
| STEM Student Activities | 4.29 |
| STEM Services | 4.40 |
| STEM Consortium Meetings | 4.47 |
| Title III Consortium | 4.47 |
| Title I Support | 4.28 |
| ESL Services | 4.33 |
| Literacy Point of Contact Meetings | 4.28 |
| Literacy Services | 4.53 |
| State Initiatives Support (PVAAS, Keystones, Teacher Effectiveness, etc.) | 4.84 |

Rating Scale (0.00 – 6.00)

The survey data suggests a high level of value placed on the services offered by the C & I team. Additional feedback from the curriculum coordinators includes comments such as: *"I am truly appreciative of the high levels of support provided by the IU team. It is an honor to collaborate with such a strong group of educational leaders"* and *"I feel fortunate and blessed to be able to work with IU13 again. I truly believe IU13 is one of the best in the Commonwealth. I appreciate the support and rapport we share with the IU. Keep it up!"*

## Summary and Conclusions

The results gathered in this data report suggest that Lancaster-Lebanon IU13 services and supports have had a significant impact on the lives of learners in Lancaster and Lebanon counties. The evidence reported here demonstrates the numerous ways that IU13 has produced successful outcomes for students served directly by IU programs. In addition, data was shared that suggests that the professional development trainings offered to local teachers and administrators have resulted in more highly skilled educators who use their training to impact student achievement in their classrooms. IU13 will continue

to implement its data collection system to gather and reflect upon the quality of services it offers. Through this ongoing analysis of critical indicators of program quality, IU13 believes it can more thoroughly fulfill its strategic priority to improve student achievement.

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# Indicators of Student Achievement and Quality Programming

**Figure and Table References:**

# Appendix A

## 2014-2015 IU13 Reading Apprenticeship Student Growth Analysis



**What is Reading Apprenticeship?**

Reading Apprenticeship is a research-based approach to reading instruction that helps adolescents develop the knowledge, strategies, and dispositions they need to become more engaged, powerful readers. Reading Apprenticeship instructional routines and approaches are based on a framework that describes classroom life in terms of four interacting dimensions that support reading development:

- **Social:** The social dimension draws on students' interests in peer interaction as well as larger social, political, economic, and cultural issues. Reading Apprenticeship creates a safe environment for students to share their confusion and difficulties with texts, and to recognize their diverse perspectives and knowledge.

- **Personal:** This dimension draws on strategic skills used by students in out-of-school settings, their interest in exploring new aspects of their own identities and self-awareness as readers, their purposes for reading, and their goals for reading improvement.

- **Cognitive:** The cognitive dimension develops readers' mental processes, including their repertoire of specific comprehension and problem-solving strategies. The work of generating cognitive strategies that support reading comprehension is carried out through shared classroom inquiry.

- **Knowledge-Building:** This dimension includes identifying and expanding the knowledge readers bring to a text and further developing it through personal and social interaction with that text. Students build knowledge about language and word construction, genre and text structure, and the discourse practices specific to a discipline – in addition to the concepts and content embedded in the text.

These dimensions are woven into subject area teaching through "metacognitive conversations" – conversations about the thinking processes students and teachers engage in as they read.

**What Does IU13's Reading Apprenticeship Baseline Training Entail?**
IU13's reading apprenticeship training model incorporates a small school team structure. School districts create four-person teams made up of content area, grades 6-12 teachers.  This team structure enables teachers to provide support to one another and engage in professional inquiry into literacy best practices onsite. Teams attend three days of regional training at IU13 where they are introduced to the Reading Apprenticeship Framework®, classroom participation structures, and instructional strategies. Teachers sign a Letter of Understanding and agree to incorporate these RA strategies and routines in 6-10 lessons throughout the school year.  In addition to the three days of regional training, teams receive 1 full day of onsite technical assistance that can be used for observation and feedback on RA lessons and the scoring of student work.

**What Is the Curriculum Embedded Reading Assessment (CERA)?**
Teachers are asked to administer a formative assessment called the Curriculum Embedded Reading Assessment (CERA) with one class of students *prior* to incorporating reading apprenticeship routines and concepts and *after* the training period.  The CERA was developed by WestEd's Strategic Literacy Initiative in order to help teachers formatively assess student growth and identify areas for further literacy instruction. The CERA is not intended for the purpose of assigning grades. With the significant demands placed upon schools in today's testing landscape, the CERA is intended to take little classroom time and tie in with the content area reading students are already doing in class.  Students are asked to read 1 – 1.5 pages of their content-area text and to annotate the text with their thinking as they read.  Then students are asked to provide written responses to six questions that ask them to summarize what they have read, explain their reading process, and determine whether the text was easy or difficult for them.

The CERA is broken up into a rubric for three specific categories.  The table below lists the three sections of the rubric and the key question to consider within that category.

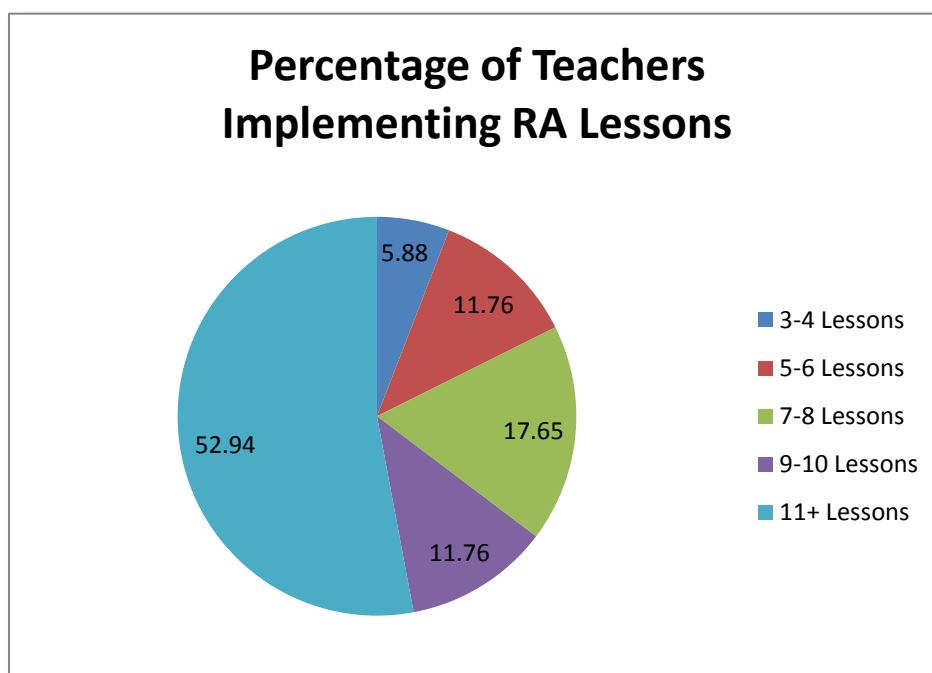| Rubric Category | Key Question |
|---|---|
| Metacognitive Conversation | How does the student monitor his/her comprehension and make adjustments to get back on track? |
| Using Cognitive Strategies | To what degree does the student use strategies to focus on and take control of reading? |
| Building Knowledge | How does the student mobilize, build, and revise schema to increase knowledge about content, text, language, and disciplinary discourse? |

Using the three performance levels on the CERA rubric, Noticing Reading, Focusing on Reading, and Taking Control of Reading, teachers highlight language on the rubric that is supported by evidence in the student annotations and responses to questions.  The table below provides additional description of the three levels of performance.

| Performance Level | Description |
|---|---|
| **Noticing Reading** | Few or no marks on the page along with vague responses to process questions and confused answers to comprehension questions. Teacher gains little insight into student's reading process, what is confusing, or how to support the student. |
| **Focusing on Reading** | Marks on the page and responses to questions give insight into student's reading process and comprehension. Teacher gathers important information about problems student encountered and next steps for supporting the student. |
| **Taking Control of Reading** | Substantial marking on the page and elaborated answers to questions give detailed information about student's reading process and comprehension. Teacher is able to develop rich ideas for instruction and how to support student's reading comprehension. |

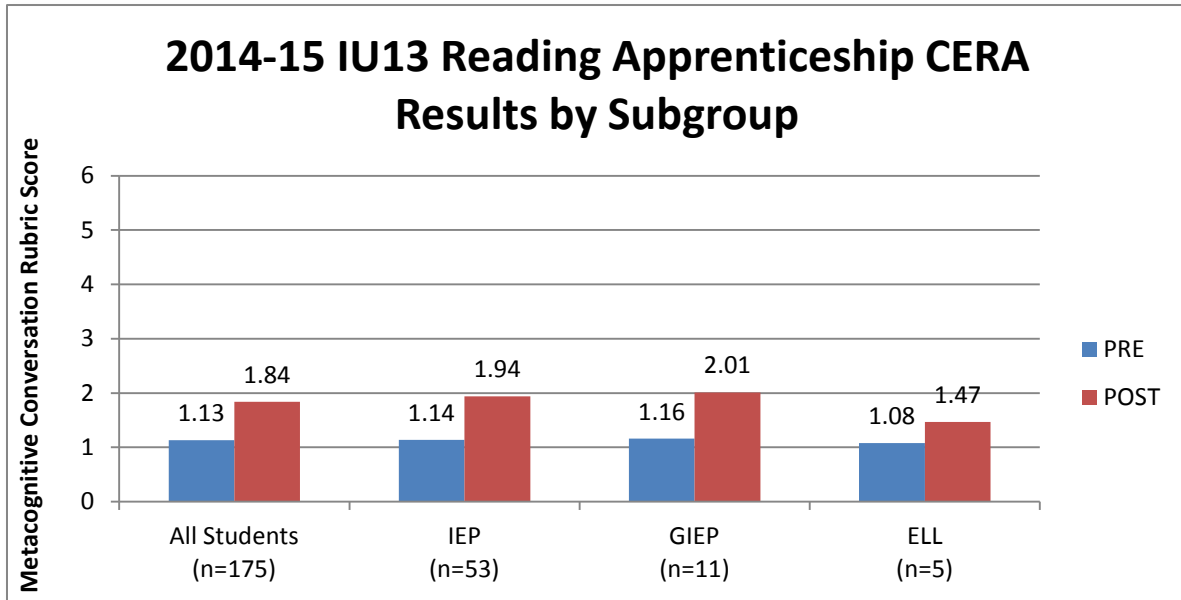**2014-15 IU13 Student Growth Analysis Design and Results**

During the 2014-15 school year, seven school teams comprised of a total of 23 teachers and five administrators from Conestoga Valley School District and Greencastle-Antrim School Districts began IU13's Reading Apprenticeship training in October and completed it in May.

All 23 teachers formatively assessed their students using the CERA, but only eleven teachers completed all aspects of the pre/post CERA with a total of 175 students so that it could be used for this analysis. For the purpose of examining student growth, students' pre and post responses were scored using the three performance levels both on the annotations and the question responses for only the metacognitive conversation category on the CERA rubric for a total of six possible score points. The results of the CERA are intended to show student growth that resulted from teacher implementation of the RA Framework®.  One of the limitations to this analysis is that teachers implemented the RA Framework in their classrooms to varying degrees. Figure 1 (below) shows the percentage of teachers within the 2014-15 training group and the number of lessons they self-reported implementing in their own classrooms.



**Percentage of Teachers Implementing RA Lessons**

- 3-4 Lessons: 5.88
- 5-6 Lessons: 11.76
- 7-8 Lessons: 17.65
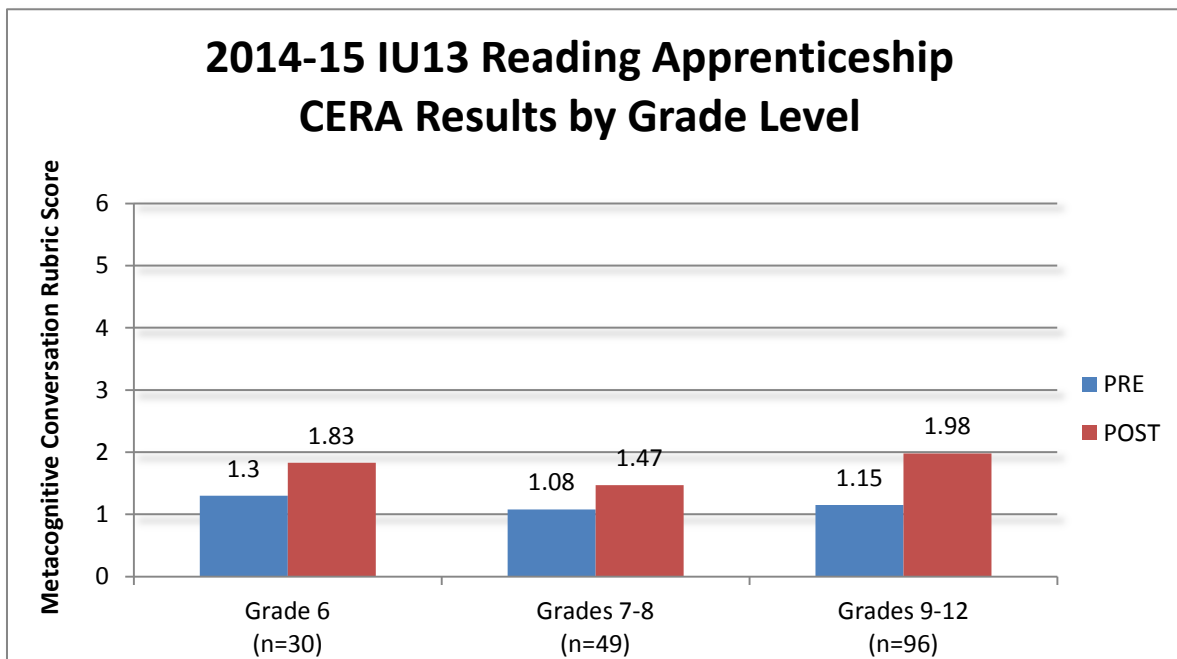- 9-10 Lessons: 11.76
- 11+ Lessons: 52.94

Figures 2 and 3 (below) represent the total pre/post mean results on the CERA. The total mean performance of students from pre-assessment administration (blue) to the post-assessment administration (red) clearly shows that a*ll* students made gains from the pre to the post administration within the six-month training period.  However, with a maximum score of 6, there is certainly room for continued improvement.

**Figure 2**

## 2014-15 IU13 Reading Apprenticeship CERA Results by Subgroup

Metacognitive Conversation Rubric Score

PRE
POST

| All Students (n=175) | IEP (n=53) | GIEP (n=11) | ELL (n=5) |
|---|---|---|---|
| 1.13 / 1.84 | 1.14 / 1.94 | 1.16 / 2.01 | 1.08 / 1.47 |

It is important to note that the sample size for GIEP and ELL students was so small that these results cannot be generalized into other contexts.  They are simply presented here to show that all students, regardless of subgroup, made gains. This supports WestEd's continued research that shows that *all* students benefit from Reading Apprenticeship.

**Figure 3**

## 2014-15 IU13 Reading Apprenticeship CERA Results by Grade Level

Metacognitive Conversation Rubric Score

PRE
POST

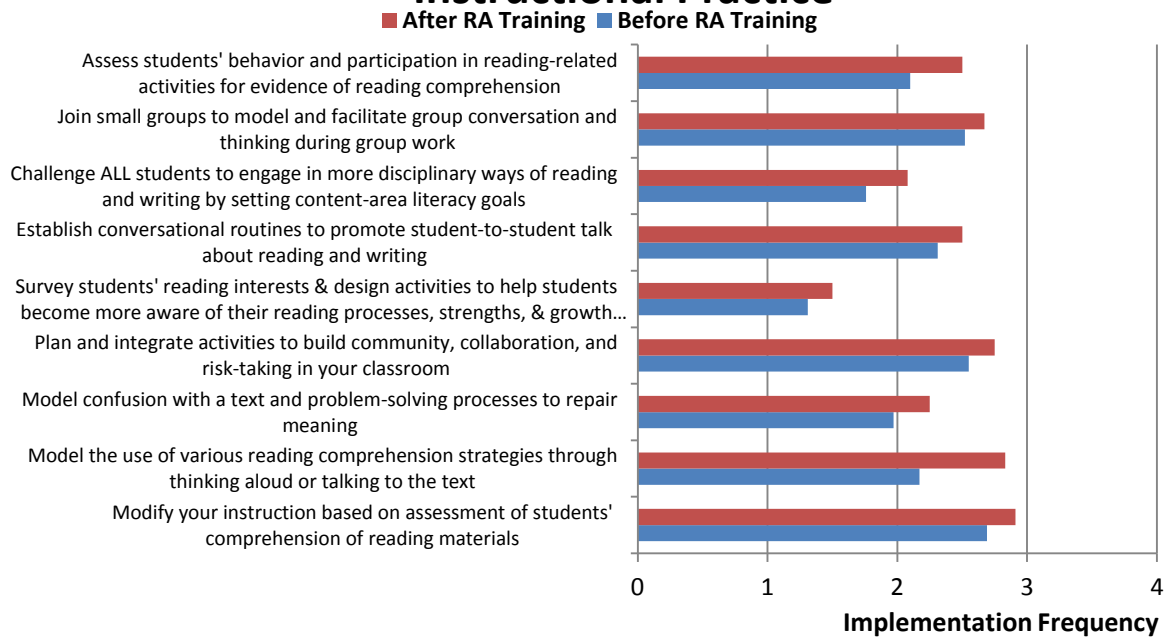| Grade 6 (n=30) | Grades 7-8 (n=49) | Grades 9-12 (n=96) |
|---|---|---|
| 1.3 / 1.83 | 1.08 / 1.47 | 1.15 / 1.98 |

The most significant gains occurred on the student annotations portion of the assessment (Gain = .84). On the pre-assessment, a majority of students had little experience with annotating the text while reading and made few markings. On the post-assessment, more students marked and annotated the text as they read, which may be the result of teacher modeling and implementation of an RA active reading strategy called "Talking to the Text." The gains in the Metacognitive Conversation category are indicative of students becoming more aware of their own reading processes. On the post-implementation survey, one teacher in the training group noted, "[Students] are now more aware of their reading strategies and their own reading behavior and how they approach a text. They will use these strategies to approach difficult-to-read texts in their academic careers." Another teacher wrote, "The students have started engaging with the course text and concepts in a deeper and more meaningful way. However, there is still much that I will be tweaking and adding to for next year."

With additional implementation time, experience, and teacher facilitation and modeling, additional gains are likely to result and extend into the other categories of the CERA rubric, should teachers choose to continue to administer the CERA on their own. Within the cognitive strategies portion of the CERA, students must demonstrate a variety of strategies like summarizing, differencing and questioning to gain deeper understanding of text as opposed to a single "go-to" strategy, like re-reading. Within the building knowledge portion of the CERA, students must analyze the diction and syntax in relationship to a text and engage in disciplinary ways of reading. For example, a student might analyze a discipline-specific term or concept in social studies, and make connections between a specific event he is reading about in class and another one in another place or time in history based on his background knowledge. In order for students to make gains in both of these areas, teachers must become more aware of their reading processes as expert readers of the content they teach. On Day 1, through an RA social dimension strategy called "People Bingo," a majority of the teachers reported that they did not see themselves as expert readers of the content that they teach. Once teachers acknowledge that they are the best readers and writers in the room, and once they uncover their own reading processes, they are better equipped to apprentice their students in discipline-specific ways of reading.

**How Did Reading Apprenticeship Training Impact Instructional Practice?**
On the post-implementation survey, teachers were asked to indicate the frequency of certain instructional literacy practices both prior to the training and following the training.

## Teacher Perceptions of Changes in Their Own Instructional Practice

**■ After RA Training  ■ Before RA Training**

Assess students' behavior and participation in reading-related activities for evidence of reading comprehension

Join small groups to model and facilitate group conversation and thinking during group work

Challenge ALL students to engage in more disciplinary ways of reading and writing by setting content-area literacy goals

Establish conversational routines to promote student-to-student talk about reading and writing

Survey students' reading interests & design activities to help students become more aware of their reading processes, strengths, & growth…

Plan and integrate activities to build community, collaboration, and risk-taking in your classroom

Model confusion with a text and problem-solving processes to repair meaning

Model the use of various reading comprehension strategies through thinking aloud or talking to the text

Modify your instruction based on assessment of students' comprehension of reading materials

**Implementation Frequency** (0, 1, 2, 3, 4)

0=Never
1= Rarely (e.g., a few times per year
2 = Sometimes (e.g., a few times per month)
3 = Often (e.g., a few times per week
4 = Always

Teachers reported that they felt more comfortable with modeling their thinking for students as they read, and that they encouraged more students to engage in reciprocal modeling with one another.  On feedback forms from teachers throughout the training, teachers reported that it was a struggle to shift the responsibility for active reading and meaning making to students.  On the post-implementation survey, one teacher wrote, "I feel that I am much better able to help students demonstrate their metacognitive skills.  I am comfortable requiring my students to make their thinking visible so I can help to grow them as readers."

Of the top five most successful RA instructional practices used by these teachers, think alouds, reciprocal think alouds, and talking to the text are all practices that help to increase awareness of students' own reading processes and range of reading strategies used.  This speaks to the gains seen in the Metacognitive Conversation portion of the CERA.  Teachers also recognized the value of the CERA as a formative assessment to inform teacher planning and document student reading growth        .

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**Top 5 Most Successful**

**RA Instructional Practices**

1. Participation Structure: Individual – Small Group – Whole Group – Individual
2. Talk to the Text
3. Think Aloud/Reciprocal Think Aloud
4. Establishing Class Norms
5. Using the CERA for Formative Assessment

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**How did Student Reading Behavior in the Classroom Change?**

Figure 5 shows teacher perceptions of changes in in-class student reading behaviors over the course of the training and implementation period.

**Figure 5**



Teacher Perceptions of Changes in Student Reading Behaviors
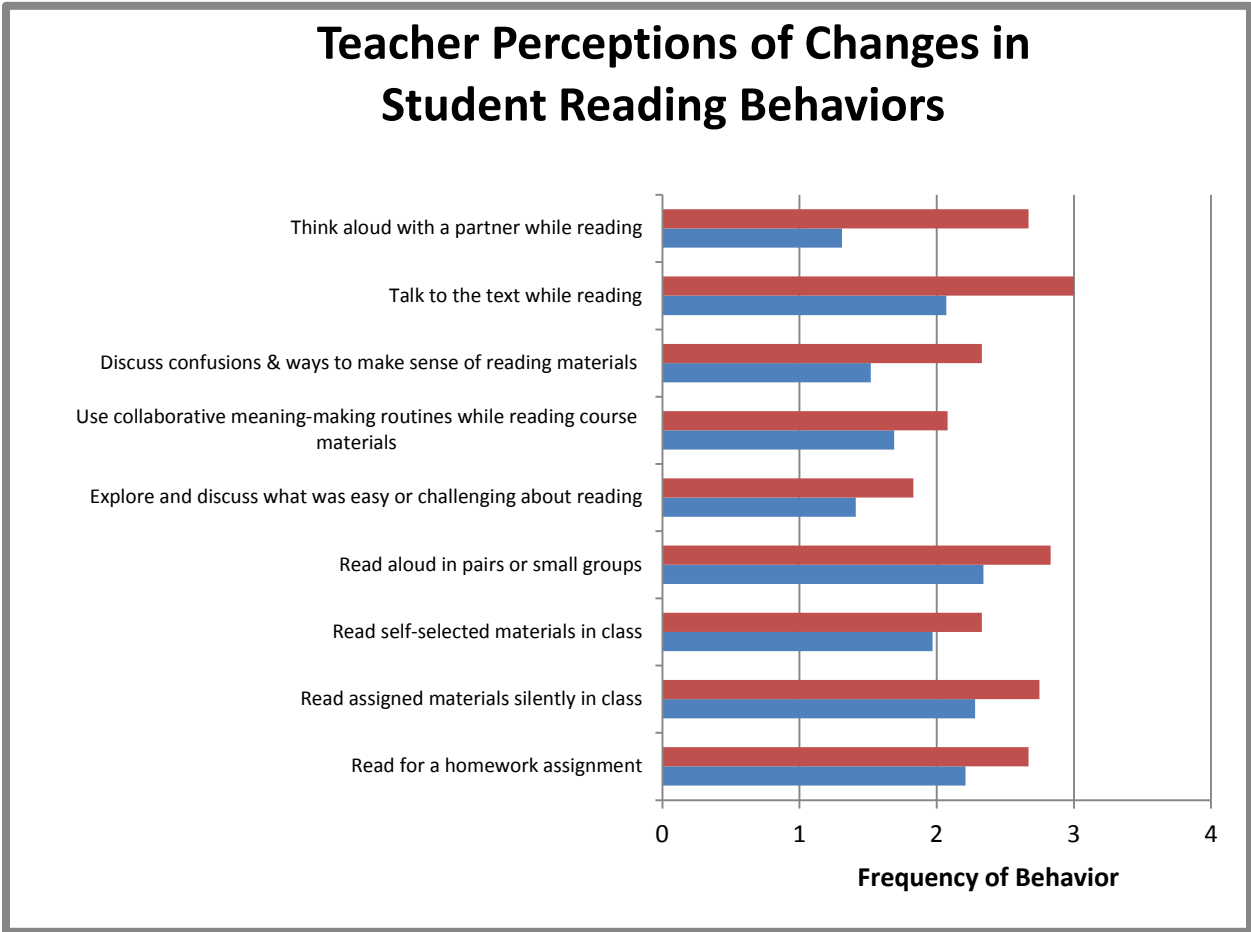
The frequency of behavior in **Figure 5** is described as follows:

0 = Never,
1 = Rarely (e.g., a few times per year)
2 = Sometimes (e.g., a few times per month)
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Reading apprenticeship emphasizes constructivist thinking and the fact that learning is done by the learner. Over the implementation period, teachers observed more frequent student discussion about their strategies for repairing confusion and making meaning from a text.  This also speaks to the social dimension in the Reading Apprenticeship Framework®.  Students must feel comfortable enough in the classroom to share their confusions with their peers.  According to WestEd, in a reading apprenticeship classroom, teachers must create an environment where "It's cool to be confused."  On the post-implementation survey, one middle school health teacher mapped out her future plans for reading apprenticeship implementation:

> I plan on creating a "safe environment" from day one next year (as I go over my course expectations and activities). I plan on collaborating with my team's language arts teacher to see what techniques she uses in her class, with the hopes of keeping some consistency between classes.  Although it is a weakness of mine, and something about which I will not exactly feel comfortable at first, I am going to make a concerted effort to stress metacognition and be a model first and foremost (showing the students *my* reading processes) and calling upon volunteers to demonstrate their processes as well, and then utilizing those techniques in independent, partner, small group, and whole class activities throughout the entire year.  And lastly, my colleague and I have decided to create a "text bank" of relevant and meaningful articles that we can use in our classes to extend the reading process (beyond the typical course text).

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**What did teachers say about IU13's Reading Apprenticeship Training?**

*"I realized the importance of metacognition in the reading process. It is something I will be emphasizing from day one next year when I go over the class expectations and common course activities."*

*~ Maureen Davis, Conestoga Valley*

*"I learned that I have TONS of work to do. I realized how difficult it is for my students to comprehend content. It is my job to teach them strategies to make them better readers and to understand and take ownership of the content. Reading a textbook and answering questions at the end of the chapter is not a good strategy."*

*~Tara Clopper, Greencastle-Antrim*

*"I am able to see the benefits of literacy training across genres and how to track one's own reading strategies and skills. I am able to see where I am not teaching certain skills and where we struggle as a class."*

*~ Zeke Flores, Greencastle-Antrim*