Lancaster-Lebanon Intermediate Unit 13

iu13
An Education Service Agency

Indicators of Student Achievement and Quality Programming

2013-14

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

Introduction

Lancaster-Lebanon Intermediate Unit 13 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 IU 13 consultants that is designed to improve the skills of the educators that work with students.

As part of its ongoing commitment to continuous improvement, IU 13 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 IU 13 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 IU 13 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 2013-14 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 IU 13 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 IU 13's success 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 IU 13 and its services will be provided. Ultimately, the analysis of the data will be used to answer two questions: 1) Is IU 13 providing quality instruction to the students it serves that result in improved student achievement and 2) Is the professional development and training offered by IU 13 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 IU 13 providing quality instruction to the students it serves that result in improved student achievement?

Early Childhood Programs

IU 13 provides instruction to eligible students in its Early Childhood and Preschool Early Intervention program, including Early Head Start 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. IU 13 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
Complete annual data will not be fully available for these programs until fall, 2014 and will be reported in the revised data report at that time. Data gathered through April, 2014 indicates that IU 13 has served a total of 2,763 children in the Early Intervention program in 2013-14. The three most common eligibility categories include Speech/Language Impairment, (1,191 children), Developmental Delay (1,089 children) and Autism (259 children).   In the Head Start program, 449 children were served (232 male and 217 female). Of these 449 children, the breakdown by race included 384 children identified by parents as white, 32 children as black or African American, and 65 children as bi or multi-racial. Three hundred and

forty-eight children were identified as having English as their primary language, with 87 students having Spanish as their primary language, and 8 children having Arabic as their primary language.

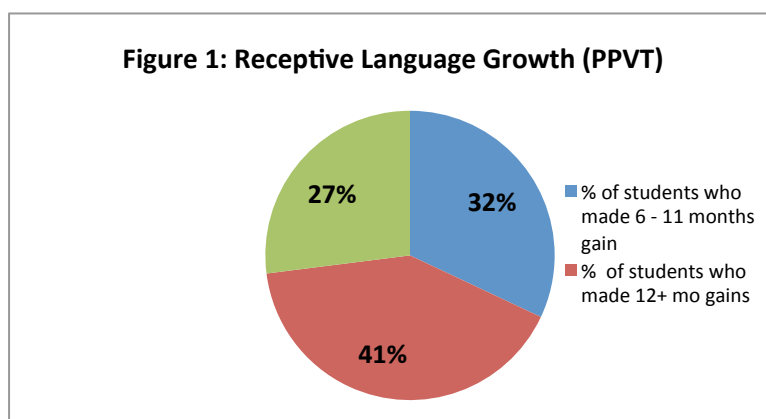## Achievement/Student Learning Data

The curriculum and instruction provided by IU 13 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). IU 13 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 IU 13. 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 Head Start 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 1**. Of the 271 children enrolled in the Head Start program that were evaluated, 231 had a fall and spring PPVT score (85%). Of the 231 with a fall and spring score, 81 had an IEP (36%). The program-wide growth average was 11 months gain in receptive language skills.


Figure 1: Receptive Language Growth (PPVT)

27%   32%

41%

■ % of students who made 6 - 11 months gain

■ % of students who made 12+ mo gains

A complete breakdown of the children's levels of receptive language skills as measured by the PPVT is shown in **Figure 2:**

Figure 2: PPVT Percentile Ranks Early Learners 2013-2014
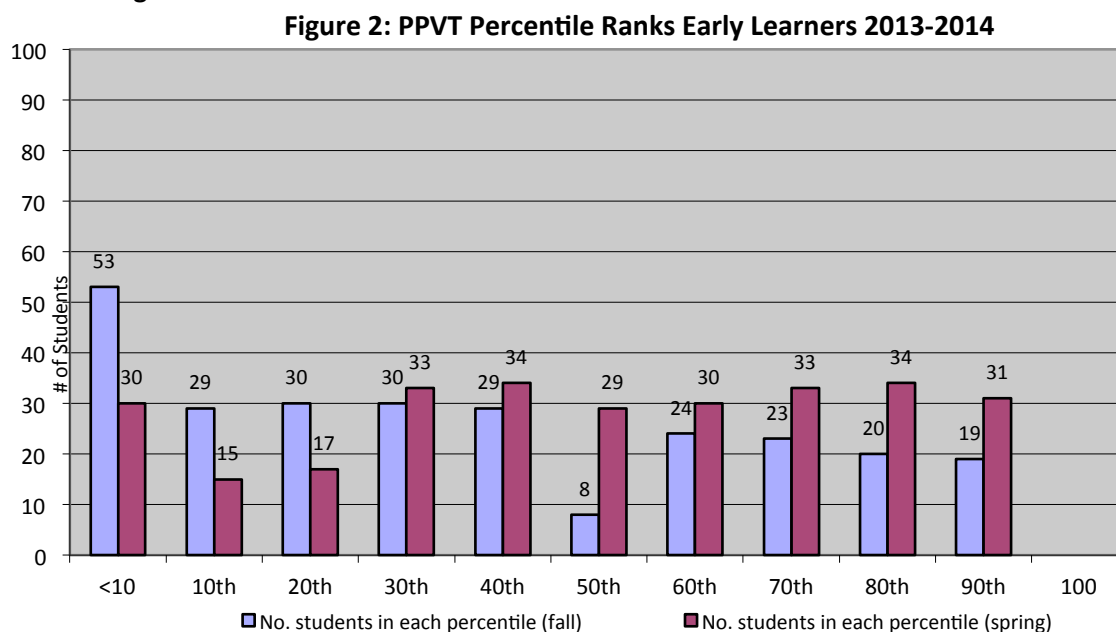
In the fall of 2013, 171 children were demonstrating receptive language skills below the 50th percentile. This number decreased to 129 children in the spring, 2014 assessment. Even more importantly, the number of children will receptive language skills at the lowest levels of performance (10th percentile and lower) decreased from 82 to 45 while the number of children at the highest levels (90th percentile and up) increased from 39 children to 65 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. Results of these assessments are shown in **Figure 3:**

Figure 3: IPT Early Literacy Benchmarks

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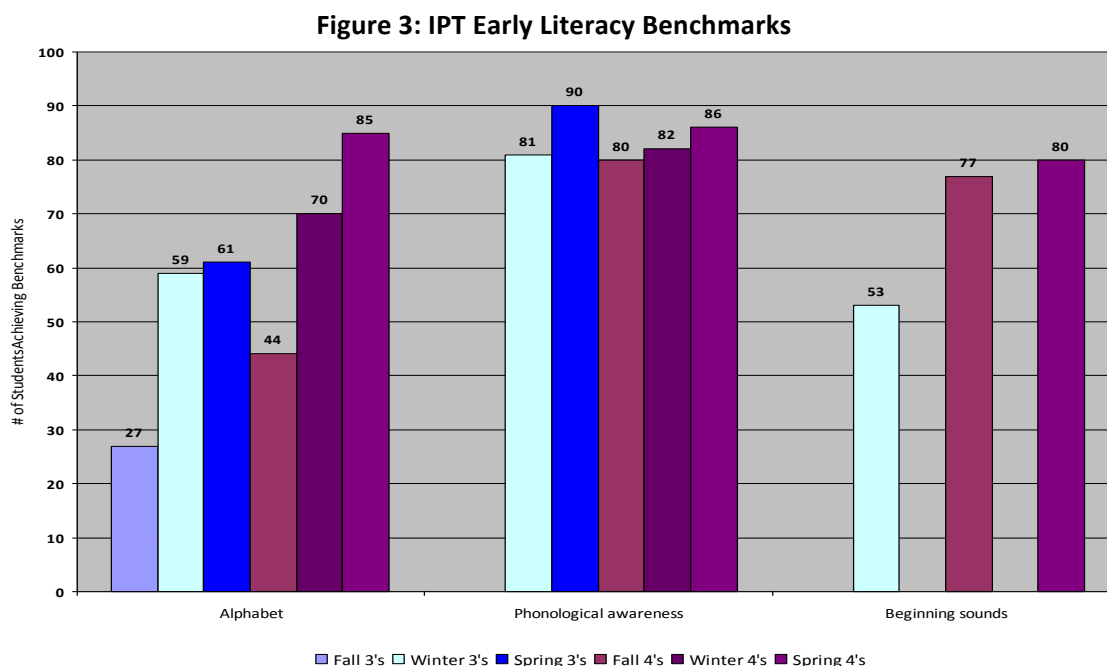
Teaching Strategies Gold

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 4** 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 October, 2013 and February and May 2014 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, as five of the six areas showed more than double the number of children performing in the expected target range. The sixth area, math, had the highest number of children (58) on track initially and it also showed significant growth with ninety-five students at their target range of skill development.

Figure 4: Teaching Strategies GOLD Data for 2013-14

	October	February	May
SE	36	79	92
Physical	58	86	95
Cognitive	32	71	91
Language	41	71	86
Literacy	42	87	95
Math	22	70	91
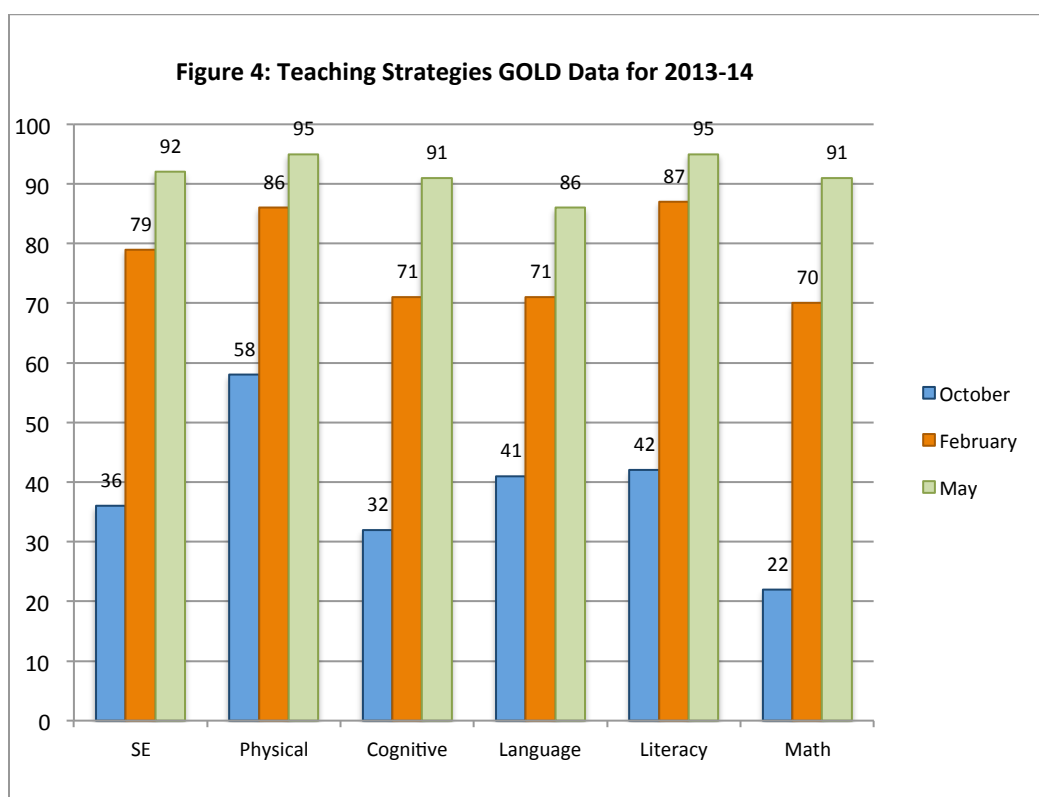
Perceptual Data

Parent involvement is critical to the development of early learners and is a key component of the services in the Early Learners program. IU 13 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 grant and 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 12-13 Family Survey Data:

Lancaster-Lebanon IU 13	Sent	Returned	Non-delivered	2012-13 Survey Return Rate	2011/12 Survey Return Rate
Preschool Program	1434	259	111	20%	22%

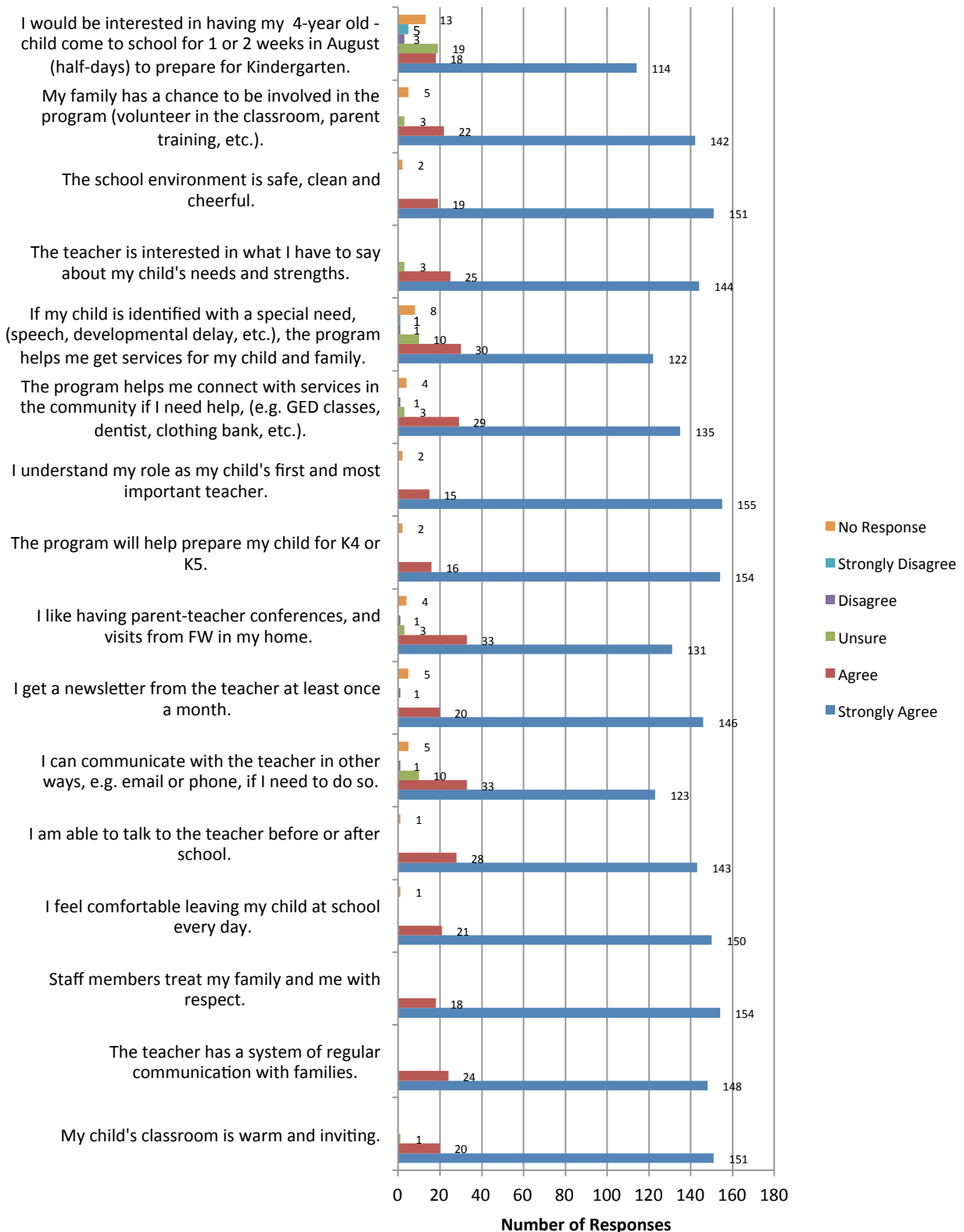| Lancaster - Lebanon IU 13	Satisfaction Rating						% Agree	Average Satisfaction Rating
	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree		
Total Preschool Program	165	92	728	2689	2325	3833	90%*	4.9

*State Average Satisfaction Rating: 88% "Agree" rating

Though the sampling is based on a small segment of the population served, the satisfaction ratings for IU 13 programs are consistent with the average satisfaction ratings for the state and show that 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. The results of the survey shown in **Figure 5** suggest that the participating families feel positively about the program and agree that staff members treat them with respect, have strong communication with parents and connect them to appropriate services.

Figure 5: Family Survey Data
Lebanon Head Start
June 2013

I would be interested in having my 4-year old child come to school for 1 or 2 weeks in August (half-days) to prepare for Kindergarten.
- No Response: 13
- Strongly Disagree: 5
- Disagree: 3
- Unsure: 19
- Agree: 18
- Strongly Agree: 114

My family has a chance to be involved in the program (volunteer in the classroom, parent training, etc.).
- No Response: 5
- Unsure: 3
- Agree: 22
- Strongly Agree: 142

The school environment is safe, clean and cheerful.
- No Response: 2
- Agree: 19
- Strongly Agree: 151

The teacher is interested in what I have to say about my child's needs and strengths.
- Unsure: 3
- Agree: 25
- Strongly Agree: 144

If my child is identified with a special need, (speech, developmental delay, etc.), the program helps me get services for my child and family.
- No Response: 8
- Strongly Disagree: 1
- Disagree: 1
- Unsure: 10
- Agree: 30
- Strongly Agree: 122

The program helps me connect with services in the community if I need help, (e.g. GED classes, dentist, clothing bank, etc.).
- No Response: 4
- Disagree: 1
- Unsure: 3
- Agree: 29
- Strongly Agree: 135

I understand my role as my child's first and most important teacher.
- No Response: 2
- Agree: 15
- Strongly Agree: 155

The program will help prepare my child for K4 or K5.
- No Response: 2
- Agree: 16
- Strongly Agree: 154

I like having parent-teacher conferences, and visits from FW in my home.
- No Response: 4
- Disagree: 1
- Unsure: 3
- Agree: 33
- Strongly Agree: 131

I get a newsletter from the teacher at least once a month.
- No Response: 5
- Disagree: 1
- Agree: 20
- Strongly Agree: 146

I can communicate with the teacher in other ways, e.g. email or phone, if I need to do so.
- No Response: 5
- Disagree: 1
- Unsure: 10
- Agree: 33
- Strongly Agree: 123

I am able to talk to the teacher before or after school.
- No Response: 1
- Agree: 28
- Strongly Agree: 143

I feel comfortable leaving my child at school every day.
- No Response: 1
- Agree: 21
- Strongly Agree: 150

Staff members treat my family and me with respect.
- Agree: 18
- Strongly Agree: 154

The teacher has a system of regular communication with families.
- Agree: 24
- Strongly Agree: 148

My child's classroom is warm and inviting.
- No Response: 1
- Agree: 20
- Strongly Agree: 151

Legend:
- No Response
- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree
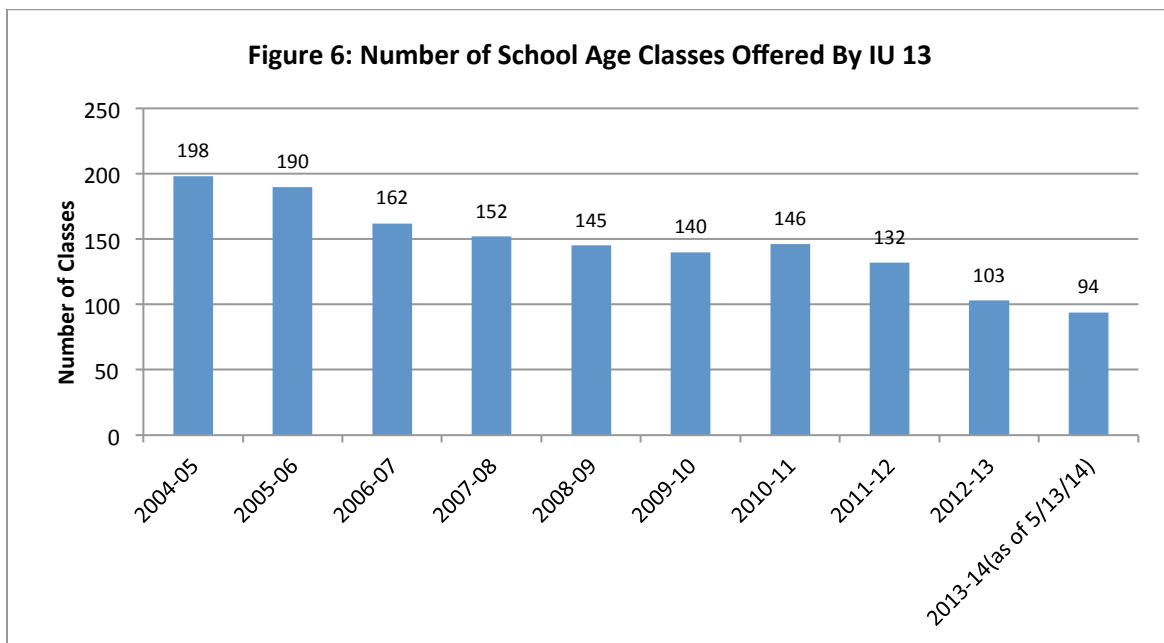
Number of Responses

8

School Age Programs

IU 13 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 kindergartens, autistic support, basic occupational skills (BOS), school-to-work, deaf/hard of hearing support and multiple disabilities. In addition, IU 13 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 IU 13 has decreased. The trend is displayed in **Figure 6:**

Figure 6: Number of School Age Classes Offered By IU 13

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(as of 5/13/14)	94

Accordingly, the number of students in school age IU 13 classes has also decreased as shown in **Figure 7:**

Figure 7: Number of Students Served in School Age IU 13 Classes

Number of Students Served

- 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(as of 5/13/14): 827
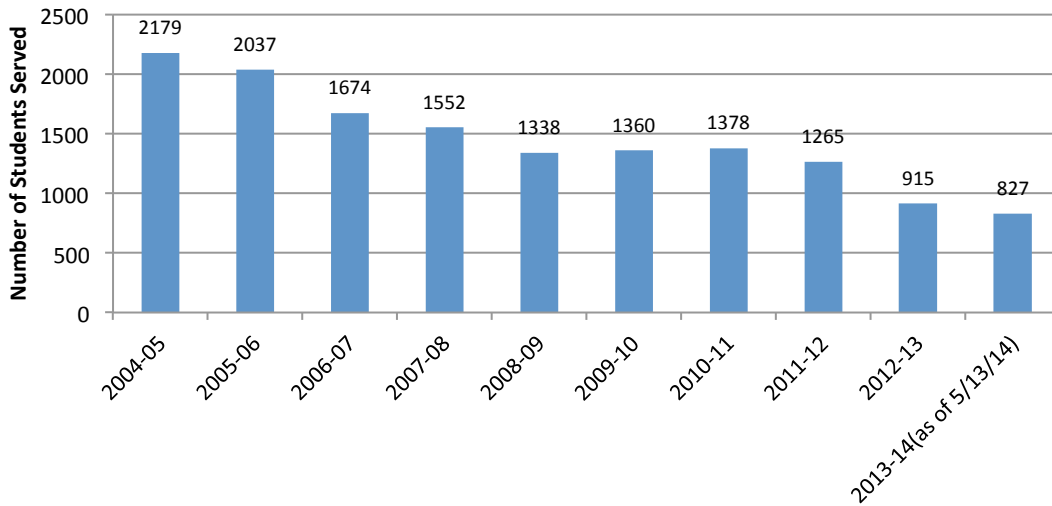
This trend has resulted in an increased focus on delivering best practices in the classrooms in a cost effective manner.

Graduation Rates

One of the goals of the School Age programs is to have students complete their IEP goals and earn their high school diploma. The number of high school graduates per program is shown in the **Figure 8**:

Figure 8: Number of High School Graduates Per Program

# of Graduates

Program	2008	2009	2010	2011	2012	2013	2014
Reg Education	0	0	2	0	0	1	6
Emotional Support	25	23	27	22	17	19	15
Multiple Disabilities Support	9	6	6	7	11	8	5
School To Work	68	58	64	67	62	59	47
Basic Occupational Skills	5	1	3	3	3	3	0
Life Skills Support	11	4	7	5	3	0	0
Autistic Support	1	2	4	4	2	4	4
Hearing/Sensory Impaired	0	1	1	1	0	1	0
Prison	1	0	1	2	1	1	0
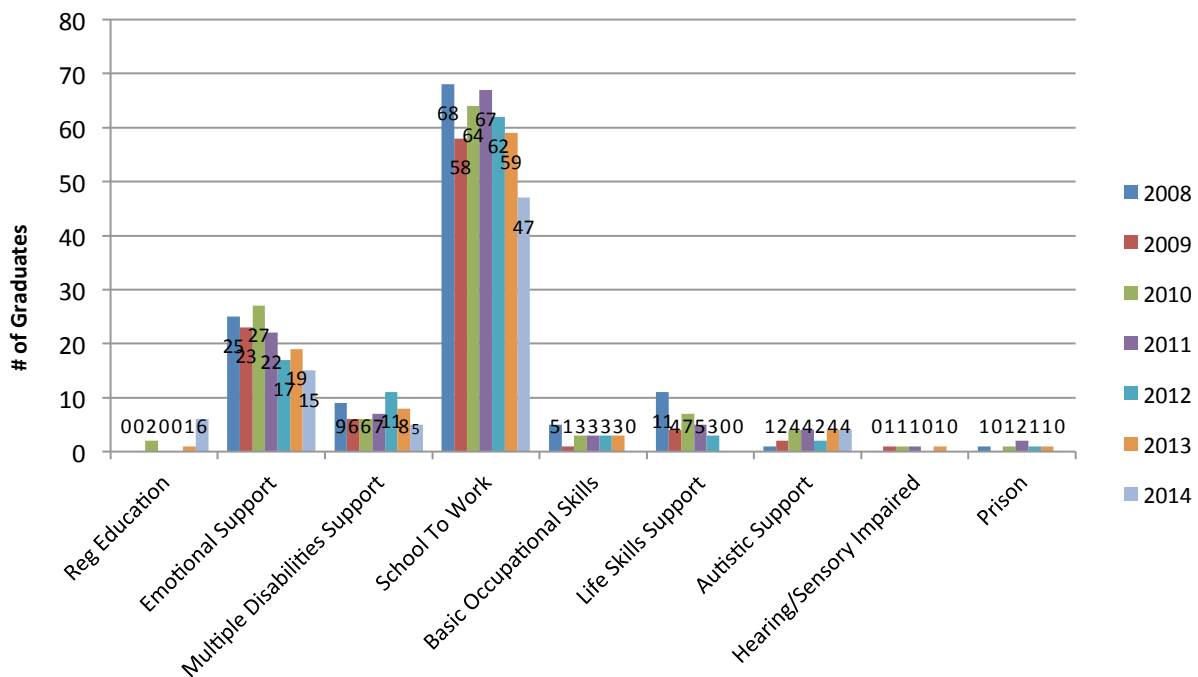
The School to Work and Emotional Support programs have the highest number of students graduating, a trend that has been consistent over the past seven years. The overall trend in graduation rates is also consistent with the decreasing number of students who are participating in IU 13 classes.

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. IU 13 has had zero due process hearings since 2008, resulting in a 7 year trend. 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 a hearing.

Job Placement of Students
IU 13 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 **Table 2:**

Table 2: Job Training Services for Students with IEPs in District and IU Operated Classes 2013-

Assignment	2011-12			2012-13			2013-14		
	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements
Annville-Cleona	0	0	0	0	0	0	0	0	0
Cocalico	85	0	3	60	1	2	45	0	4
Columbia	150	0	8	110	0	8	99	15	3
Conestoga Valley	0	0	0	0	0	0	0	0	0
Cornwall-Lebanon	114	1	12	106	5	5	129	4	11
Donegal	55	0	4	40	1	0	56	1	4
Eastern Lancaster Co.	141	10	16	150	8	22	168	14	11
Eastern Lebanon Co.	43	5	8	37	9	6	40	2	1
Elizabethtown	50	0	2	49	0	4	45	0	2
Ephrata	136	5	5	136	4	8	148	8	15
Hempfield	121	0	5	147	0	7	215	1	9
Lampeter-Strasburg	51	0	8	25	1	6	26	2	6
Lancaster	181	5	15	357	2	26	200	0	4
Lebanon	125	8	20	47	8	18	46	4	12
Manheim Central	17	0	8	21	2	7	42	3	5
Manheim Township	85	0	7	53	4	9	50	6	6
Northern Lebanon	12	0	0	6	0	0	13	0	2
Palmyra	40	2	2	45	5	3	80	6	5
Penn Manor	143	1	7	95	0	5	90	0	10
Pequea Valley	0	0	0	0	0	0	0	0	0
Solanco	76	0	3	64	1	4	71	0	3
Warwick	35	5	3	55	0	1	70	0	3
Lebanon CTC - OTP	0	0	0	0	0	0	11	0	6
Lebanon CTC - Co-op	0	0	0	0	0	0	27	0	5
TOTAL SCHOOL DISTRICTS	1,660	42	136	1,603	51	141	1,671	66	127

	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements
Alternative Education	32	0	4	14	0	2	0	0	0
Autistic Support - Lancaster	0	0	0	18	0	0	7	0	1
BOS -Lebanon	35	0	0	19	0	0	25	0	0
Community School Southeast	57	4	5	65	2	6	57	0	4
Community School West	41	0	5	32	4	5	35	1	7
Deaf/Hard of Hearing Support	14	0	0	7	0	2	12	0	0
Emotional Support - Lancaster	25	11	0	14	1	0	13	0	0
Fairland	30	6	6	22	1	7	23	0	0
Life Skills Support - Lancaster High School	22	0	0	12	0	0	0	0	0
Life Skills Support - Lancaster Middle School	0	0	0	12	0	0	14	0	0
Manheim Education Center	20	0	0	8	0	0	6	0	0
Mulberry Street	0	0	0	12	0	0	5	0	0
Multiple Disabilities - Lancaster	4	0	0	5	0	0	4	1	0
Project Search-Lancaster	10	10	9	9	9	6	9	9	7
School-to-Work-Lancaster	47	9	19	49	16	21	42	26	22
Willow Valley School-to-Work	9	9	9	9	28	7	10	10	9
TOTAL IU - LANCASTER	346	49	57	307	61	56	262	47	50

	2011-12			2012-13			2013-14		
	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements	Total Students	Unpaid Internships	Job Placements
Autistic Support - Lebanon	11	1	0	12	0	0	13	0	1
BOS -Lebanon	10	0	2	9	9	0	0	0	0
Community School North	20	2	1	0	0	0	0	0	0
Emotional Support - Lebanon	14	0	0	8	0	3	10	0	0
Life Skills Support - Lebanon	20	0	1	9	2	0	9	0	0
Project Search-Lebanon	11	0	9	13	10	9	9	9	7
School-to-Work-Lebanon	20	10	5	16	5	2	9	0	1
TOTAL IU - LEBANON	106	13	18	67	26	14	50	9	9
OVR Lancaster	15	0	6	14	0	8	19	0	8
OVR Lebanon	9	0	6	8	0	4	6	0	4
Logistics Program	0	0	0	0	0	0	7	0	4
TOTAL OVR	24	0	12	22	0	12	32	0	16
WIA/TANF (Grant)	112	0	42	0	0	0	0	0	0
WIA/TANF ISY (Fee for Service)	0	0	0	90	21	37	67	8	43
WIA/TANF OSY (Fee for Service)	0	0	0	38	4	22	24	0	14
TANF (Fee for Service)	0	0	0	26	0	0	26	2	15
TOTAL WIA/TANF	112	0	42	154	25	59	117	10	72
GRAND TOTAL	2,248	104	265	2,153	163	282	2,132	132	274

Academic/Student Learning

The instruction provided to students served in IU 13 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 IEP, it has been difficult to establish system wide methods of tracking program success. State assessments are not tracked by IU 13 classes and are reported to school districts, not IU 13. In addition, many of the students served by IU 13 have IEP goals which include social and emotional, communication, and daily living skills goals. Because of this, during 2013-14, IU 13 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 include:

- Percentage of IEP goal completion
- Number of recommendations to complete services (available fall 2014)
- Number of recommendations to return to a Less Restrictive Environment (LRE)

Indicators of Student Learning

Number of recommendations to return to a less restrictive environment (LRE):
During 2013-14, sixty-eight students were recommended by the IEP team to return to a less restrictive environment. **Table 3** shows the baseline data detailed by program assignments:

Table 3 Number of Recommendations to Return to a Less Restrictive Environment	
Program	**Number of Students Returning to Less Restrictive Environment**
Community School East or West	20
Diagnostic Kindergarten	12
Emotional Support	1
Life Skills	2
Catholic Charities	2
Deaf/Hard of Hearing	3
MEC Emotional Support	5
MEC Autistic Support	3
Fairland	3
Autistic Support	7
Lebanon County ES, LSS, and MDS	12
Lancaster MDS	0

This information will continue to be tracked in future reports to allow for trend analysis.

Additional information regarding itinerant services, specifically the number of students that have been dismissed from service or have an increase or decrease in service frequency has also been tracked for the 2013-14 school year. This baseline data will be available in July, 2014 and will be included in the revised fall, 2014 report.

Perceptual Data

District special education supervisors were surveyed at the end of the 2013-14 school year to assess their satisfaction with the staff development team supports and services provided to them by IU 13 staff. Since IU 13 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 **Table 4.**

Supports and Services	Highly Satisfied	Satisfied	Occasionally Satisfied	Rarely Satisfied	Not Satisfied
Literacy Elementary	50.0% (4)	0.0% (0)	50.0% (4)	0.0% (0)	0.0% (0)
Literacy Secondary	42.9% (3)	14.3% (1)	42.9% (3)	0.0% (0)	0.0% (0)
Math	42.9% (3)	14.3% (1)	28.6% (2)	0.0% (0)	14.3% (1)
Behavior Supports	33.3% (3)	33.3% (3)	33.3% (3)	0.0% (0)	0.0% (0)
Assistive Technology	44.4% (4)	44.4% (4)	11.1% (1)	0.0% (0)	0.0% (0)
Inclusive Practices/LRE	44.4% (4)	33.3% (3)	22.2% (2)	0.0% (0)	0.0% (0)
Transition Support	62.5% (5)	25.0% (2)	12.5% (1)	0.0% (0)	0.0% (0)
Interagency Coordination	0.0% (0)	50.0% (3)	33.3% (2)	0.0% (0)	16.7% (1)
Response to Intervention - Elementary	16.7% (1)	66.7% (4)	16.7% (1)	0.0% (0)	0.0% (0)
Response to Intervention - Secondary	16.7% (1)	50.0% (3)	33.3% (2)	0.0% (0)	0.0% (0)
Progress Monitoring	33.3% (3)	55.6% (5)	11.1% (1)	0.0% (0)	0.0% (0)
Standards-based IEP Development	0.0% (0)	83.3% (5)	16.7% (1)	0.0% (0)	0.0% (0)
Autism Spectrum Disorder Supports	37.5% (3)	37.5% (3)	25.0% (2)	0.0% (0)	0.0% (0)
Paraeducator Training	37.5% (3)	37.5% (3)	12.5% (1)	0.0% (0)	12.5% (1)
Co-teaching Training and Supports	25.0% (2)	50.0% (4)	25.0% (2)	0.0% (0)	0.0% (0)
Brain STEPS	14.3% (1)	85.7% (6)	0.0% (0)	0.0% (0)	0.0% (0)
Workshops, On-site	50.0% (5)	40.0% (4)	10.0% (1)	0.0% (0)	0.0% (0)
Workshops, Regional/Advertised	25.0% (2)	62.5% (5)	12.5% (1)	0.0% (0)	0.0% (0)
Consultation on Individual Students	70.0% (7)	0.0% (0)	30.0% (3)	0.0% (0)	0.0% (0)

Table 4: ECSES Staff Development Team Supports and Services Satisfaction 2013-14

Though the limited number of responses makes it difficult to evaluate the overall satisfaction level, those special directors that did respond indicated they showed some level of satisfaction with services, with only a few responses indicating dissatisfaction with services.

In addition, IU 13 department and program directors are highly rated by both district supervisors and IU 13 supervisors of special education, based on the most recent survey data (2012).

Adult Education

In addition to services to early learners and K-12 students, IU 13 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.

Demographic Information

During the 2013-14, 1921 students participated in Adult Education classes. One thousand and eighteen students were female and 803 students were male, with the average age being 33 years old.

Table 5 shows the number of students enrolled in each type of class offered by Adult Education services as well as the percentage of students who complete each level. This is important information to track, as funding is frequently tied to learning gains and meeting contracted hours. Contracted hours are the target numbers of student enrollments designated as part of the grant requirements. Failure to meet the required deliverables may result in reduced or eliminated funding for the following years.

Table 5: Adult Education Enrollment Data and Completion Rates

Enrollment

Contract	Contracted Number	Number Enrolled 2011-2012	Number Enrolled 2012-2013
Federal/State Adult Education	1082	1286	1087
English Language Civics	55	79	71
Family Literacy	87	107	102

Learning Gains

Contract	2011 – 2012			2012-2013
	% of students with a learning gain	State average for learning gains	Difference between IU 13/LC and the state average	
Federal/State Adult Education	51%	43%	+ 8%	53%
English Language Civics	58%	46%	+ 12%	49%
Family Literacy	64%	53%	+ 11%	62%

Achievement/Student Learning

The Adult Education program at IU 13 has a well established reputation as a leading provider of educational services. On key indicators tracked by the Pennsylvania's Division of Adult Education, IU 13 is ranked as one of the top ten providers out of 54 providers in the state in the area of educational function level (EFL) gains. In addition to exceptional learning gains, IU 13 Adult Education has also exceeded the state average and standard in the areas of employment, GED attainment, and transition to post-secondary, and IU 13 was within several percentage points of meeting the state average and standard in the area of job retention. Industries specific to construction and manufacturing, both typically robust cohorts in Lancaster and Lebanon counties, were particularly hard-hit during the recent economic downturn, and it is believed that this may have had a direct impact on the retention of those workers with lower educational levels. This trend will be carefully monitored to see if it improves with the improvement of the local economy. **Figure 9** outlines the comparison of each of the critical areas:

Figure 9: Comparison of EFL Gains 2013
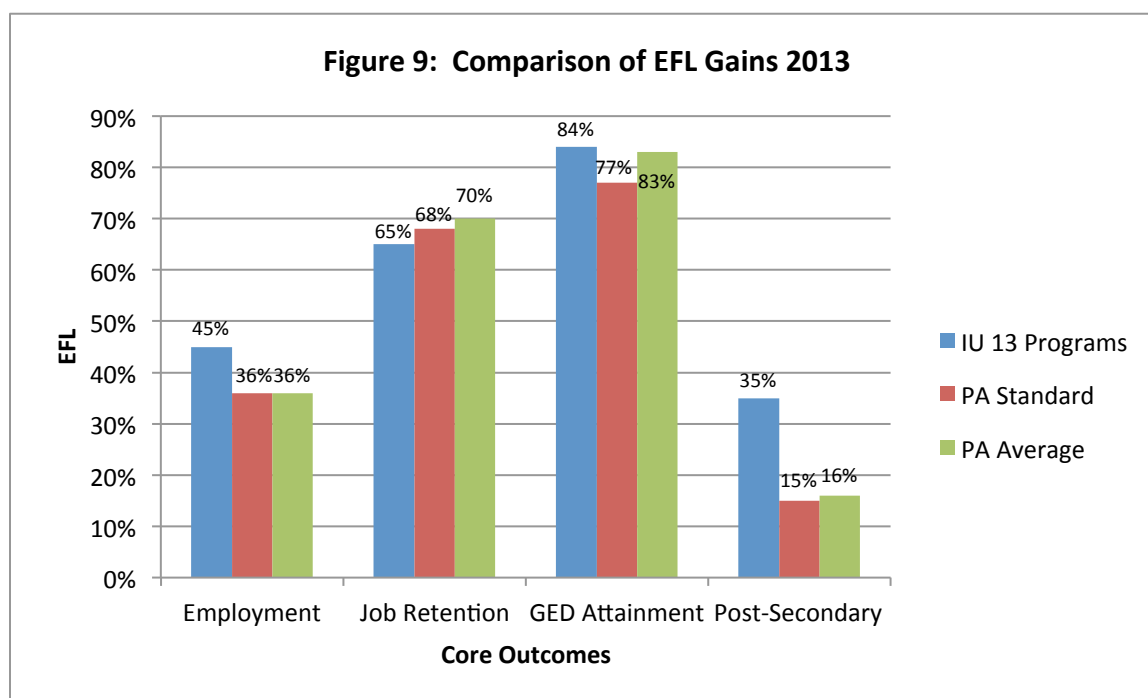
Perceptual Data

The Adult Education program annually asks students to complete surveys regarding their satisfaction with the services they received. The program is currently transitioning to an online version of the survey which will allow supervisors to receive a system wide compilation of survey results. These results will be added to the report when they are available for distribution.

Nonpublic Services

IU 13 is also charged with providing remedial and support services to eligible Lancaster and Lebanon county students who are attending nonpublic schools through the use of Title I federal funds and Act 89 state funds. Title I services are provided on behalf of local school districts. Act 89 regulations also

require that intermediate units provide equitable services to students attending nonpublic schools. Reading and math specialists, speech and language therapists and 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 10** shows the trend in the number of schools served over the past six years.

Figure 10: Act 89 Schools Served
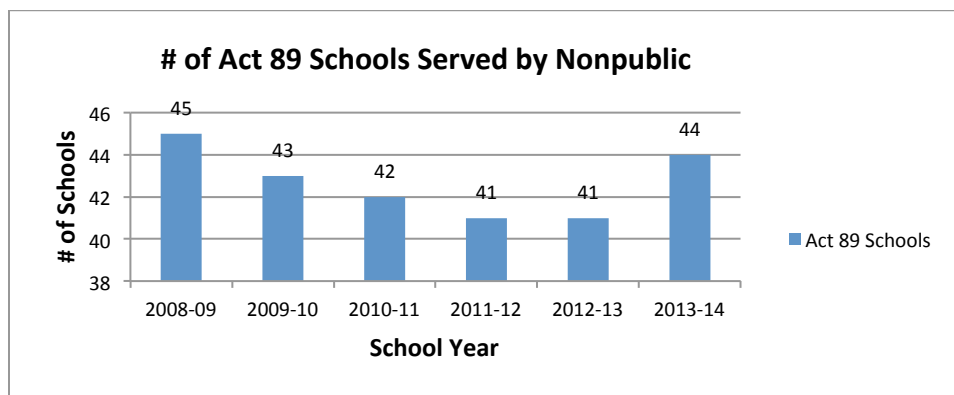
A breakdown of the number of students receiving reading and math remedial services is detailed below in **Figure 11** (remedial math services) and **Figure 12** (remedial reading services):

Figure 11
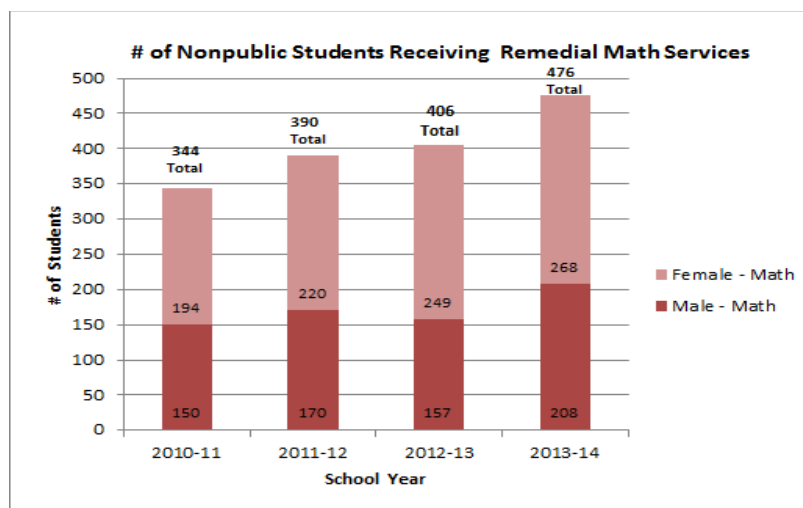
Figure 12
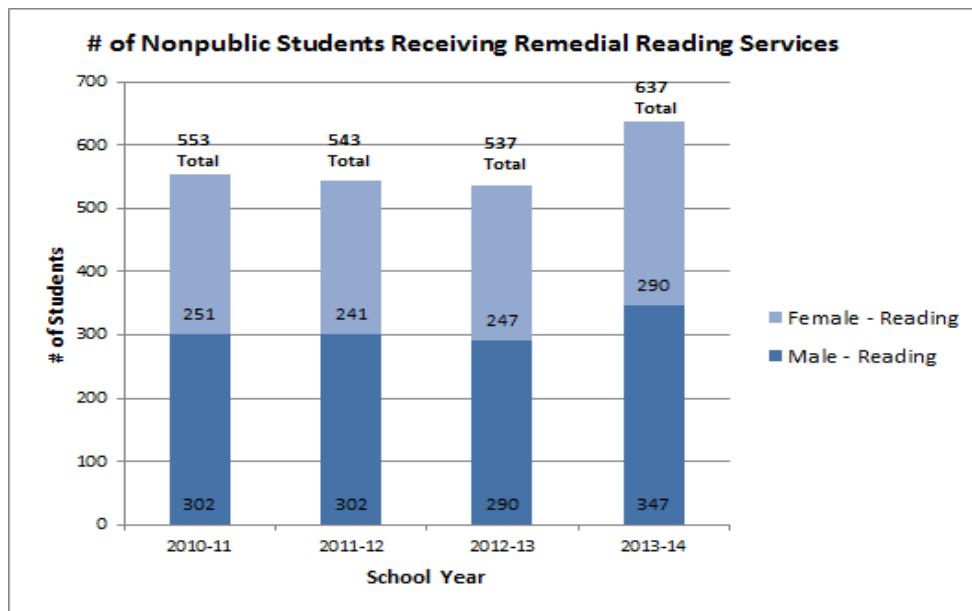
In addition, 414 students received speech and language services and 76 psychological referrals were made during 2013-14.

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 two 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):** DIBELS 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.
- **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 IU 13 staff, aligned with the PA Core, and designed to measure student performance in kindergarten in grades K-8. They are administered three times per year.

Measures of Student Learning

Reading

DIBELS

Results for each grade are listed below in **Figures 12a-g**. Each figure lists the number of students whose skills are assessed to be in each level of intervention. These include **Intensive** (requiring the most 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. For a more detailed explanation of the methodology and identified skills assessments, please refer to the DIBELS website https://dibels.uoregon.edu/.

Figures 12a-g: DIBELS Reading Assessment Results Nonpublic 2013-14

Figure 12a
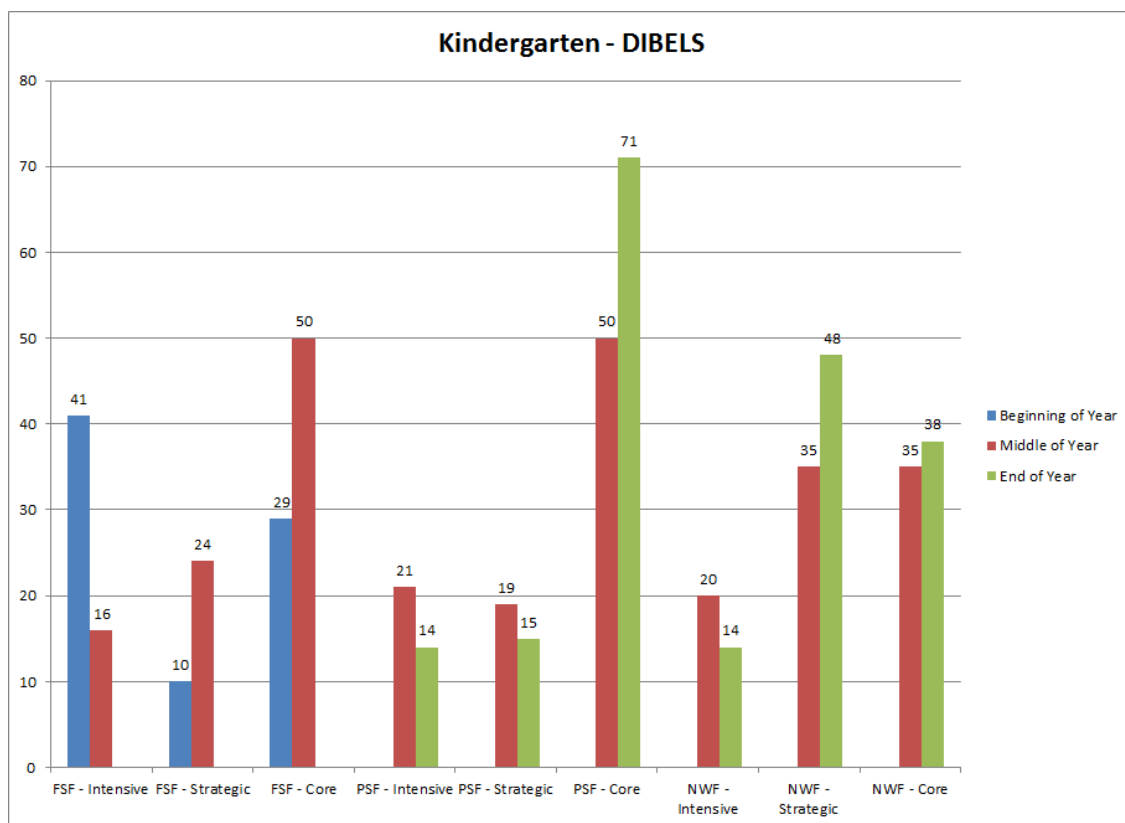
Figure 12b
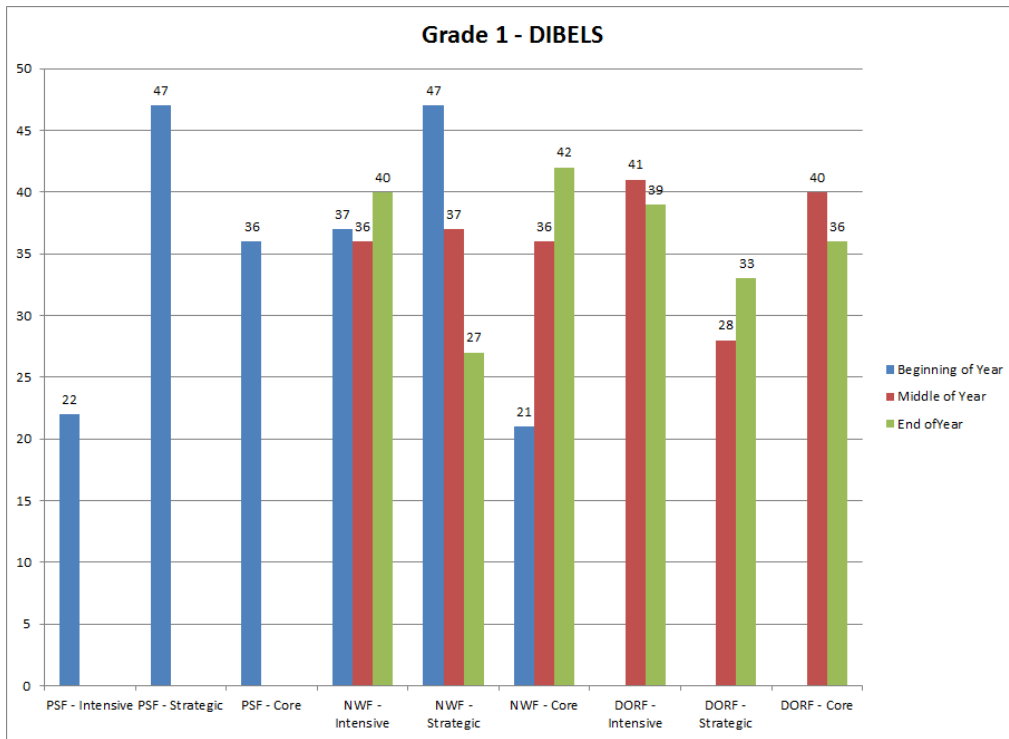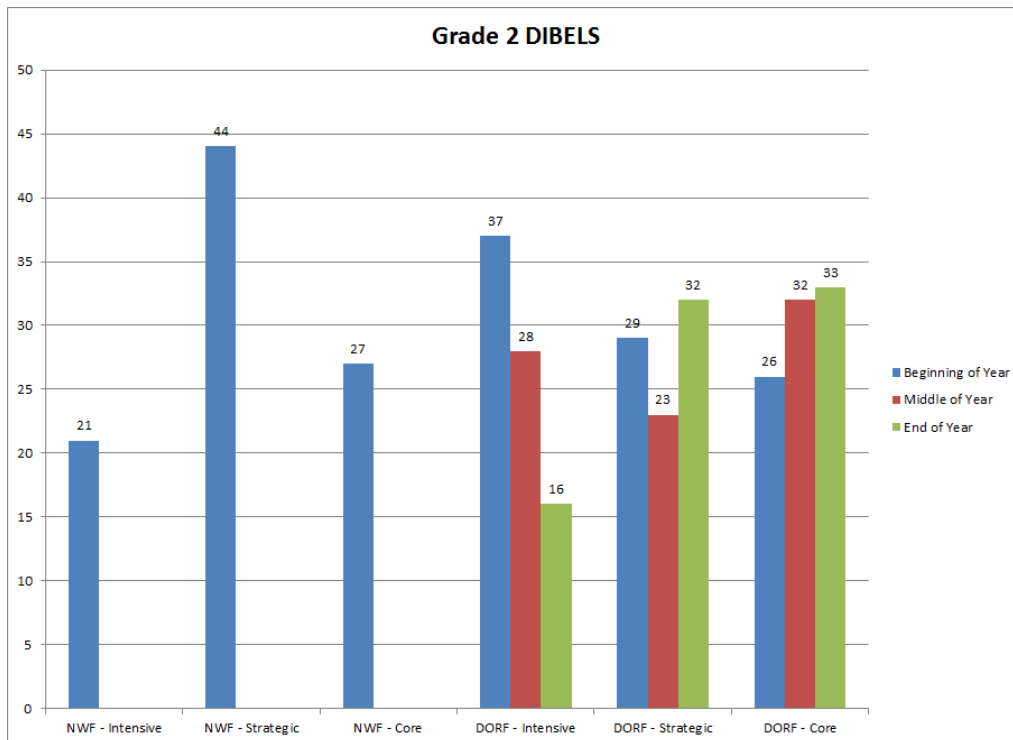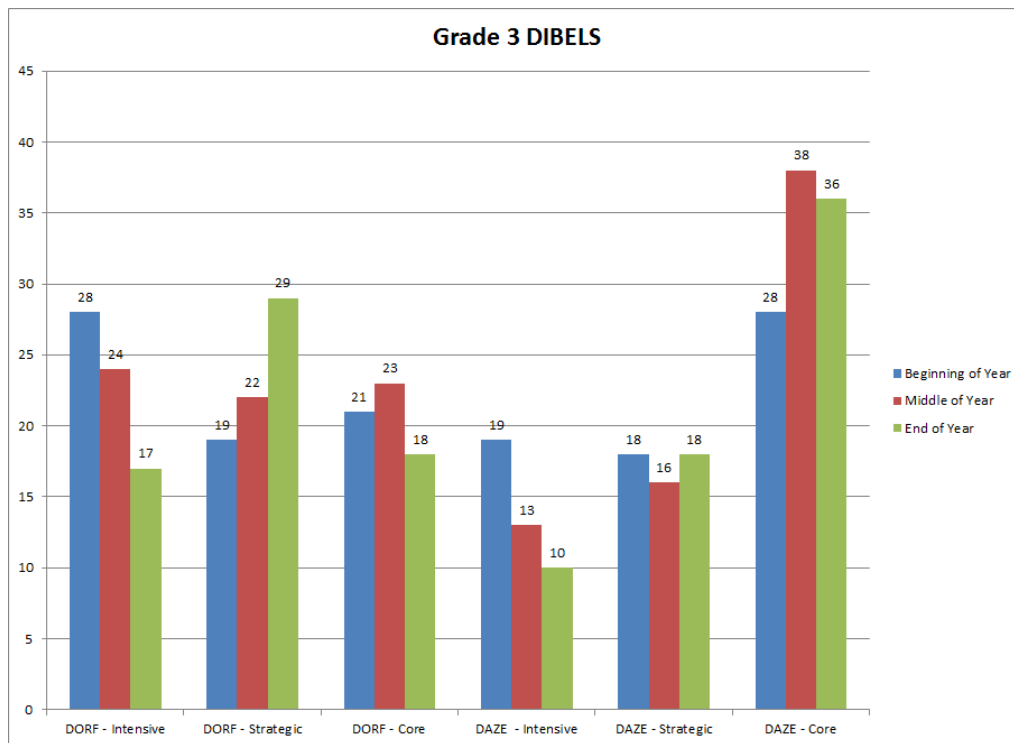
Grade 1 - DIBELS

Figure 12c

Grade 2 DIBELS

21

Figure 12d

Grade 3 DIBELS

Beginning of Year, Middle of Year, End of Year

DORF - Intensive: 28, 24, 17
DORF - Strategic: 19, 22, 29
DORF - Core: 21, 23, 18
DAZE - Intensive: 19, 13, 10
DAZE - Strategic: 18, 16, 18
DAZE - Core: 28, 38, 36

Figure 12e

Grade 4 DIBELS

Beginning of Year, Middle of Year, End of Year

DORF - Intensive: 29, 19, 20
DORF - Strategic: 21, 27, 22
DORF - Core: 6, 14, 9
DAZE - Intensive: 16, 17, 12
DAZE - Strategic: 19, 16, 13
DAZE - Core: 17, 26, 26

Figure 12f

Grade 5 DIBELS

Figure 12g

Grade 6 DIBELS
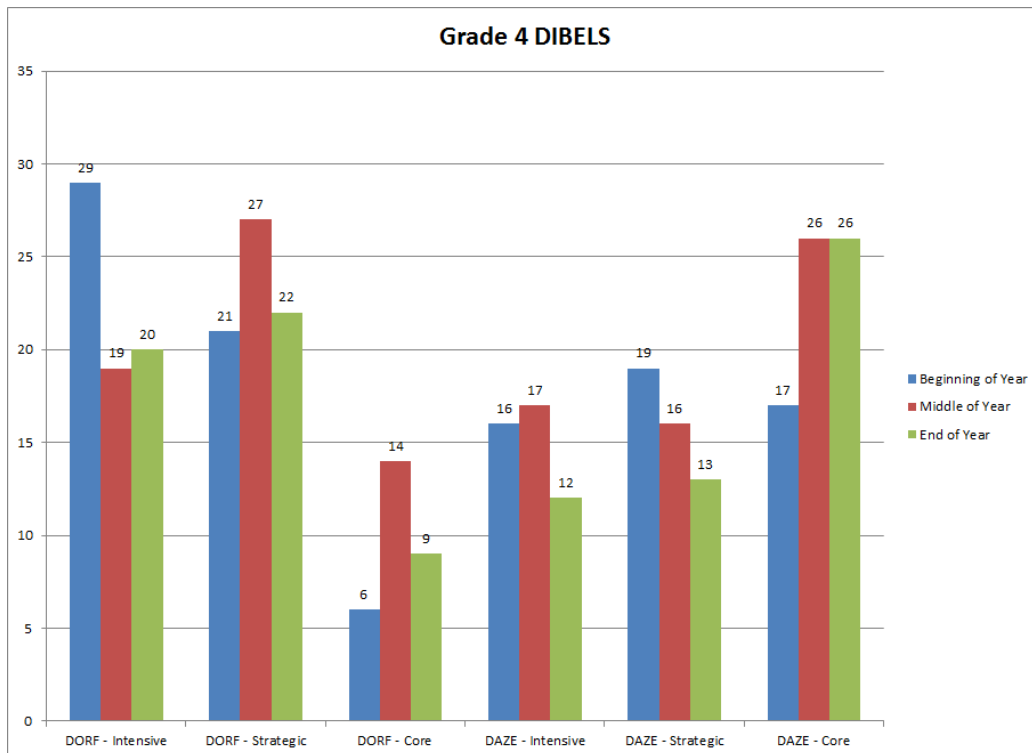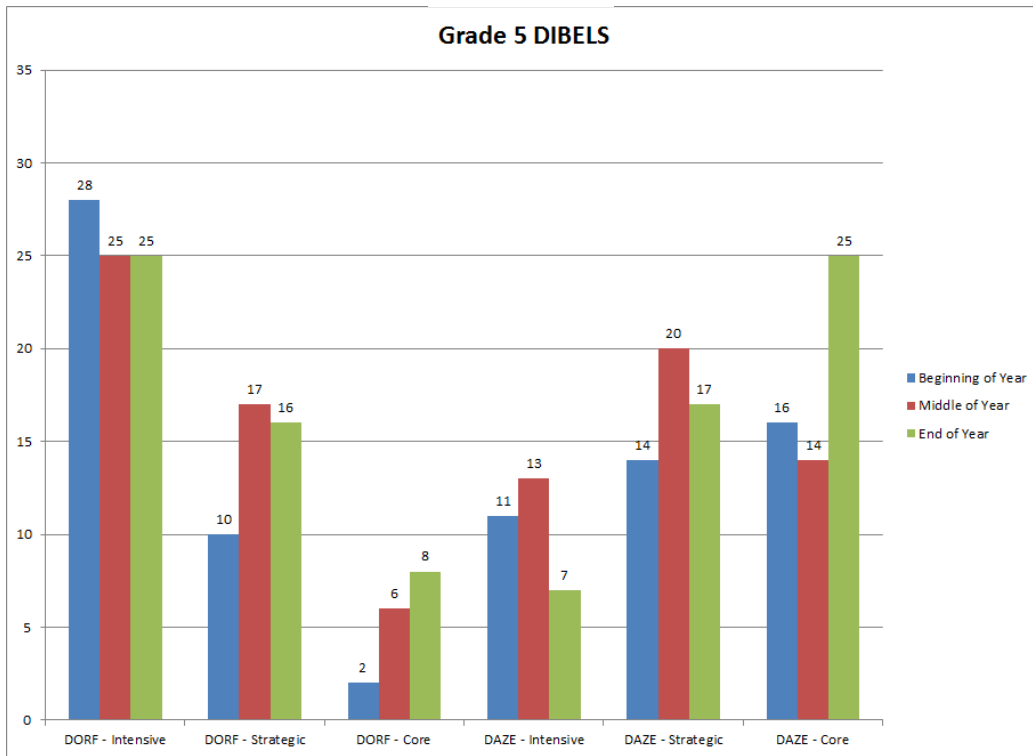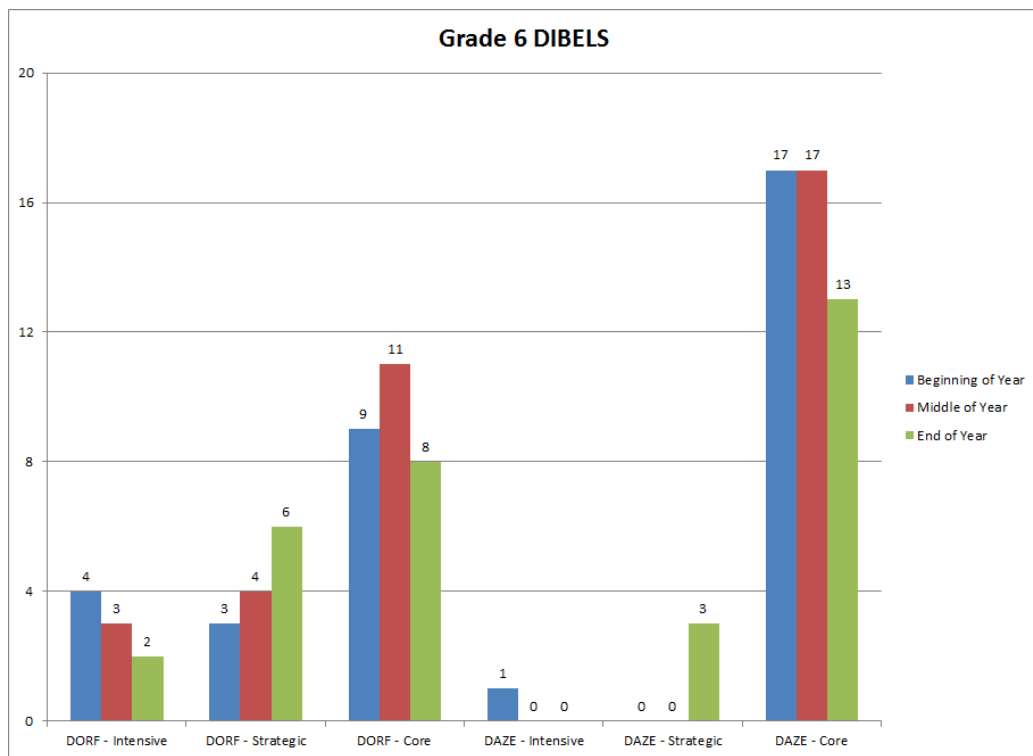
4Sight Benchmark Assessments

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 13a-f** (reading) and **Figures 14a-f** (math).

Figures 13a-f
4Sight Benchmark Assessments Results Reading Nonpublic 2013-14

Figure 13a

Figure 13b

Grade 4 4Sight - Reading

Figure 13c

Grade 5 4Sight - Reading

Figure 13d

Grade 6 4Sight - Reading

Figure 13e

Grade 7 4Sight - Reading

Grade 8 4Sight - Reading
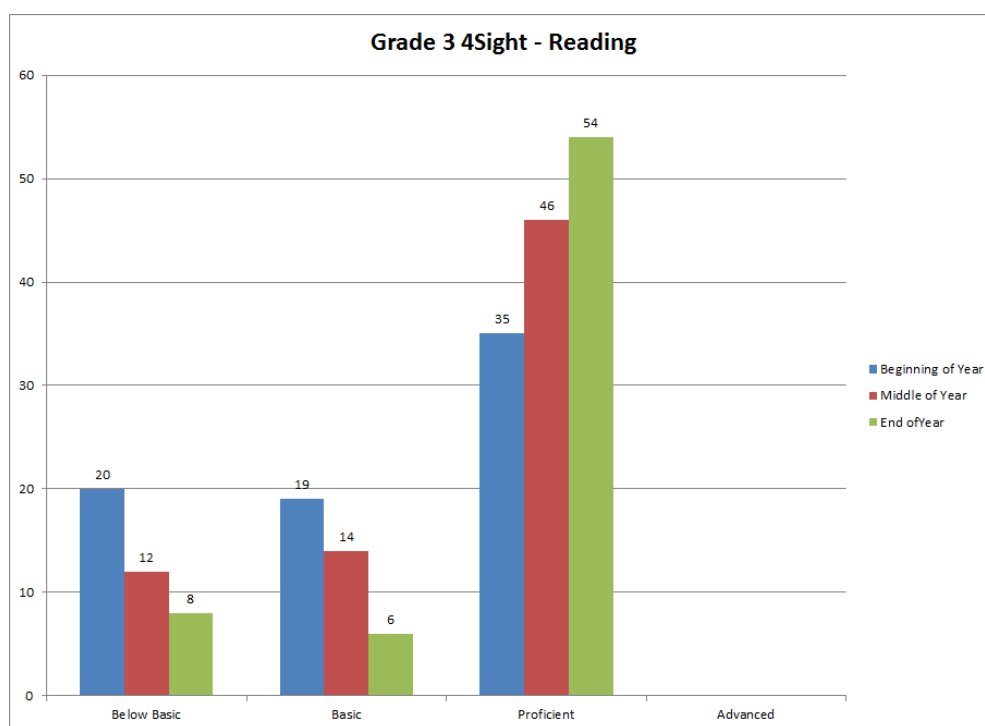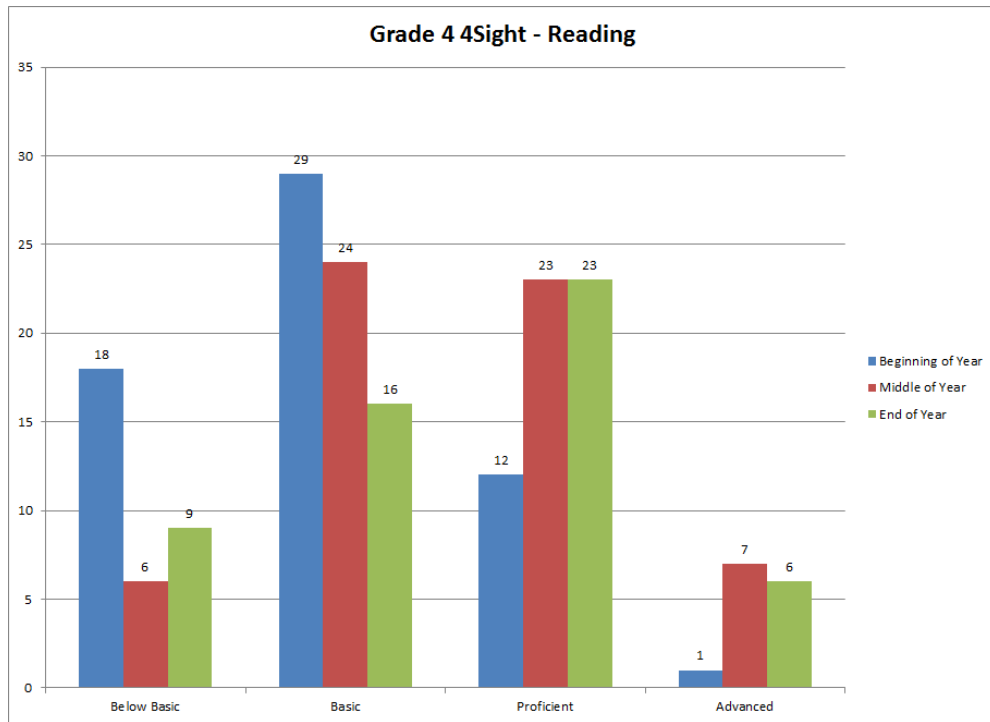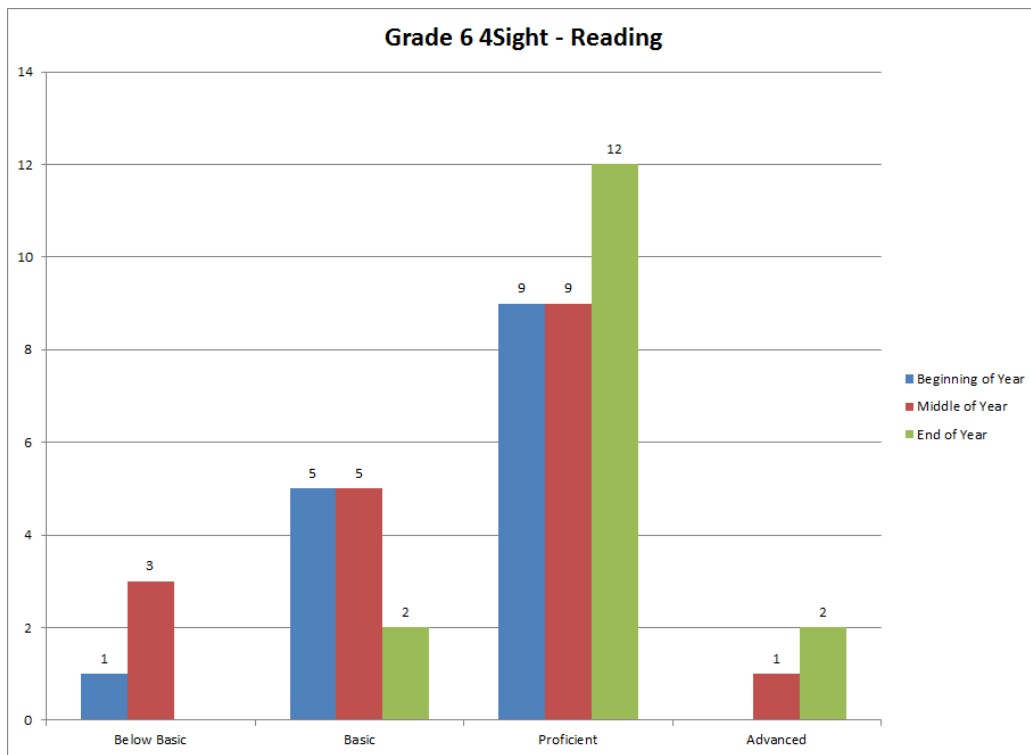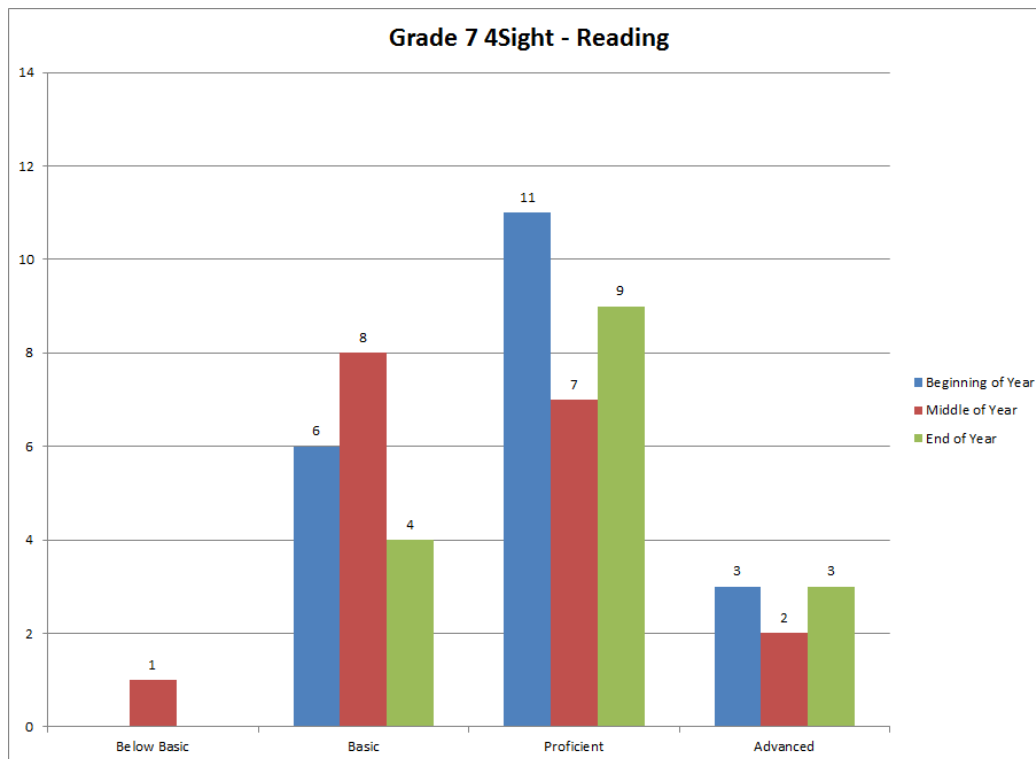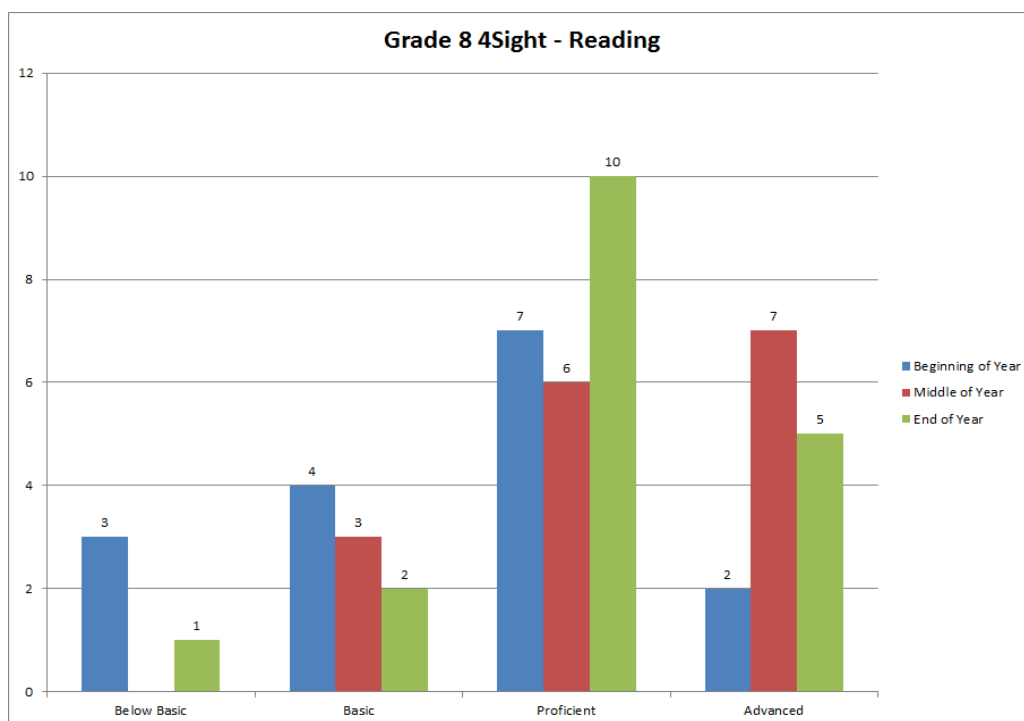
Both the DIBELS and the 4Sight Benchmark Assessments show a positive trend in the progression of skills across the grades. Grade 7 is the exception where the number students performing in the proficient/advanced range actually decreased slightly from 14 students to 12 students. Further analysis of the data at the student level is necessary to determine possible causes of this trend.

Math:

Figure 14a

Grade 3 4Sight - Math

Figure 14b

Grade 4 4Sight - Math

Figure 14c

Grade 5 4Sight - Math

Figure 14d

Grade 6 4Sight - Math

Figure 14e

Figure 14f
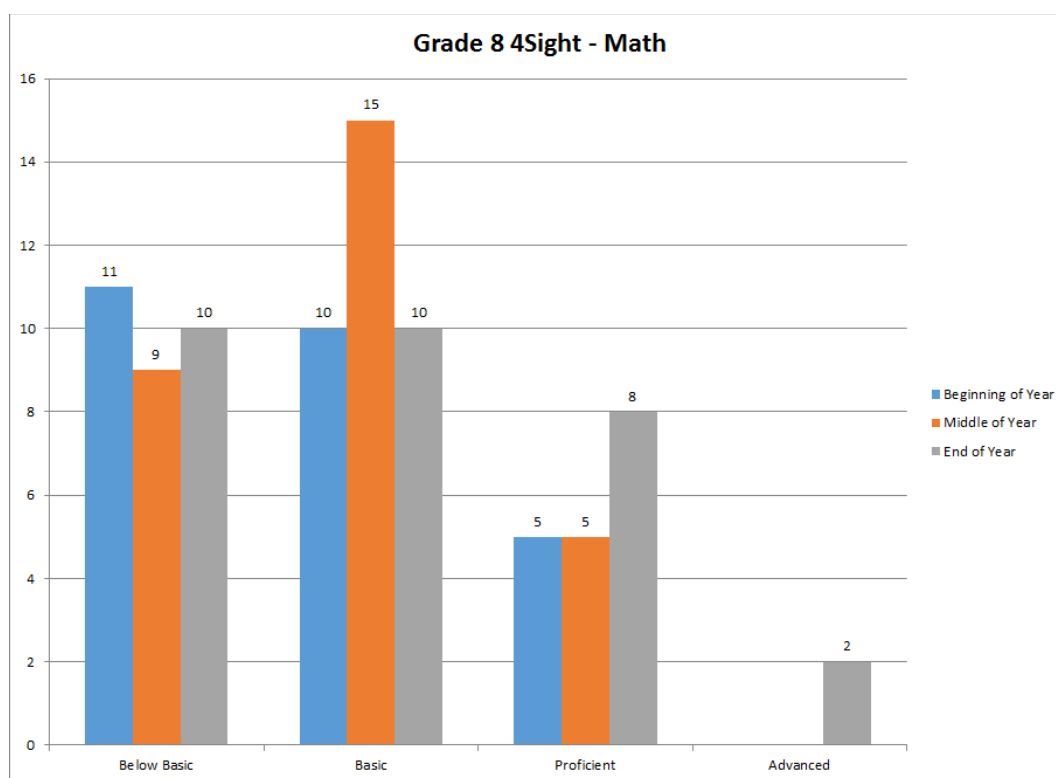
Act 89 Math Assessments

Students were also given the Act 89 Assessments for Math, a locally developed assessment aligned with the PA Common Core, to measure performance in in grades K-8. They are administered three times per year. Results are listed in **Figures 15a-i Act 89 Math Assessments K-8 2013-14:**

Figure 15a
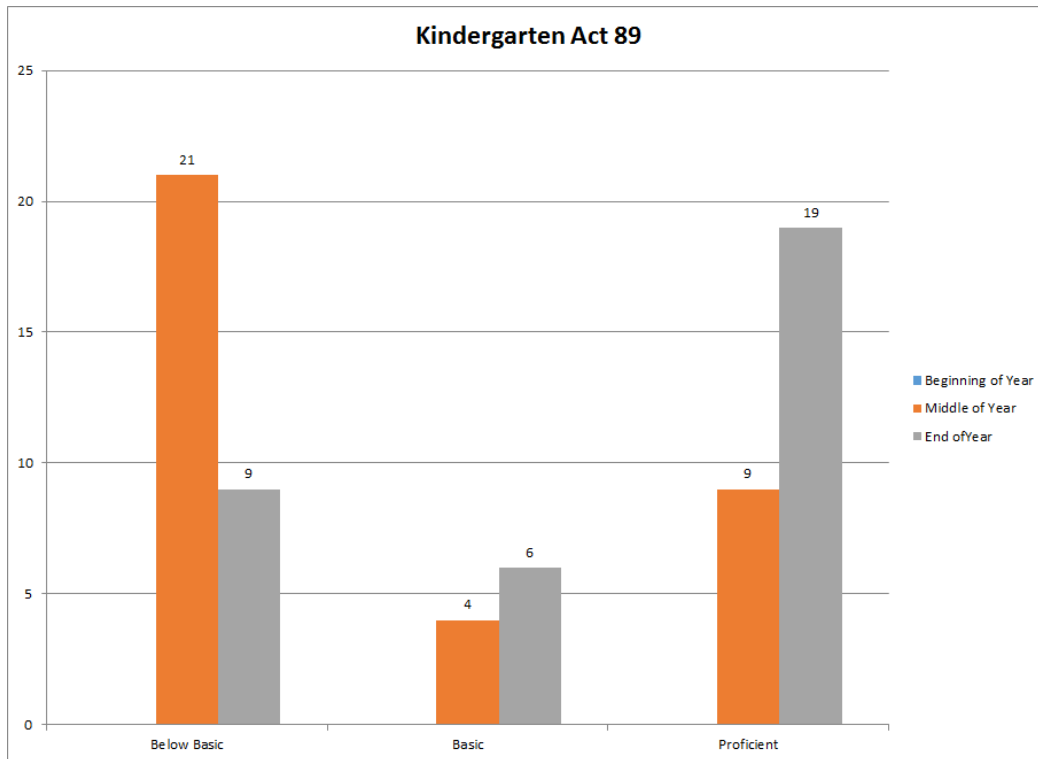
Figure 15b
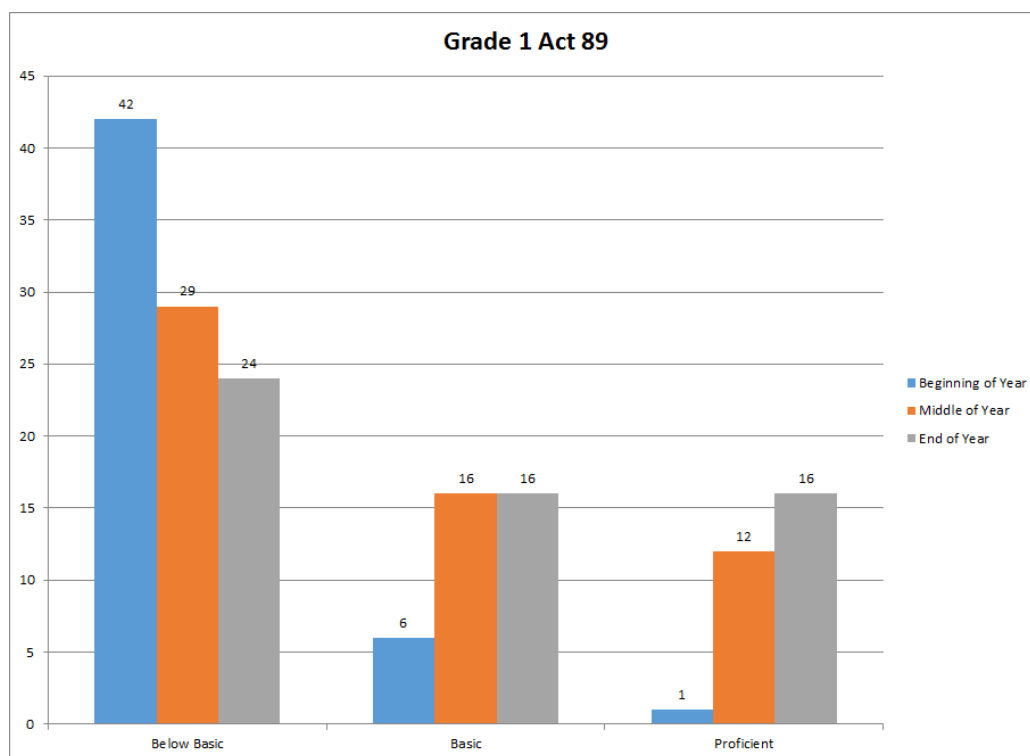
31

Figure 15c

Grade 2 Act 89

Figure 15d

Grade 3 Act 89

Figure 15e

Grade 4 Act 89

Figure 15f

Grade 5 Act 89

Figure 15g

Grade 6 Act 89

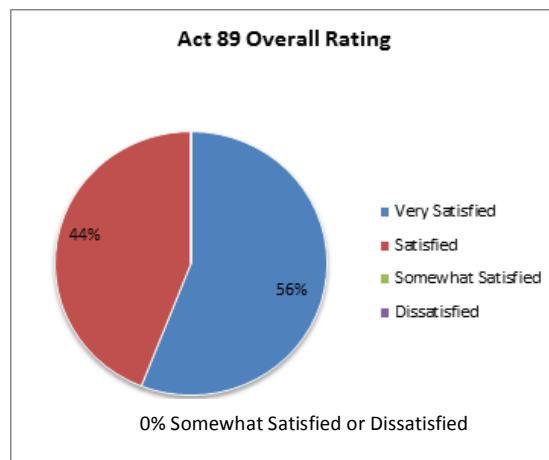**Figure 15h**

Grade 7 Act 89

Grade 8 Act 89
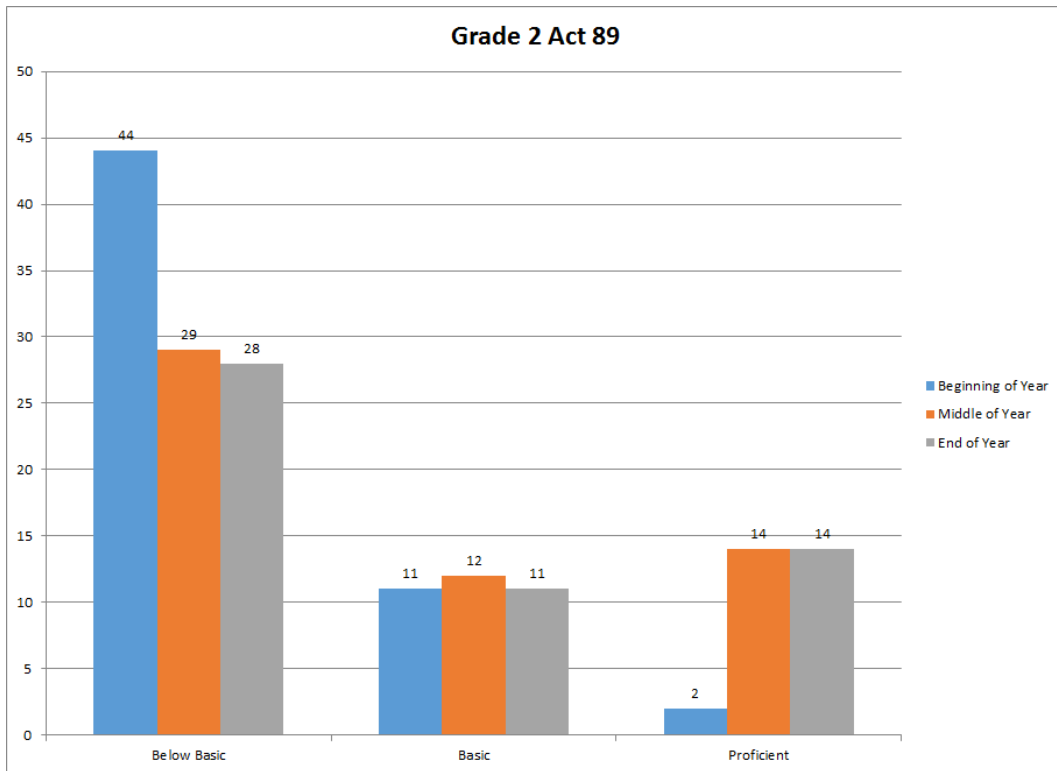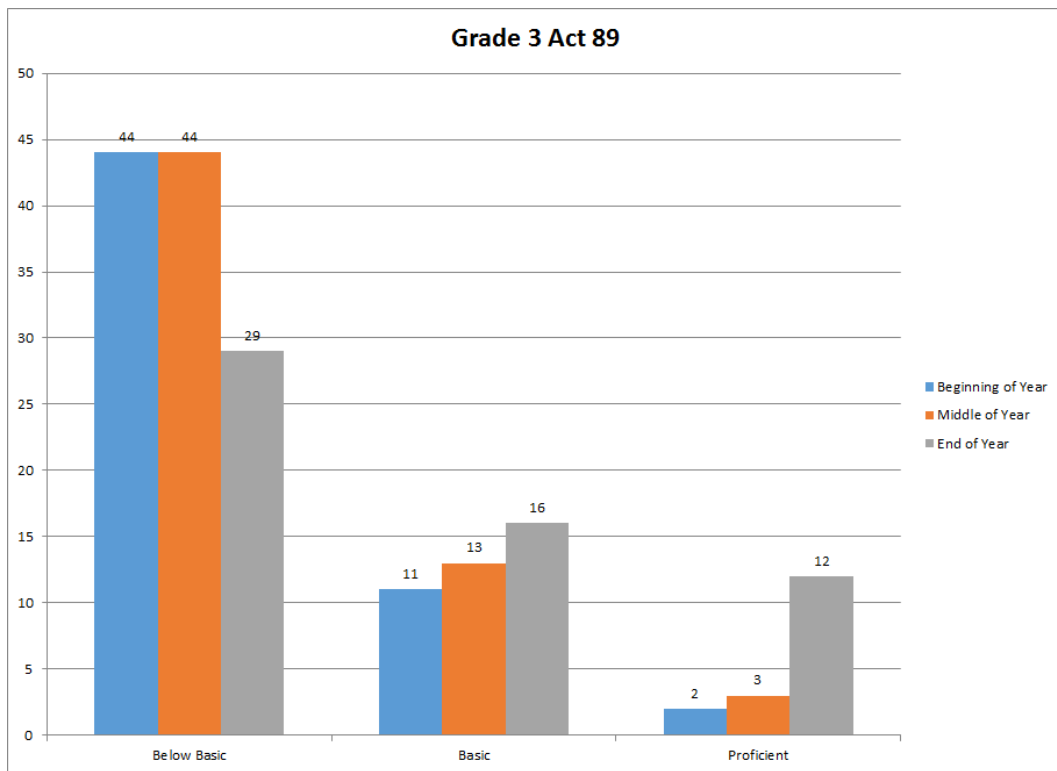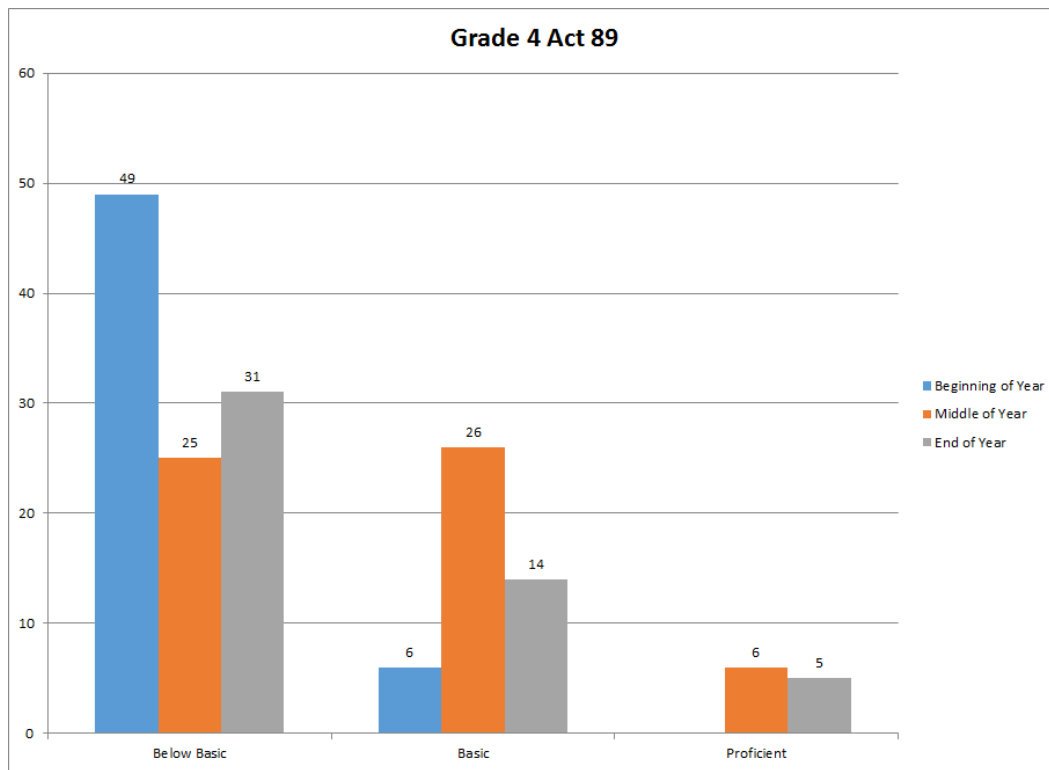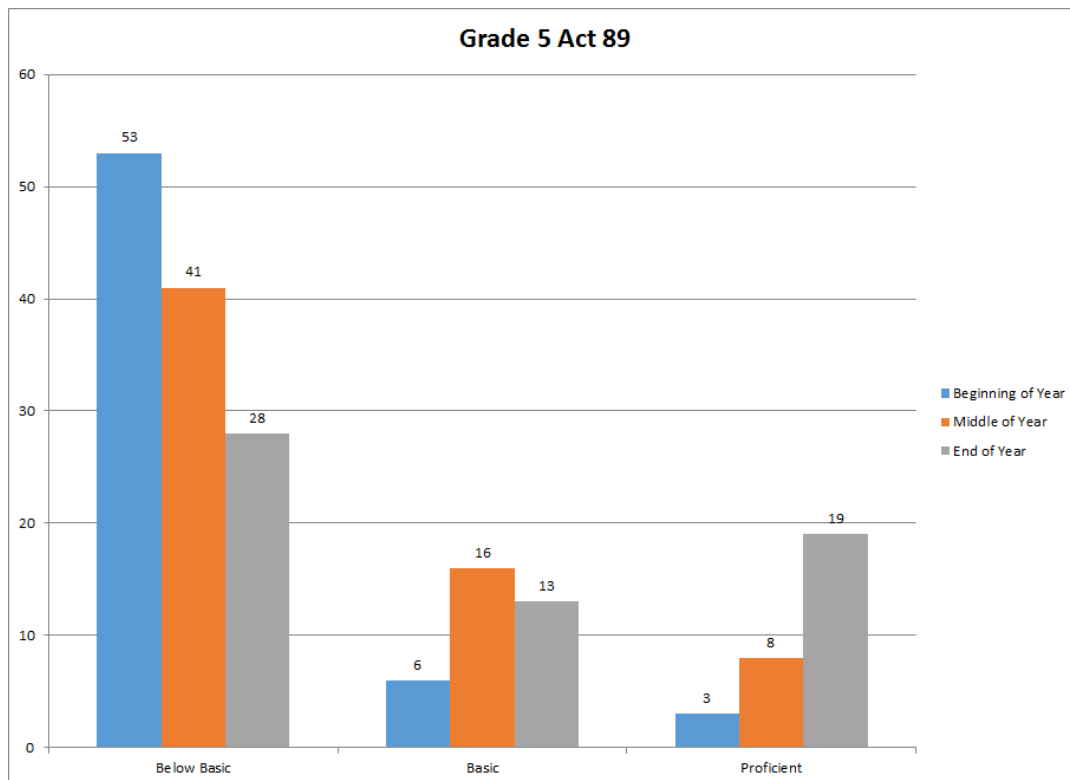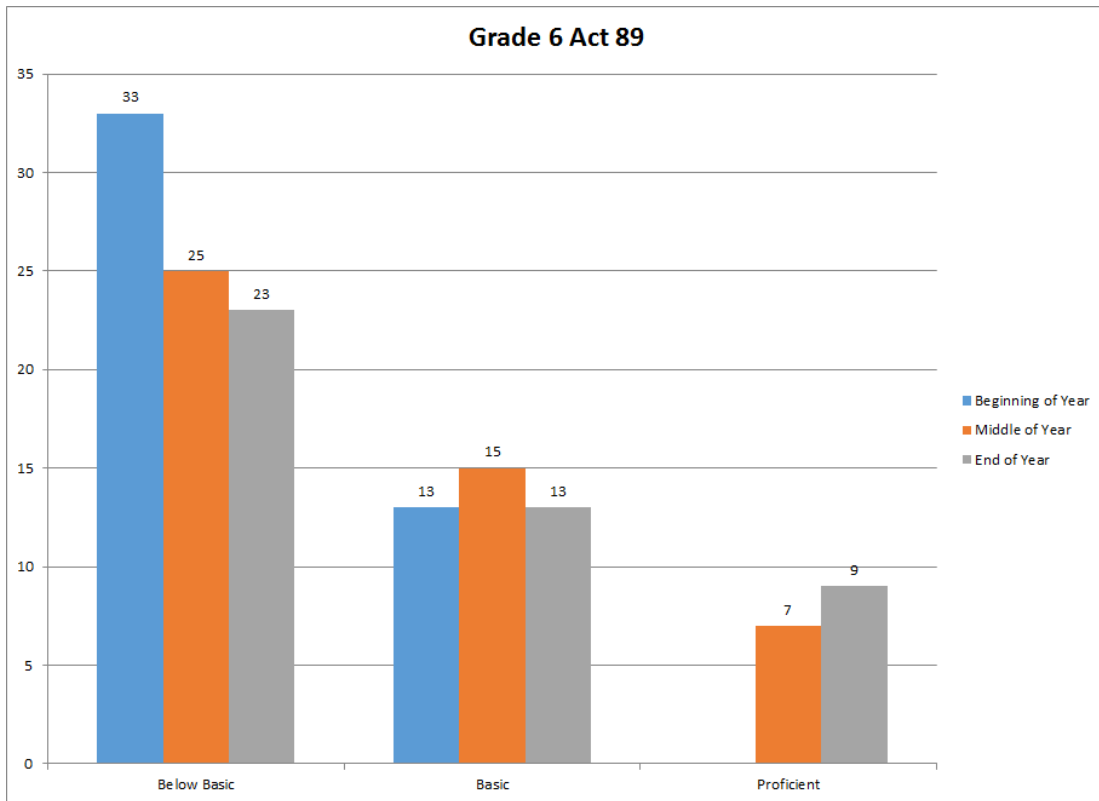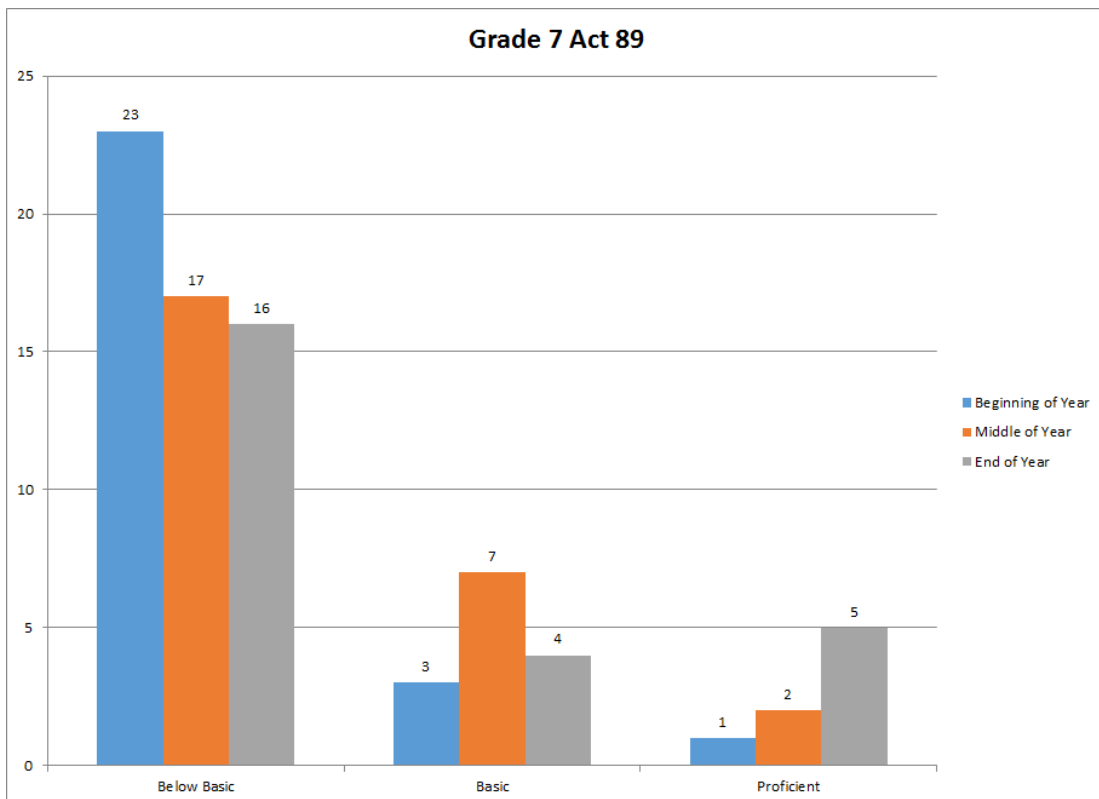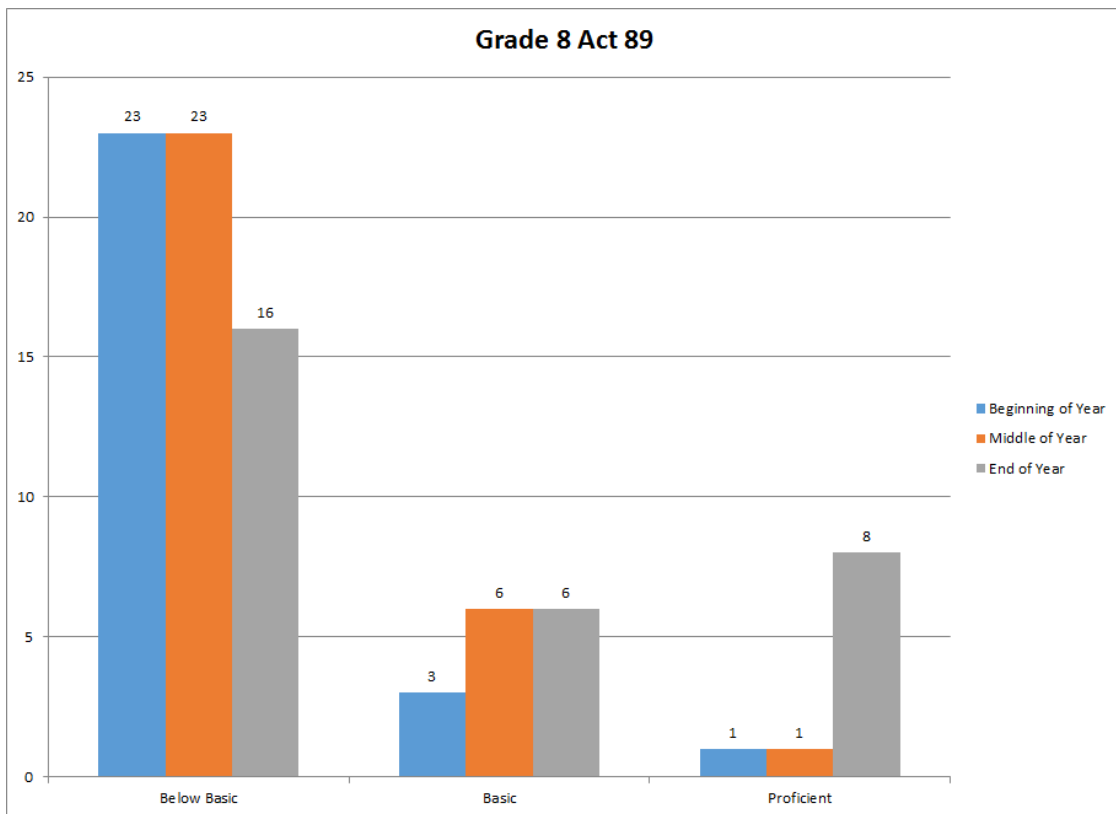
Overall trends on both the Act 89 and 4Sight math assessments suggest that the students are moving toward proficiency at a steady rate across the grades. Staff, however, may want to investigate ways to accelerate the progress of their students, particularly in the upper grades and to review if students continue to qualify for services as they reach the proficient and advanced levels.
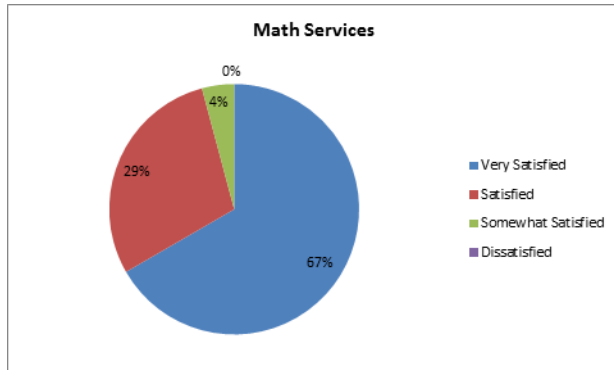
Perceptual Data

Nonpublic administrators were surveyed regarding their satisfaction with Nonpublic Services. The results of the survey are indicated below:
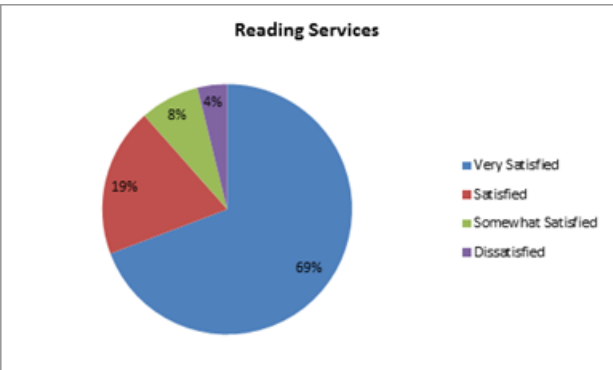
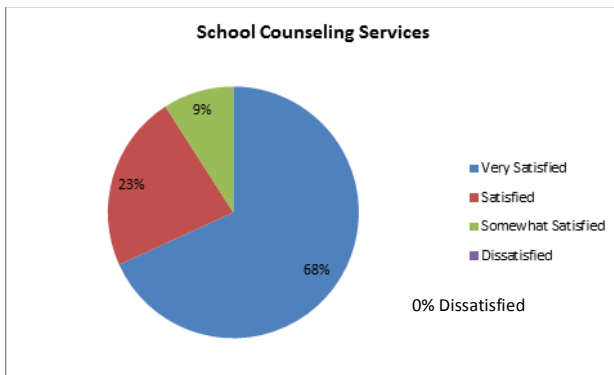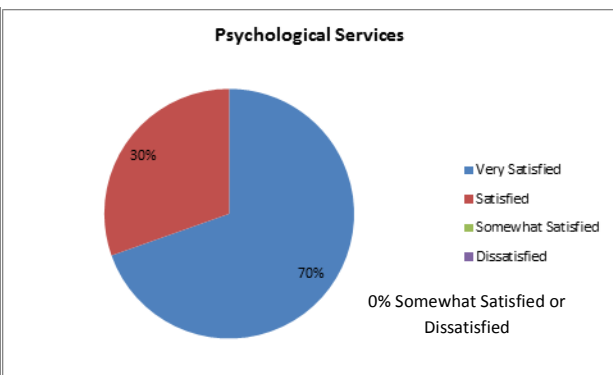**Figures 16a-f Nonpublic Service Ratings 2013-14**

Figure 16a

Act 89 Overall Rating

0% Somewhat Satisfied or Dissatisfied

35

Figure 16b

Math Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

0%
4%
29%
67%

Figure 16c

Reading Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

4%
8%
19%
69%

Figure 16d

School Counseling Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

9%
23%
68%

0% Dissatisfied

Figure 16e

Psychological Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

30%
70%

0% Somewhat Satisfied or Dissatisfied

Figure 16f

Speech & Language Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

4%
46%
50%

0% Dissatisfied

Figure 16g

IU Office Services

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Dissatisfied

31%
69%

0% Somewhat Satisfied or Dissatisfied

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.

Curriculum and Instruction

IU 13 Curriculum and instruction services are designed primarily to improve the skills of district and IU 13 teachers and administrators as they interact and instruct their students. IU 13 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.

Demographics

Complete demographic information will be available at the end of June, 2014 and will be reviewed after the close of the 2013-14 school year. This data will be included in the fall, 2014 revision of the data report.

Achievement/Student Learning

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 IU 13 of high quality and effectiveness, resulting in more highly trained educators who will in turn, impact student achievement?

In order to more accurately correlate results with services, it was decided that measures of student learning would be collected from those instances where IU consultants had ongoing relationships with teachers and administrators. The C&I team hypothesized that this would more accurately document 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. Four projects were identified to include in the analysis. They include:

- **The Literacy Design Collaborative (LDC)** – LDC provides a framework for teachers to implement PA Core Standards for literacy across content areas including English language arts, science, and social studies. IU 13. The IU 13 LDC training model incorporated a school launch team structure. Schools created 8-person teams made up of 6 content area teachers, 1 support teacher, and 1 building administrator. Teams attended four days of regional training at IU 13 where they were introduced to the literacy design collaborative framework. Teams also received access to all of the training resources electronically in order to provide the materials they may need to scale and spread LDC within their schools beyond the initial training year. A complete report of the findings from the project **2013-14 IU 13 Literacy Design Collaborative Student Growth Analysis** (Galbraith, 2014) is located in Appendix A of this report.
- **Implementing Pennsylvania Core Standards Through Close Reading** - This professional development series related to implementing the PA Core Standards took place over the course of the year in three local elementary schools. The structure of the professional development

series varied by the needs and requests of the schools, but included whole and small group presentations, classroom visits, individual or small group debriefing or planning sessions, and modeled or co-taught lessons. A complete report of the findings from the project **Implementing Pennsylvania Core Standards through Close Reading Professional Development Report 2013-2014** (Lewis, 2014) is located in Appendix B of this report.

- **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 **2013-2014 Reading Apprenticeship Student Growth Analysis** (Galbraith, 2014) found in Appendix C.

- **Math Science Partnership Grant Program (MSP)** - IU 13's MSP grant program is an action-research study designed to measure the impact of targeted professional development for educators on student proficiency in math and science. By increasing the content knowledge and pedagogical skills of participating teachers, it is hypothesized that student achievement 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 receive instructional coaching from IU 13's STEM consultant and participate in three day-long professional development sessions. Information shared in this data report is drawn from data analysis done in September, 2013, based on IU 13's first MSP grant.

Assessments used as part of the research designs include:

- **Literacy Design Collaborative rubrics:** There are three LDC rubrics, one for each mode of writing outlined in the PA Core Standards – argumentative, informational/explanatory, and narrative. Each rubric contains seven common elements:
    - **Focus-**How steadily and thoroughly does the student address the prompt and/or additional demands.
    - **Controlling Idea** - How does the student establish an overall claim or thesis?
    - **Reading and Research-**How does the student transfer relevant content from the reading materials to the writing product?
    - **Development** - How thoroughly does the student provide and explain details in support of the controlling idea?
    - **Organization-**How controlled and logical is the essay's structure?
    - **Conventions-** How much command do the students have over standard English conventions, cohesion, sentence structures? How appropriate are language and tone? Citation of sources?
    - **Content Understanding-** How firmly does the student grasp the relevant content?

For more information on the LDC rubrics, refer to the LDC website (http://ldc.org/).
- **Measures of Academic Progress (MAP)** – The MAP is an online, individualized assessment of student progress in reading. Detailed information on the design and implementation of the MAP assessments can be found at the MAP website http://www.nwea.org/map .
- **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.
- **Surveys of Enacted Curriculum –** Developed by the Wisconsin Center for Education Research, this tool allows teachers to compare their practices to other teachers around the country through the use of teacher logs, alignment reports and other online tools.
- **Keystone Exams** – These end of course assessments are required for Pennsylvania students completing Algebra I and Biology coursework.
- **Pennsylvania System of School Assessments (PSSAs)** – The Pennsylvania state assessments assess student proficiency levels in reading and math in grades 3-8 and science grades 4 & 8. More information on the Keystone Exams and the PSSA exams can be found at PDE's SAS portal (http://pdesas.org/).
- **4Sight Benchmark Assessments (Reading)**

LDC Student Growth Analysis Design:

During the 2013-14 school year, IU 13 asked LDC building points of contact, on a voluntary basis, to identify one teacher per launch team who was implementing LDC with fidelity, to participate in the student growth analysis. These teachers selected a minimum of one class set of student work to submit to IU 13 for the purposes of analyzing student performance on the LDC rubrics and determining whether student writing growth occurred from module 1, implemented in the fall 2013, to module 2, implemented in spring 2014.

Sixteen teachers and 302 students participated in the student growth analysis; however, due to snow days and district-requested extensions for student work submissions, the results from 163 students in grades 4-12 were used in this analysis. IU 13 used the LDC rubrics as measurement instruments in the LDC Student Growth Analysis.

Summary of Results

Figure 17 illustrates the differences in student scores from module 1 to module 2. Each figure includes a data table below it.
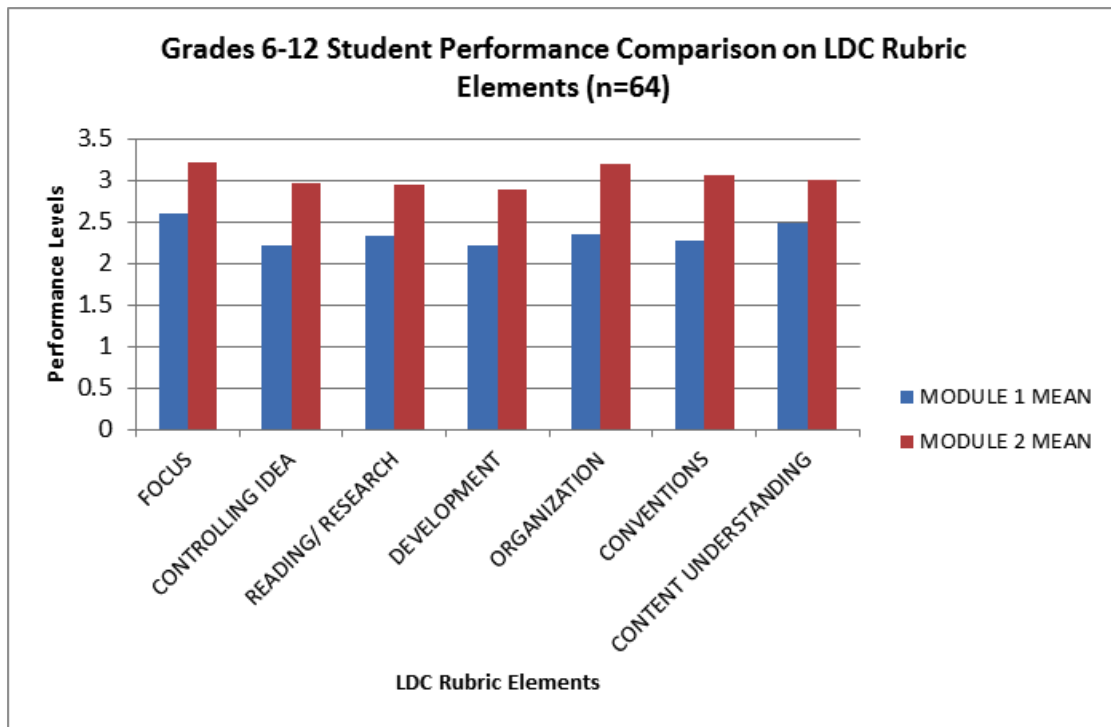
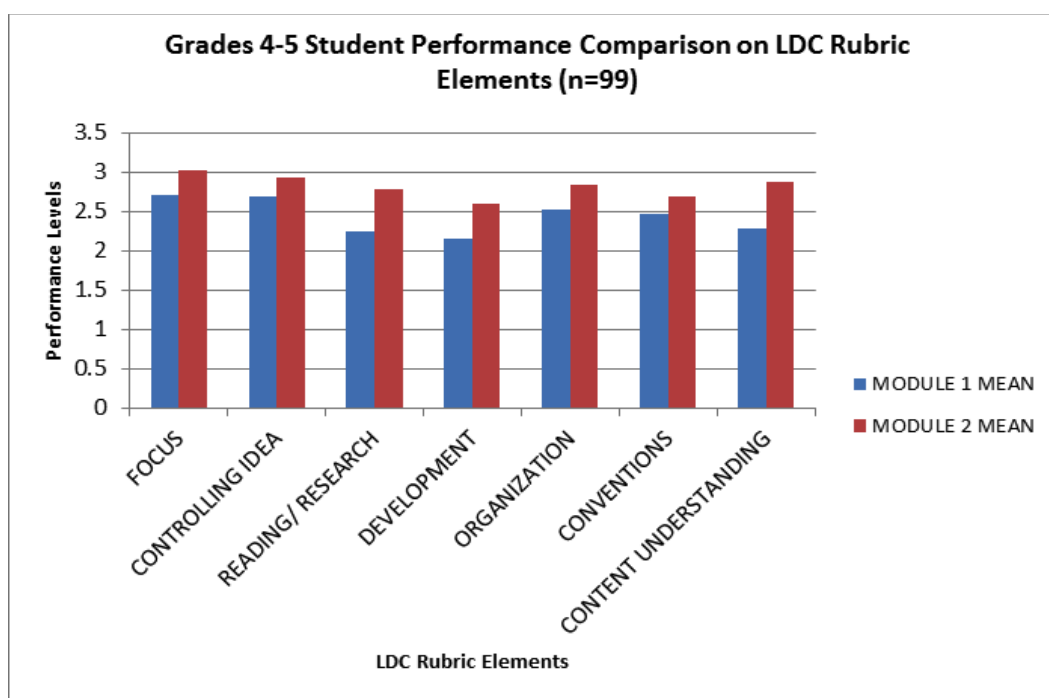Grades 4-12 Student Mean Performance on LDC Rubric Elements (n=163)
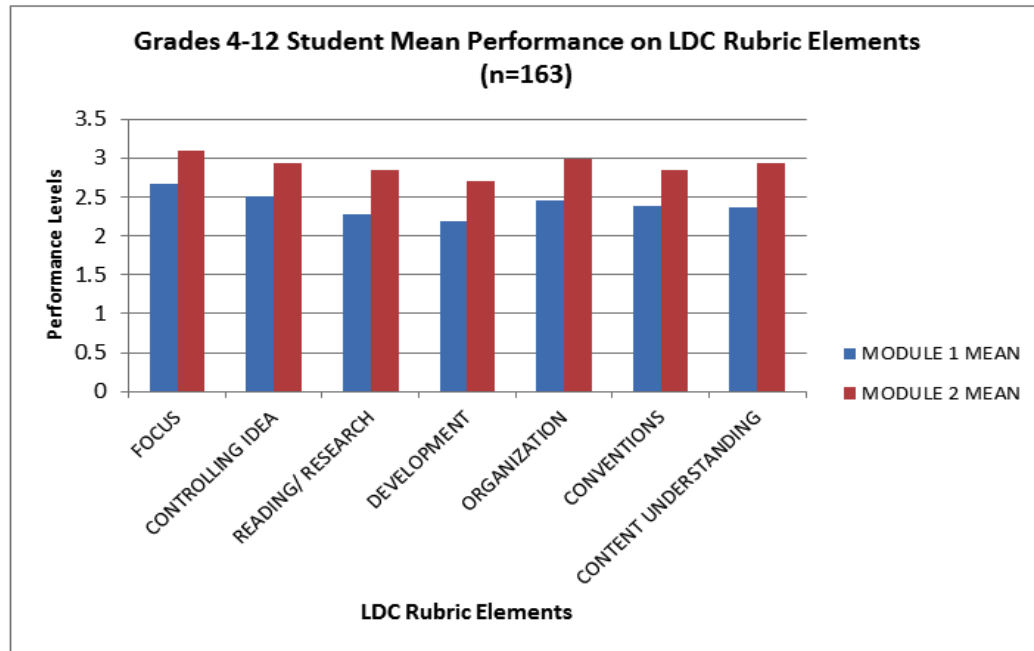
	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.59	2.21	2.33	2.23	2.34	2.28	2.49	AE
Module 2 Mean	3.23	2.97	2.95	2.90	3.20	3.06	3.01	ME

Overall, mean student performance improved from an overall performance level of Approaches Expectations to Meets Expectations on the LDC rubrics. Gains were made in all seven LDC rubric elements.

Grades 6-12 Student Performance Comparison on LDC Rubric Elements (n=64)

	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.59	2.21	2.33	2.23	2.34	2.28	2.49	AE
Module 2 Mean	3.23	2.97	2.95	2.90	3.20	3.06	3.01	ME

Students in grades 6-12 improved from an overall performance level of Approaches Expectations to Meets Expectations on the LDC rubrics. Gains were made in all seven LDC rubric elements.

Figure 19

Grades 4-5 Student Performance Comparison on LDC Rubric Elements (n=99)

	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.72	2.70	2.25	2.16	2.53	2.46	2.29	AE
Module 2 Mean	3.03	2.93	2.78	2.60	2.84	2.70	2.88	ME

Implementing Pennsylvania Core Standards through Close Reading Student Growth Analysis Design

Teachers from three local elementary schools participated in a series of professional development activities, which varied depending on school needs. **Table 6** lists a summary of the events by school:

Table 6 Summary of Professional Development by School

School A	School B	School C
• 18 Full-days • Grades 1-4 • Small Group PD sessions • Model Lessons • Co-Taught Lessons	• 7 Full-days and 1 Half-day • Grades 1-5 • Whole Group PD Sessions • Small Group PD Sessions • Model Lessons	• 6 Full-days and 2 Half-days • Grades K-5 • Whole Group PD Sessions • Classroom Visits • Debriefing/Planning Sessions

Student achievement was measured using the Measures of Academic Progress (MAP), an online, individualized of student progress in reading and the 4Sight Benchmark Assessments.

Summary of Results

**School A**   **Figure 20**
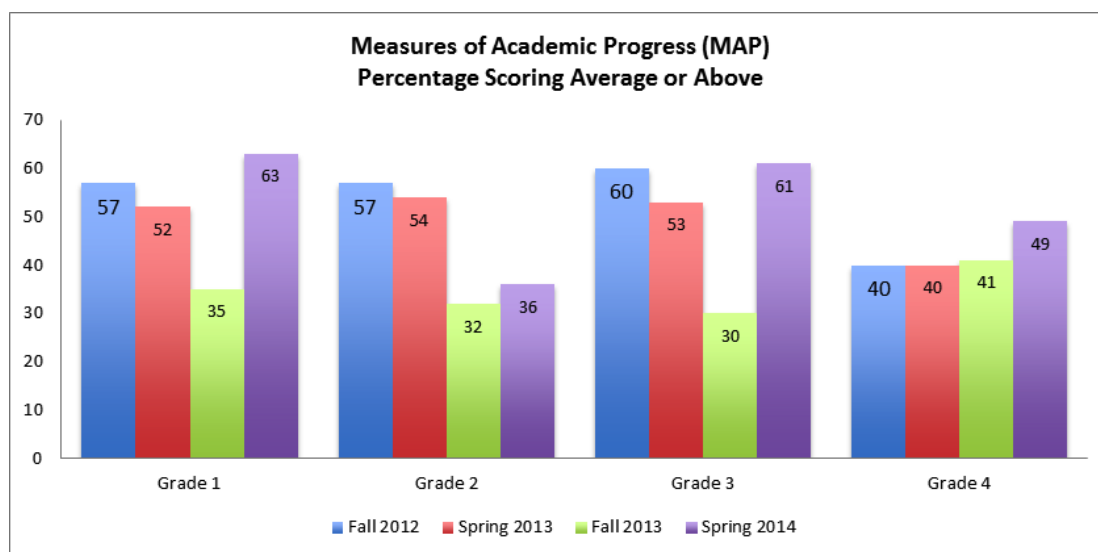
The data from School A indicate that, although students entered the 2013-2014 school year performing lower than the fall of the previous year, they ended 2014 performing higher than in spring 2013, with the exception of Grade 2. In addition, MAP scores decreased or remained the same over the course of the 2012-2013 school year, but increased during the 2013-2014 school year.

School B*   **Figure 21**
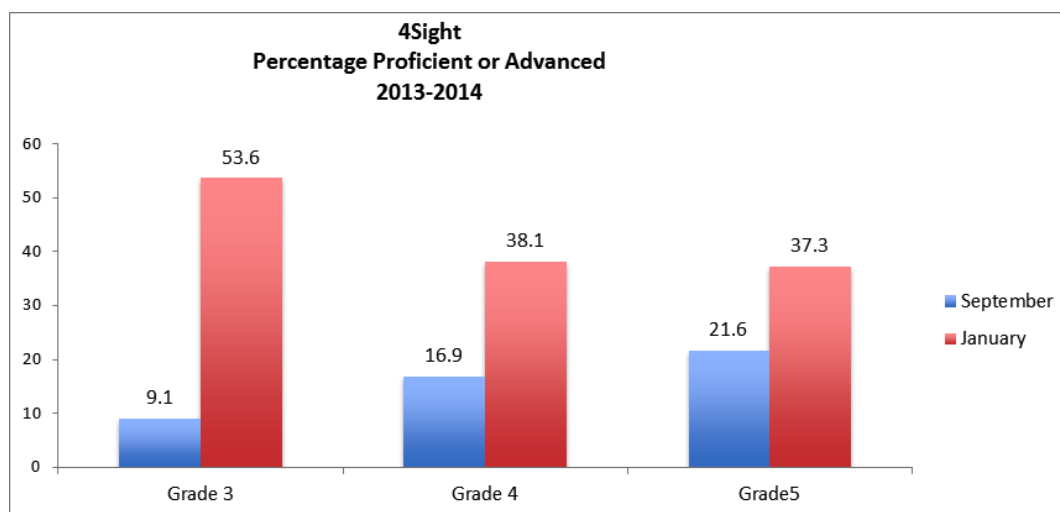
4Sight data from School B increased from the beginning of year through the middle of the year.

* End of year data was not yet available when this report was developed.

School C

Student data was not included in this report for School C due to the limited number of days of professional development.
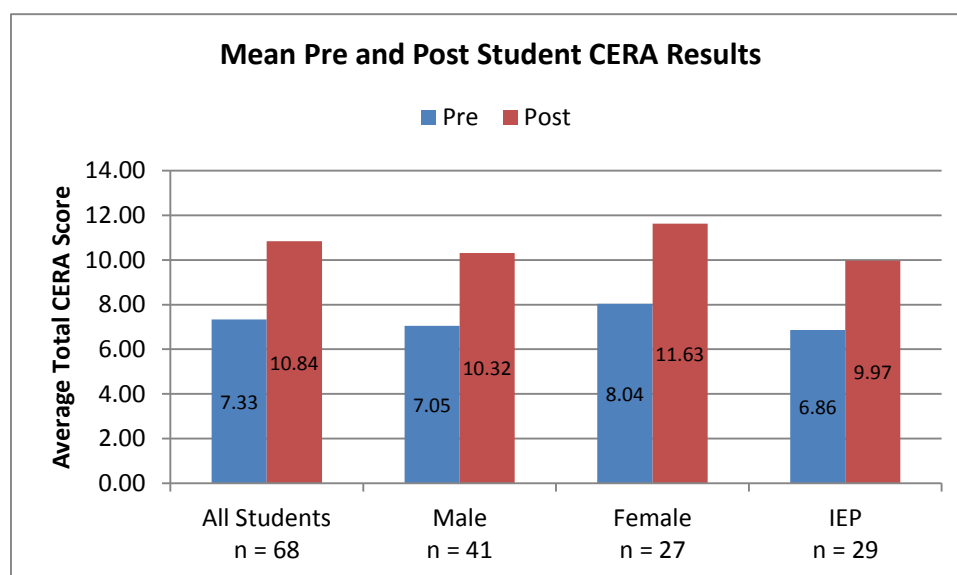
Reading Apprenticeship Student Growth Analysis Design

During the 2013-14 school year, two school teams comprised of a total of 8 teachers from two local high schools began IU 13's reading apprenticeship training in December and completed it in April. Teachers were 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. These teachers formatively assessed sixty-eight students using the CERA and began using reading apprenticeship routines and strategies as part of their content-area instruction. 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 all three categories for a total of 18 possible score points.

Summary of Results

Figure 22 represents 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 five-month training period. It is important to note that there were no English language learners within this sample.

Figure 22

The most significant gains occurred on the student annotations portion of the assessment, specifically within the Metacognitive Conversation category (Gain = .84). Improvement also occurred in the Cognitive Strategies (.69) and Building Knowledge (.55) portions of the assessment, although not as large. 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 fact that the Metacognitive Conversation category had the most gains is indicative of students becoming more aware of their own reading process. On the post-implementation survey, one teacher in the training group noted, "Each student recognizes that a metacognitive analysis exists. This awareness creates opportunities for students to further develop their reading skills and become better readers."

Math Science Partnership Grant Student Analysis Growth 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. Surveys of Enacted Curriculum (SEC) were also administered to assess teacher self-reporting for confidence & efficacy in teaching their current content.

PSSA / Keystone Exam student data was also used as appropriate, dependent on grade levels & content areas. PSSAs and Keystones for Math and Science are only administered in specific grades and after the completion of aligned courses. Because of this, while teachers participating in the MSP grant taught a total of 4,669 students during SY2012-13, only 25% of math students and 35% of science students had PSSA / Keystone Exam data available for consideration.

Summary of results:

Math

Seventy-two percent of math teachers had a statistically significant gain in content knowledge during the Summer Institute. Follow-up testing in the spring suggests that most math teachers (68%) retained some or all of that gained content knowledge. Math teachers who participated in multiple years of the MSP program expected their students to spend less time memorizing facts, definitions, and formulas and spend more time demonstrating understanding of mathematical ideas. In addition, the percentage of time math teachers in the intervention group (IG) expected their students to solve non-routine problems or make connections tended to decrease during the school year, contrary to what had been hypothesized by the design team. Math IG teachers showed statistically significant improvements between the first and last RTOP observations, both in overall score and for scores in the 5 sub-areas measured. These included lesson design and implementation, propositional pedagogic knowledge, procedural pedagogic knowledge, classroom culture promoting communication and interactions and classroom culture promoting positive student/teacher relationships.

Student data proved to be inconclusive as a majority (85%) of students of math IG teachers rated Proficient or Advanced on the 2013 Math PSSA/KE; however, this was also true for students of math CG teachers.

Science

Follow-up testing in the spring suggests that half (50%) of science teachers retained some or all of that gained content knowledge. Science teachers who participated in multiple years of the project showed increased confidence in their ability to teach their content. Science teachers who participated in multiple years of the MSP program expected their students to analyze information more frequently and

more rigorously, than did science teachers who only participated in activities in 2012-13. Compared to their control group counterparts, participating science teachers tended to spend less classroom time performing rote procedures or expecting their students to do so. Science intervention group teachers did not show statistically significant improvements between the first and last RTOP observations. This was most likely due at least in part to high scores on the first RTOP.

Similar to the math results, an analysis of student data was inconclusive. A small majority (54%) of students of science IG teachers were rated Proficient or Advanced on the 2013 Science PSSA. This, however, was also true for students of science CG teachers.

Perceptual Data

LDC Post Training Survey Results

Surveys also indicated strong growth in participating teachers' knowledge of SAS (Pennsylvania's Department of Education online resource bank), understanding of LDC and comfort level in using literacy strategies.

Implementing Pennsylvania Core Standards through Close Reading Post Training Survey Results

Teacher surveys given post training indicated that the professional development series had an impact on teacher classroom practice. All teachers planned at least one lesson based on the professional development and half planned more than five lessons as a result. Teachers also reported that their students benefitted from the professional development series. When asked to rate the level of change in practice caused by each professional development structure, teachers reported that whole group professional development sessions had the largest impact and that work or planning sessions with the facilitator resulted in the second largest percentage of significant or slight change. All structures appeared to have a positive impact on teacher change in practice.

Reading Apprenticeship Post Training Survey Results

As a result of their participation in the Reading Apprenticeship training, teachers reported that they see students supporting their thinking with evidence from text more frequently because of their implementation of the reading apprenticeship framework. In addition, teachers reported more frequent student discussion about their strategies for repairing confusion and making meaning from a text.

Additional Perceptual Data

In addition to the project perceptual data discussed previously, the curriculum and instruction consultants provided general marketplace and grant-funded trainings 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, these participants' ratings provide an overall view of satisfaction with the quality of the workshops.   Based on an analysis of ratings gathered since January, 1, 2014, using a scale of 1-5 (1 = poor; 5 = excellent), the average rating for professional development workshops is 4.2. This rating means that workshop participants were generally very satisfied with the professional development they received.

Summary and Conclusions

The results gathered in this data report suggest that Lancaster-Lebanon IU 13 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 IU 13 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 in turn, impact student achievement in their classrooms. IU 13 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, IU 13 believes it can more thoroughly fulfill its strategic priority to improve student achievement.

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Lewis, T. (2014). Implementing Pennsylvania Core Standards Through Close Reading Professional Development Report.

Literacy Design Collaborative: http://ldc.org/.

Measures of Academic Performance (MAP): http://www.nwea.org/map .

Indicators of Student Achievement and Quality Programming

Figure and Table References:

Appendix A

2013-14 IU 13 Literacy Design Collaborative Student Growth Analysis

What is the Literacy Design Collaborative?

The Literacy Design Collaborative engages teacher communities of practice around increasing the literacy skills and content knowledge necessary for college and career readiness. It provides a framework for teachers to implement PA Core Standards for literacy across content areas including English language arts, science, and social studies. Simply put, students engage in rigorous assignments that integrate reading, writing, and content understanding as part of an instructional plan, called a module, which intentionally builds literacy skills along the way.

An LDC module is made up for four parts:

What Task?	The student performance *task* called a "teaching task" that teachers design using LDC templates aligned to the CCSS and cross-walked to the PA Core Standards.
What Skills?	A *skills* list that engages teachers in backward mapping to identify the reading, writing, and thinking skills students will need to complete that task.
What Instruction?	An *instructional* plan in which teachers create or select predesigned student activities, called "mini-tasks," and instructional strategies that develop students' literacy skills and guide them toward completing the teaching task.
What Results?	A *results* section that shows sample student responses to the task and how those pieces scored on an LDC rubric, as well as an option for teachers to design a summative assessment related to the teaching task.

The Literacy Design Collaborative began as a framework geared toward secondary teachers in grades 6-12 to help those teachers meet the demands of the Common Core State Standards, and over time, the framework has expanded into the elementary grades.

What does IU 13's Baseline LDC Training Entail?

The IU 13 LDC training model incorporates a school launch team structure. Schools create 8-person teams made up of 6 content area teachers, 1 support teacher, and 1 building administrator. This team structure enables teachers to provide support to one another and engage in professional inquiry into literacy best practices on-site. Teams attend four days of regional training at IU 13 where they are introduced to the literacy design collaborative framework. Teams receive access to all of

LDC Technical Assistance Uses

- ✓ Facilitate collaborative team scoring sessions (virtually or face-to-face).
- ✓ Meet with launch team members individually and/or in small groups for instructional planning.
- ✓ Lead walk-throughs with building administrators to observe LDC implementation and alignment to the PA Core Standards.
- ✓ Provide professional development to launch teams to support LDC implementation
- ✓ Provide professional development to launch teams to connect initiatives already in place with LDC.
- ✓ Provide professional development to the school to support the launch of LDC.

the training resources electronically in order to provide the materials they may need to scale and spread LDC within their schools beyond the initial training year. School districts sign a Letter of Understanding and agree to design, implement, and publish two high quality modules and submit their student work to IU 13. In addition to the 4 days of regional training, teams receive 2 full days of onsite technical assistance that can be used in a variety of ways to support LDC implementation. Launch teams are separated into multiple training cohorts based on grade bands outlined in the PA Core Standards.

2013-14 Student Growth Analysis Design and Results

During the 2013-14 school year, IU 13 asked LDC building points of contact, on a voluntary basis, to identify one teacher per launch team who was implementing LDC with fidelity, to participate in the student growth analysis. These teachers selected a minimum of one class set of student work to submit to IU 13 for the purposes of analyzing student performance on the LDC rubrics and determining whether student writing growth occurred from module 1, implemented in the fall 2013, to module 2, implemented in spring 2014.

Sixteen teachers and 302 students participated in the student growth analysis; however, due to snow days and district-requested extensions for student work submissions, the results from 163 students in grades 4-12 were used in this analysis.

IU 13 used the LDC rubrics as measurement instruments in the LDC Student Growth Analysis. There are three LDC rubrics, one for each mode of writing outlined in the PA Core Standards – argumentative, informational/explanatory, and narrative. Each rubric contains seven common elements.

Rubric Element	Guiding Question
Focus	How steadily and thoroughly does the student address the prompt and/or additional demands?
Controlling Idea	How does the student establish an overall claim or thesis?
Reading and Research	How does the student transfer relevant content from the reading materials to the writing product?
Development	How thoroughly does the student provide and explain details in support of the controlling idea?
Organization	How controlled and logical is the essay's structure?
Conventions	How much command does the student have over standard English conventions, cohesion, sentence structures? How appropriate are language and tone? Citation of sources?
Content Understanding	How firmly does the student grasp the relevant content?

Within all three LDC rubrics, there are four levels of performance: Not Yet, Approaches Expectations, Meets Expectations, and Advanced. In addition, there are separate, grade-band specific rubrics that have been developed for grades K-5.

Results

Figures 1-3 illustrates the differences in student scores from module 1 to module 2. Each figure includes a data table below it.

Figure 1
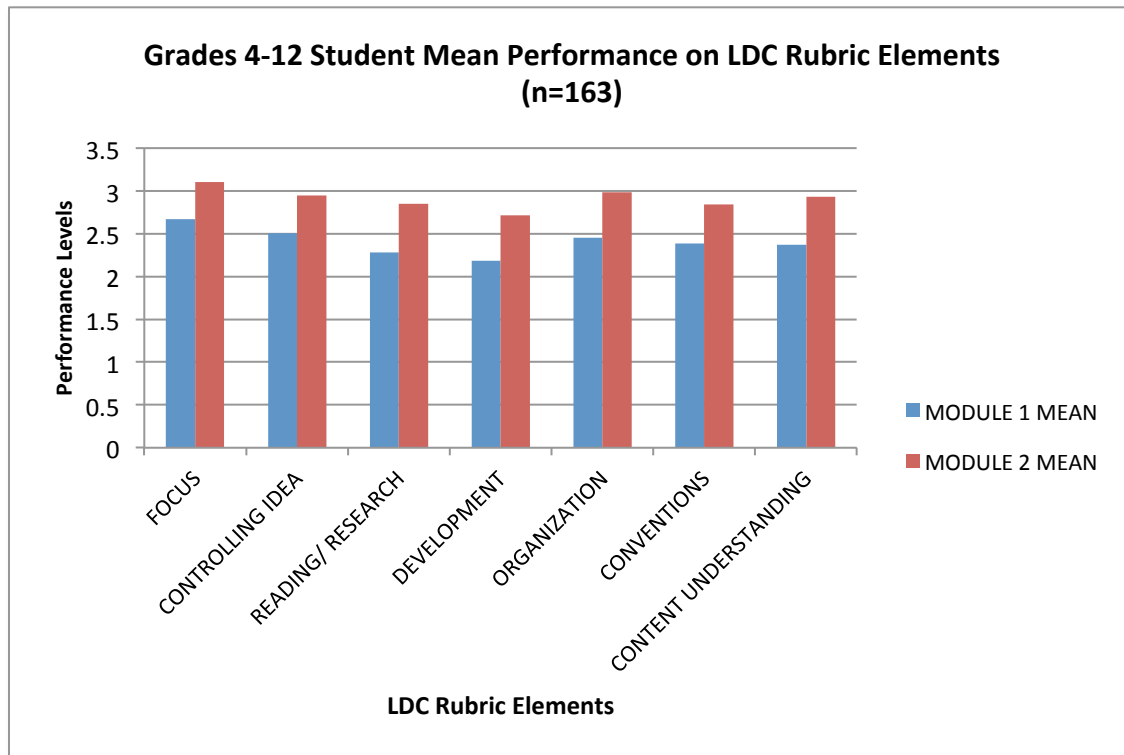
Grades 4-12 Student Mean Performance on LDC Rubric Elements (n=163)

	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.67	2.51	2.28	2.18	2.46	2.39	2.37	AE
Module 2 Mean	3.10	2.94	2.85	2.71	2.98	2.84	2.93	ME

Overall, mean student performance improved from an overall performance level of Approaches Expectations to Meets Expectations on the LDC rubrics. Gains were made in all seven LDC rubric elements.

Figure 2

Grades 6-12 Student Performance Comparison on LDC Rubric Elements (n=64)
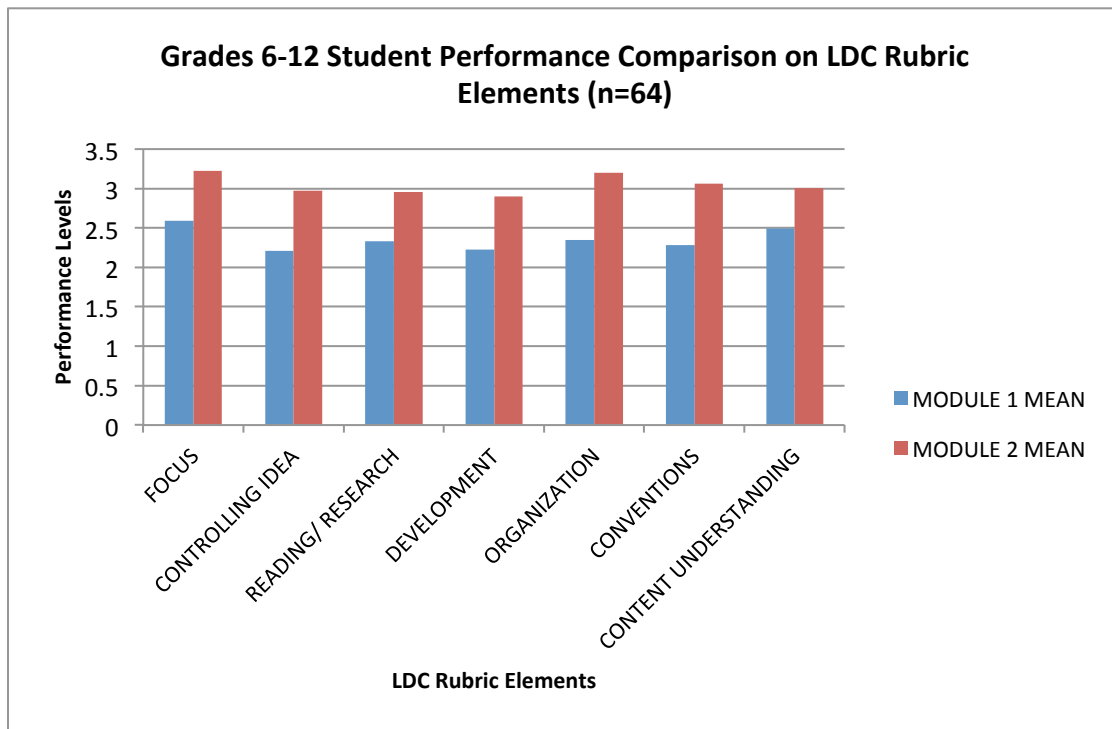

	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.59	2.21	2.33	2.23	2.34	2.28	2.49	AE
Module 2 Mean	3.23	2.97	2.95	2.90	3.20	3.06	3.01	ME

Students in grades 6-12 improved from an overall performance level of Approaches Expectations to Meets Expectations on the LDC rubrics. Gains were made in all seven LDC rubric elements.

Figure 3

Grades 4-5 Student Performance Comparison on LDC Rubric Elements (n=99)

	Focus	Controlling Idea	Reading/ Research	Development	Organization	Conventions	Content Understanding	Overall Performance Level
Module 1 Mean	2.72	2.70	2.25	2.16	2.53	2.46	2.29	AE
Module 2 Mean	3.03	2.93	2.78	2.60	2.84	2.70	2.88	ME

Students in grades 4-5 improved from an overall performance level of Approaches Expectations to Meets Expectations on the LDC rubrics. Gains were made in all seven LDC rubric elements.
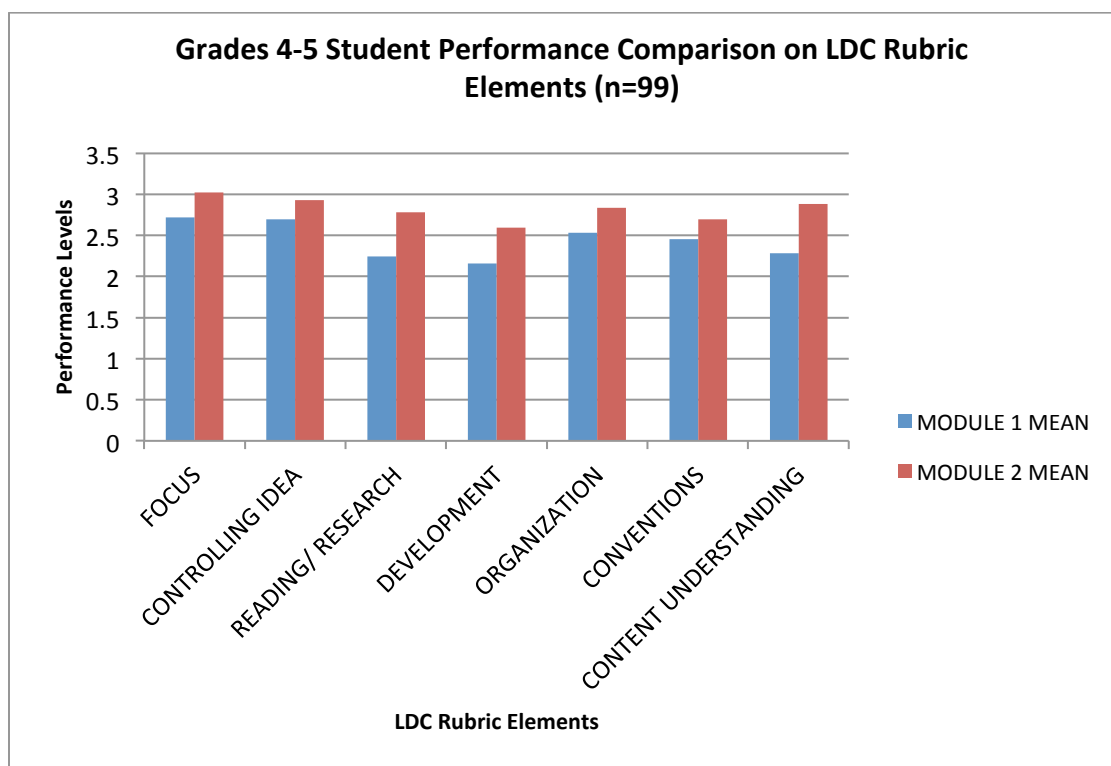
How did LDC training benefit grades 6-12 teachers?

Teachers reported that they had many lessons learned from LDC training. To begin, four teachers out of 33 respondents indicated that they became registered SAS users for the first time.

Figure 4 illustrates survey results from teachers of grades 6-12 involved in the 2013-14 training cohort.

Figure 4

Grades 6-12 Teacher Perceptions of Their Own Growth in Understanding
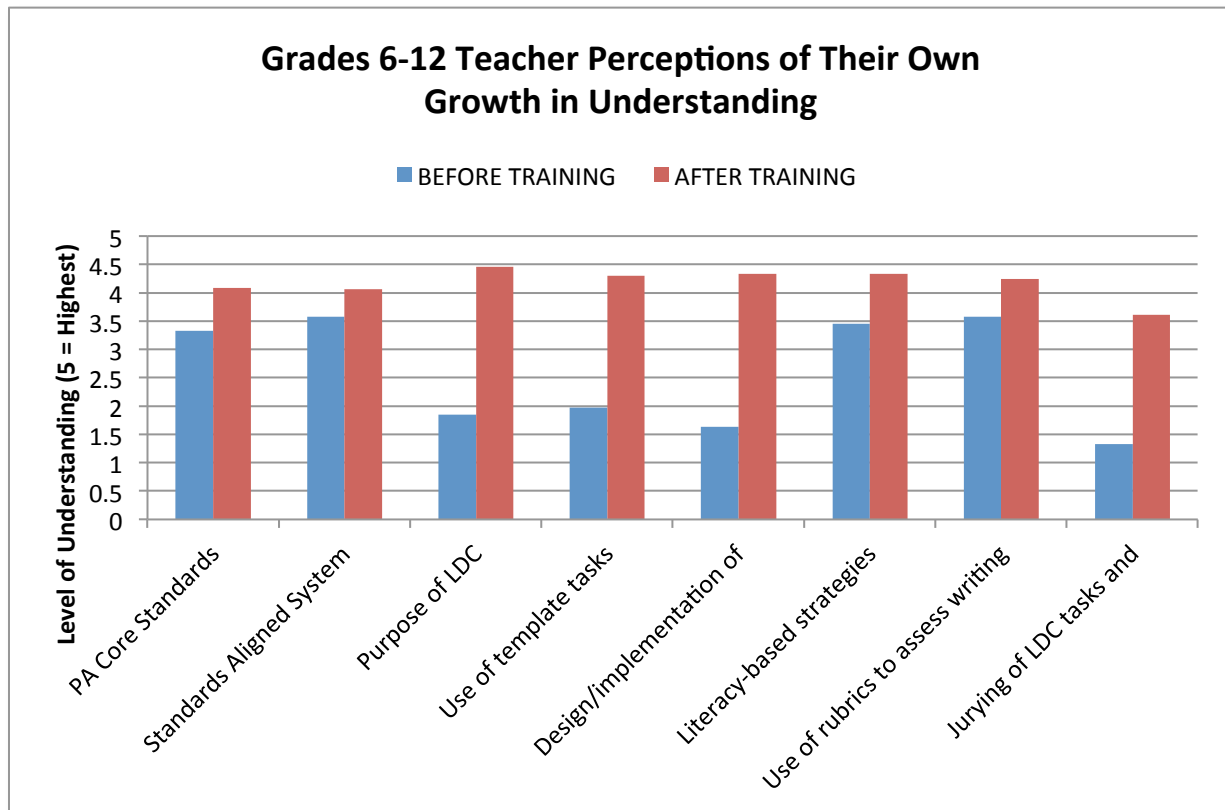
What did teachers say?

"Before the LDC training I struggled to use writing in my classroom in a way that the students were active. After the training I am able to implement student-based writing within my classroom, where the students are actively writing and engaged." – Middle School English Language Arts Teacher

"Bringing literacy into science always seemed difficult and now it seems easy." – High School Science Teacher

"It [LDC] has changed the way I teach. Now I teach with a purpose and students read and write with a purpose." – High School Science Teacher

"My participation in LDC training has helped me realize the importance of incorporating literacy into the content areas and that my students are able to perform at a higher level when working within one of these modules. I also appreciate the resources that are created by other educators and are now available for me to use in my classroom." – Middle School English Language Arts Teacher

"I am excited to have serious training in literacy because that is not a focus of study at the secondary level when studying to become a teacher. I am also excited to be working towards publishing something for other professionals to view." – High School English Language Arts Teacher
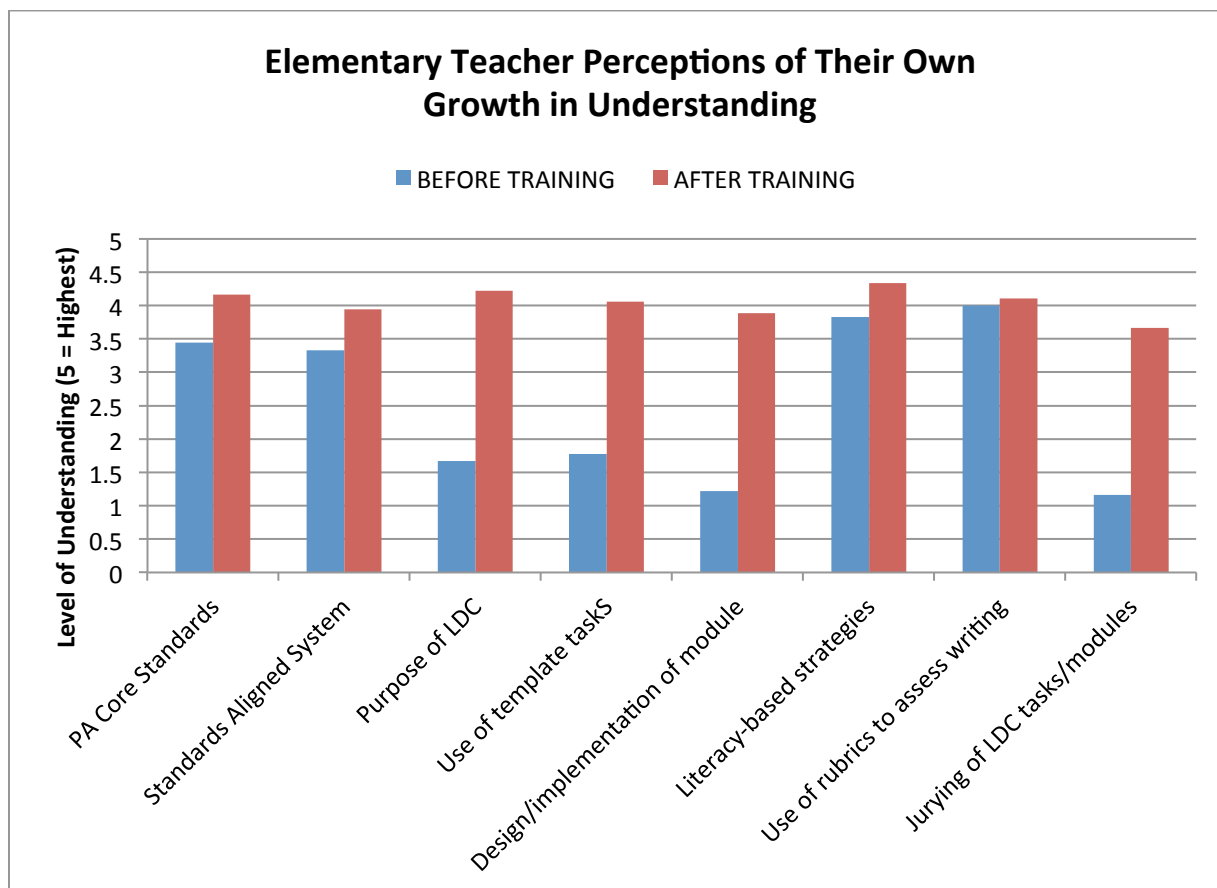
How did LDC training benefit grades 4-5 teachers?

Overall, teachers reported that LDC Four teachers out of 18 respondents indicated that they became registered SAS users for the first time.

Figure 5 illustrates survey results from teachers of grades 4-5 involved in the 2013-14 training cohort.

Figure 5

Elementary Teacher Perceptions of Their Own Growth in Understanding

■ BEFORE TRAINING   ■ AFTER TRAINING

What did teachers say?

"LDC reminded me of the essential components of an effective unit plan. It demonstrated how to thoroughly integrate writing into the content areas - not just open-ended responses, but actual essays." - Fifth Grade Teacher

"LDC has allowed for greater reflection on how to implement active reading strategies and how to connect communication arts and content." - Fifth Grade Teacher

"It [LDC] allowed me to look at writing and the actual writing process in a different way." - Fourth Grade Teacher

"It has provided me a way of supporting teachers and co-teaching modules we have co-authored. This was not happening before LDC. Thank you! It also gave me a tool to help teachers create consistent writing expectations and complex texts to integrate PA core standards and teach content." - Fifth Grade Literacy Coach

How did LDC implementation benefit students?

"I got to see students really engage with the content and then use that content for a purpose. Our students were excited to write and share what they knew." - Fourth Grade Teacher

"Students experienced more reading and writing in my class than they would have previously. Students learned some topics more in depth." - Sixth Grade Social Studies Teacher

"They have become better writers, more organized, and better communicators." – Ninth Grade Science Teacher

"My greatest accomplishment in my work with LDC is the improvement in the writing of my students and the level of which they began to understand and discuss the content." – Fourth Grade Teacher

"My students "Met Expectations" in their writing pieces and were able to use complex texts to reach that goal." – Fourth Grade Teacher

"My participation in the IU 13 LDC training has benefited my students because they have become more knowledgeable in the writing process, and they have learned how to better analyze a text and write in a more meaningful and focused manner. LDC has helped my students become more skilled writers and more evaluative readers." – Sixth Grade English Language Arts Teacher

"Students are now being exposed to common language, skills, and strategies in English, social studies, and science. So, their reading comprehension and writing ability has greatly increased." – Ninth Grade English Language Arts Teacher

Limitations and Lessons Learned

There are five important limitations to this student growth analysis.

1) Students did not complete the same performance task for module 1 and module 2.

    There is a tremendous amount of local choice and flexibility built into IU 13's training model. All of the teachers involved in the training implemented an argumentative module in the fall 2013, but then had the choice to implement any of the 29 template tasks or 3 modes of writing for module 2. Comparing student results, but using two entirely different modes of writing (e.g., argumentative and informational/explanatory writing) could certainly have impacted the results of this analysis.

2) The scorers for module 1 and module 2 were different.

    During the 2013-14 school year, it was not an established requirement for teachers to submit already-scored student work to IU 13 for module 1. Therefore, IU 13 hired 8, trained teacher scorers to score the module 1 student work for the student growth analysis. Scorers had to calibrate on a student paper and demonstrate competence and consistency with scoring in order to score student papers as part of this student growth analysis. The benefit of hiring teacher scorers was that it helped to eliminate teacher bias, and it helped to maintain consistency of expectations. However, this additional expense is not financially sustainable within our training model in the future.

    Submitting module 2 student work with completed LDC rubrics was an already-established expectation for launch teams. These teachers had less experience than hired scorers with scoring consistently and accurately on the LDC rubric. Also, because teachers scored their own student work, the increased possibility of teacher bias exists.

3) The LDC rubrics for grades 4-5 were not finalized.

During the 2013-14 school year, revisions were made to the LDC elementary rubrics, and final rubrics have not yet been released to date. Scoring for the purposes of this student growth analysis was completed using older rubrics.

4) We did not control for task quality.

If the teaching task is unclear or misaligned to PA Core or Content Standards, student performance is impacted. Throughout the training, IU 13 facilitators provide feedback and guidance during task development, but districts have local control over task and module development and implementation.

5) We did not control for text complexity.

The complexity of the texts students were asked to read in module 1 versus module 2 could affect student performance. For example, one middle school English language arts teacher involved in the SGA implemented an argumentative module on a popular social issue in the fall and then asked the students to write their first poetry analysis as part of an informational/explanatory module in the spring. The reading and writing in module 2 was much more complex than the reading and writing in module 1 in this example.

In the future, for these results to be viable, certain controls for writing mode, scorer consistency and bias, task quality and text complexity should be considered. In future training cohorts, teachers will submit already-scored student work for both module 1 and module 2 so that the scorers remain the same. Selecting a small sample of the module 1 and module 2 student work and hiring trained scorers to double-score it would help to increase the validity and reliability of the results.

Appendix B

Introduction

In order to prepare students to meet the demands of the PA Core Standards, because the standards have shifted at all levels to reflect higher expectations, instructional practice must shift. Achieve the Core summarizes the shifts in the English Language Arts/Literacy standards as follows:

Shift 1: Regular practice with complex text and its academic language.

Rather than focusing solely on the skills of reading and writing, the Standards highlight the growing complexity of the texts students must read to be ready for the demands of college and careers. The Standards build a staircase of text complexity so that all students are ready for the demands of college- and career-level reading no later than the end of high school. Closely related to text complexity—and inextricably connected to reading comprehension—is a focus on academic vocabulary: words that appear in a variety of content areas (such as *ignite* and *commit*).

Shift 2: Reading, writing and speaking grounded in evidence from text, both literary and informational

The Standards place a premium on students writing to sources, i.e., using evidence from texts to present careful analyses, well-defended claims, and clear information. Rather than asking students questions they can answer solely from their prior knowledge or experience, the Standards expect students to answer questions that depend on their having read the text or texts with care. The Standards also require the cultivation of narrative writing throughout the grades, and in later grades a command of sequence and detail will be essential for effective argumentative and informational writing.

Likewise, the reading standards focus on students' ability to read carefully and grasp information, arguments, ideas and details based on text evidence. Students should be able to answer a range of *text-dependent* questions, questions in which the answers require inferences based on careful attention to the text.

Shift 3: Building knowledge through content-rich nonfiction

Building knowledge through content rich non-fiction plays an essential role in literacy and in the Standards. In K–5, fulfilling the standards requires a 50–50 balance between informational and literary reading. Informational reading primarily includes content rich non-fiction in history/social studies, science and the arts; the K–5 Standards strongly recommend that students build coherent general knowledge both within each year and across years. In 6–12, ELA classes place much greater attention to a specific category of informational text—literary nonfiction—than has been traditional. In grades 6–12, the Standards for literacy in history/social studies, science and technical subjects ensure that students can independently build knowledge in these disciplines through reading and writing.

One high-leverage instructional practice that addresses these shifts is close reading. Close reading is defined as an instructional routine in which students critically examine a text, particularly through repeated readings. Common components of close reading include selecting short, worthy passages, providing limited frontloading, rereading the text multiple times, annotating or making notes on the text, and answering questions and completing after-reading tasks that require evidence from the text (Fisher and Frey, 2012).

Professional Development

This professional development series related to implementing the PA Core Standards took place over the course of the year in three local elementary schools. The structure of the professional development series varied by the needs and requests of the schools, but included both whole and small group presentations, classroom visits, individual or small group debriefing or planning sessions, and modeled or co-taught lessons. In all schools, an overview of the PA Core Standards and close reading was presented to the school staff or to grade-level groups and several months later a follow-up session was facilitated in which teachers shared their experiences with close reading and common pitfalls and how to avoid them were shared. Between these sessions, individual and small group support was provided through classroom visits, model lessons, and/or debriefing and planning sessions.

Summary of Professional Development by School

School A	School B	School C
18 Full-days - Grades 1-4 - Small Group PD sessions - Model Lessons - Co-Taught Lessons	7 Full-days and 1 Half-day - Grades 1-5 - Whole Group PD Sessions - Small Group PD Sessions - Model Lessons	6 Full-days and 2 Half-days - Grades K-5 - Whole Group PD Sessions - Classroom Visits - Debriefing/Planning Sessions

Data Sources

Measures of Academic Progress (MAP)

NWEA's Measures of Academic Progress (MAP) are both computerized adaptive and Internet-enabled tests, and offer all of the benefits these testing forms offer such as fast turnaround of results; cost efficiencies; time savings; higher security and more accurate results. MAP is a testing system that tailors tests to a student's achievement level (California Department of Education, 2008). Grade-independent Common Core MAP interim assessments deliver valid, reliable, and real-time growth and proficiency data. Created for kindergarten – grade 2 students, computer adaptive Common Core MAP® for Primary Grades (MPG) interim assessments provides real-time student growth data that allows teachers to maximize individual student learning well before high-stakes testing begins. In addition, the cross-grade item pool assesses grade 3 – 12 students who are performing below, on-grade, or above grade level with appropriate levels of challenge. As a result, results provide key instructional insights into all student populations—including high- and low-performing students and special needs students (Northwest Evaluation Association, 2014).

4Sight

The 4Sight Benchmark Initiative is an effort that allows the Pennsylvania Department of Education (PDE) and its Intermediate Units to collaborate to provide 4Sight Reading and Math Benchmark Assessments in grades 3-11, that are aligned with the PSSA in reading and math, to school districts across the Commonwealth. This initiative allows districts to benefit from the use of benchmark assessments. The PA 4Sight Benchmarks are aligned to the PSSA and provide an estimate of student performance on the PSSA as well as diagnostic sub-skill data to guide classroom instruction and professional development efforts (Pennsylvania Training and Technical Assistance Network, 2010).

Teacher Survey

A teacher survey was designed to gain insight on the impact of the professional development series on classroom practice (Appendix A). Thirty-four teachers across all three schools responded to the survey.

Summary of Student Results

School A
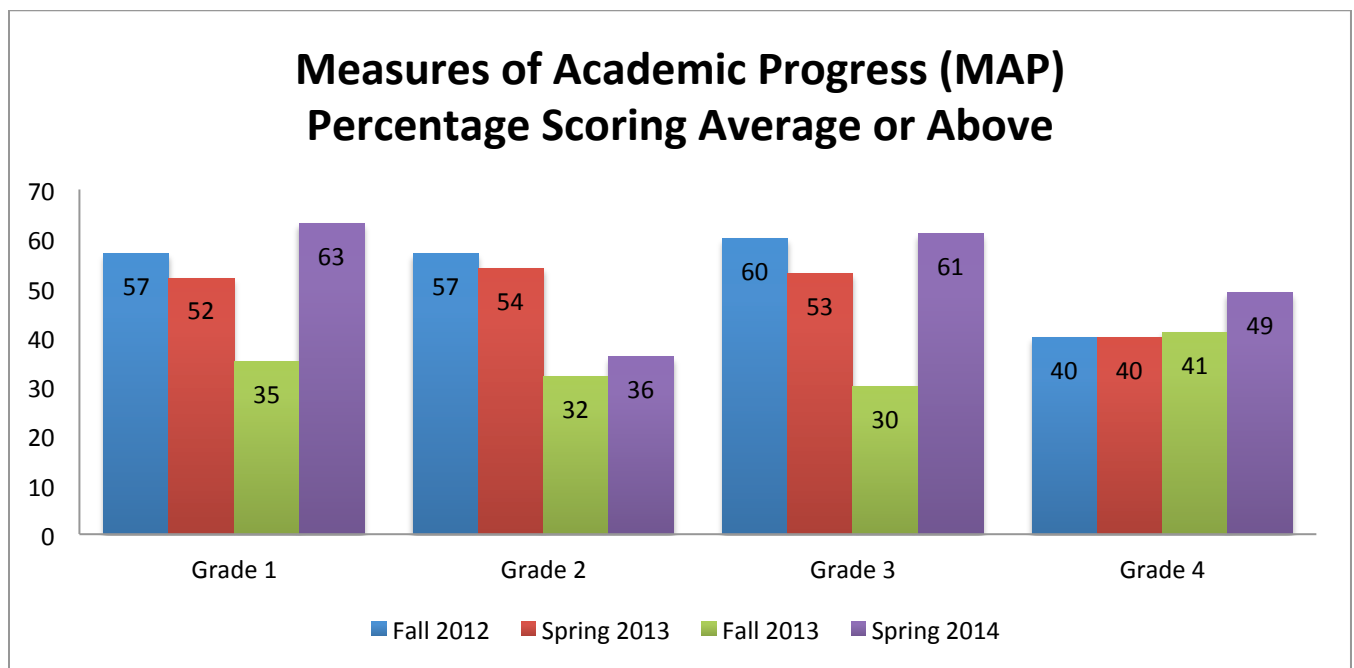
The data from School A indicate that, although students entered the 2013-2014 school year performing lower than the fall of the previous year, they ended 2014 performing higher than in Spring 2013, with the exception of Grade 2. In addition, MAP scores decreased or remained the same over the course of the 2012-2013 school year, but increased during the 2013-2014 school year.

School B*

4Sight Percentage Proficient or Advanced 2013-2014
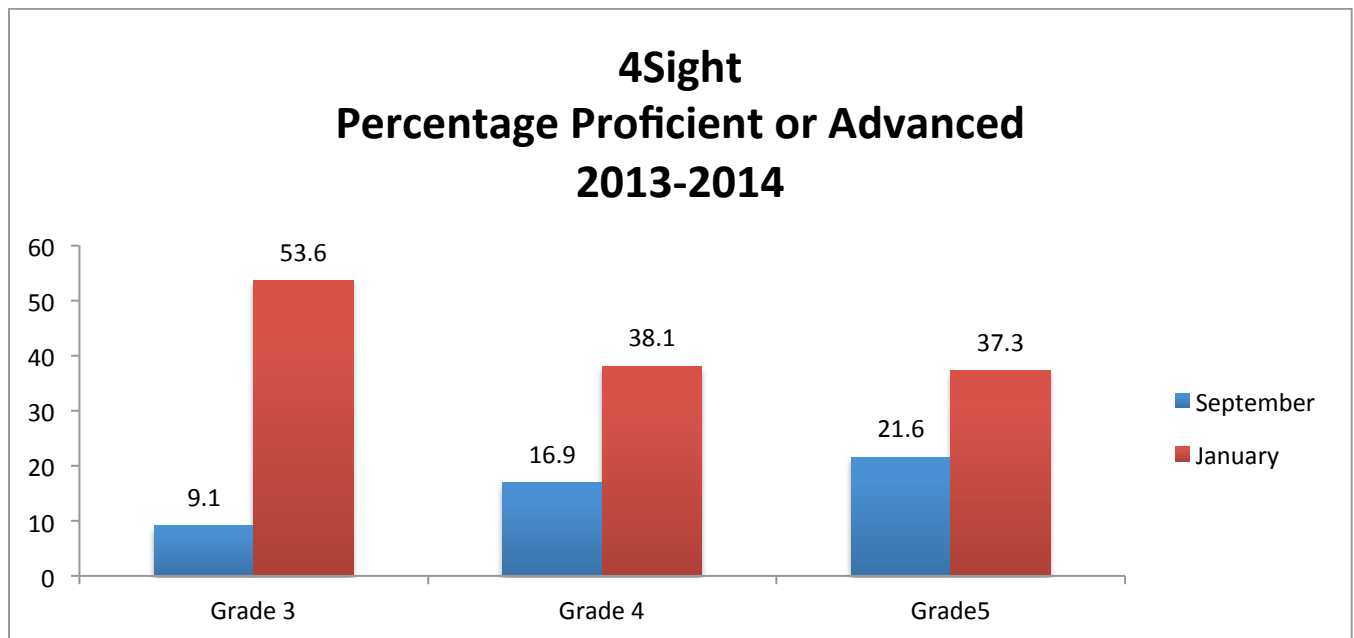
4Sight data from School B increased from the beginning of year through the middle of the year.

* End of year data was not yet available when this report was developed.

School C

Student data was not included in this report for School C due to the limited number of days of professional development.

Teacher Perception Data

Teacher data based on survey results indicate the professional development series had an impact on teacher classroom practice. All teachers planned at least one lesson based on the professional development and half planned more than five lessons as a result. Teachers also reported that their students benefitted from the professional development series (see page 5). When asked to rate the level of change in practice caused by each professional development structure, teachers reported that whole group professional development sessions had the largest impact and that work or planning sessions with the facilitator resulted in the second largest

Number of Lessons Teachers Developed as a Result of the Professional Development

- 0
- 1-2
- 3-5
- more than 5

percentage of significant or slight change. All structures appeared to have a positive impact on teacher change in practice.
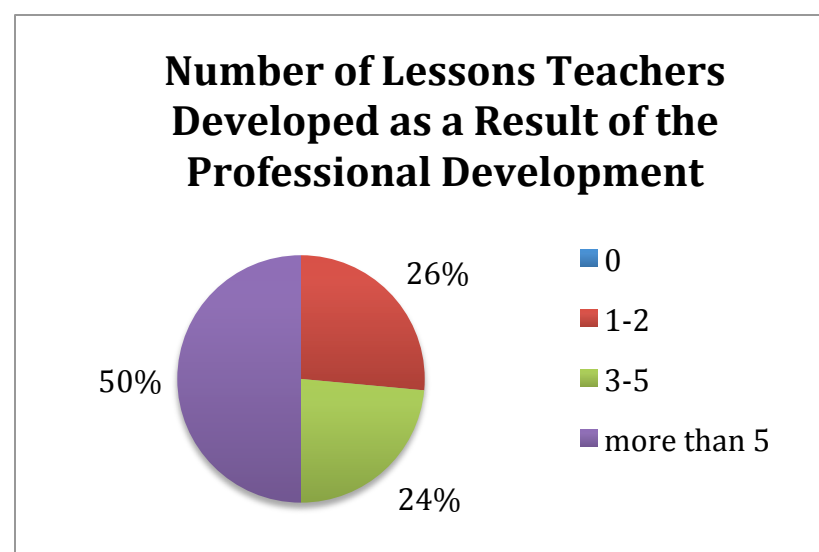
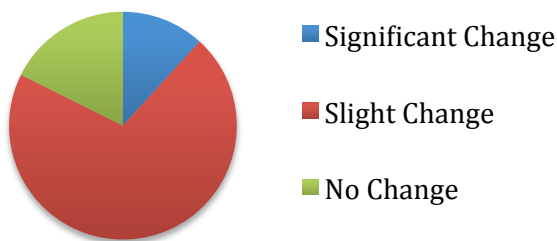## Change in Practice Based on Whole Group Professional Development

- Significant Change
- Slight Change
- No Change
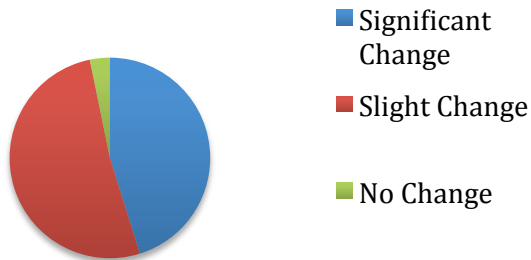
Change in Practice Based on Small Group or Grade-Level Professional Development

- Significant Change
- Slight Change
- No Change
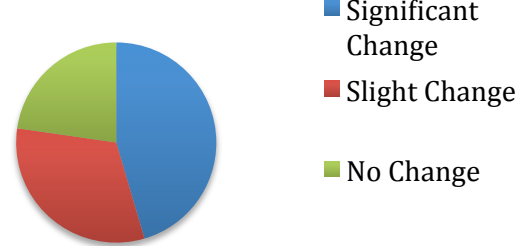
Change Based on Model Lessons From or Co-Teaching With Facilitator

- Significant Change
- Slight Change
- No Change

Change in Practice Based on Work or Planning Sessions with Facilitator

- Significant Change
- Slight Change
- No Change
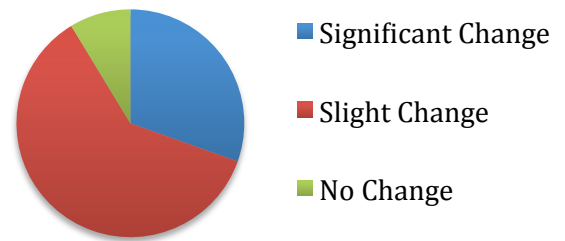
Comments from the Field

How have your students benefitted from this literacy professional development?

"The rigor of the lessons has vastly improved their learning performance and increased student engagement." Grade 4 Teacher

"My students used the strategies of close reading and coding and improved their reading score on assessments." Grade 3 Teacher

"I have begun to use Common Core language during instruction. Rigor has been increased." Grade 5 Teacher

- "They enjoy the cold reads. I have also given them choices when it comes to which story they want to dive into deeper. The text-dependent questioning is also improving test scores and the cold reads help improve overall engagement." Grade 2 Teacher

Additional Comments

- "Overall, the PD series was eye-opening. It gave me the tools and techniques to implement a new way of teaching reading and my students are learning to love to read as a result." Instructional Coach
- "This experience has been transformative like no other in service or training I've ever received." Grade 4 Teacher
- "A shift in my thinking of centers and writing has occurred. I foresee next year's set up totally different right from the start." Kindergarten Teacher

Summary of Results

In both schools A and B, student achievement scores increased over the course of the year. Due to the many factors related to student growth and achievement, though, it is difficult to correlate the student growth directly to this professional development series. Teacher survey data, however, indicate that the professional development did have an impact on classroom practice. Several comments suggested that teachers reported an impact on student achievement. All teachers reported that they planned and implemented at least one lesson as a result of this professional development and a large majority planned and implemented multiple close reading lessons. Although whole group professional development sessions appeared to have the greatest impact on change in practice, most teachers reported changing practice as a result of all of the professional development models. It can be inferred that the combination of structures positively contributed to the change in practice that most teachers reported.

References

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Northwest Evaluation Association (2014). Common Core MAP. Retrieved from http://www.nwea.org/commoncoremap

Pennsylvania Training and Technical Assistance Network (2011). Assessing to learn: 4Sight benchmark initiative. Pennsylvania Department of Education. Retrieved from http://www.pattan.net/category/Educational%20Initiatives/Data%20Analysis/page/Assessing_to_Learn_4Sight_Benchmark_Initiative_.html

**2013-2014 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.

http://www.wested.org/cs/ra/print/docs/ra/home.htm

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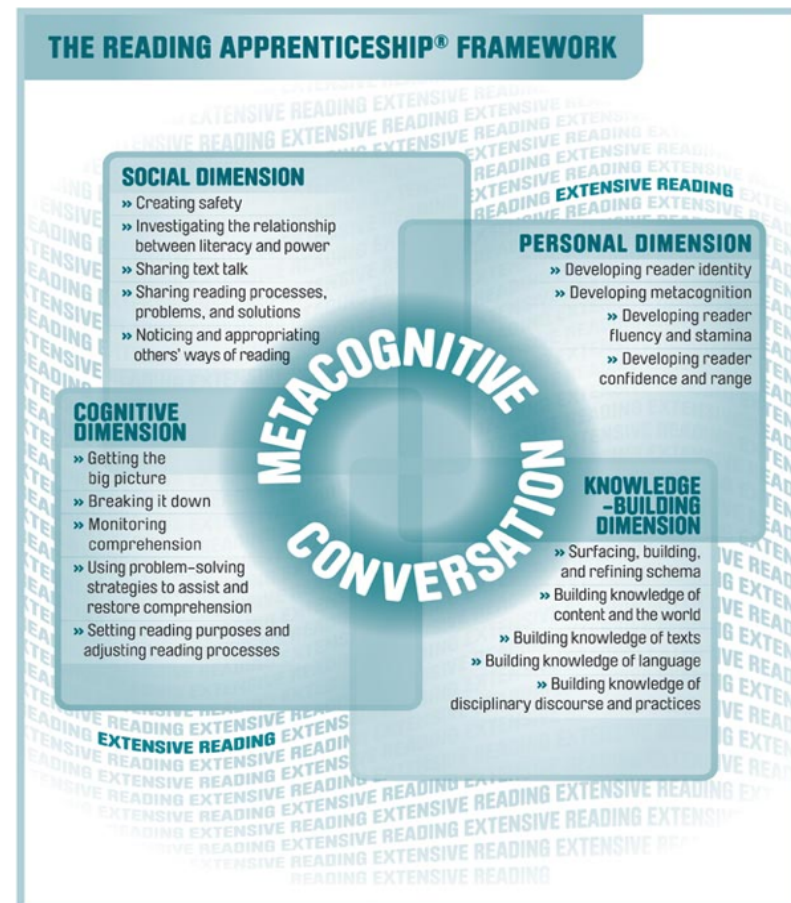
These dimensions are woven into subject area teaching through "metacognitive conversations" – conversations about the thinking processes students and teachers engage in as they read.

What Does IU 13's Reading Apprenticeship Baseline Training Entail?

IU 13's reading apprenticeship training model incorporates a small school team structure. School districts create 4-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 IU 13 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 3 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 grade. 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.

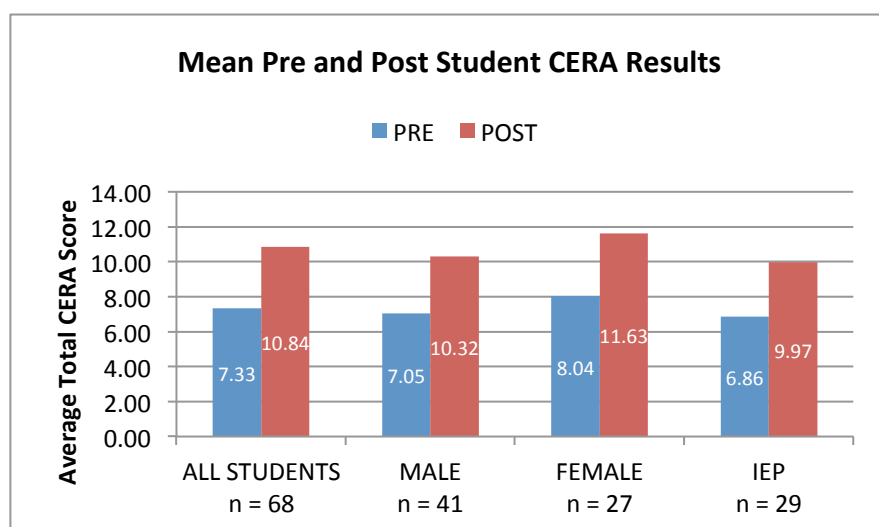| Performance Level	Description
Noticing Reading	Few or no marks on the page along with vague responses to process questions and confused answers to comprehension questions. Teacher gains little insight into student's reading process, what is confusing, or how to support the student.

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.

2013-14 IU 13 Student Growth Analysis Design and Results

During the 2013-14 school year, two school teams comprised of a total of 8 teachers from Donegal and Warwick High Schools began IU 13's reading apprenticeship training in December and completed it in April. These teachers formatively assessed sixty-eight students using the **Figure 1** CERA and began using reading apprenticeship routines and strategies as part of their content-area instruction. 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 all three categories for a total of 18 possible score points.

Figure 1 (right) represents 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 five-month training period. It is important to note that there were no English language learners within this sample.

Mean Pre and Post Student CERA Results

PRE POST

Average Total CERA Score

|	ALL STUDENTS n = 68	MALE n = 41	FEMALE n = 27	IEP n = 29
PRE	7.33	7.05	8.04	6.86
POST	10.84	10.32	11.63	9.97

The most significant gains occurred on the student annotations portion of the assessment, specifically within the Metacognitive Conversation category (Gain = .84). Improvement also occurred in the Cognitive Strategies (.69) and Building Knowledge (.55) portions of the assessment, although not as large. 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 fact that the Metacognitive Conversation category had the most gains is indicative of students becoming more aware of their own reading process. On the post-implementation survey, one teacher in the training group noted, "Each student recognizes that a metacognitive analysis exists. This awareness creates opportunities for students to further develop their reading skills and become better readers."

With additional implementation time, experience, and teacher facilitation and modeling, additional gains in all three categories are likely to result. Within the cognitive strategies portion of the assessment, students must demonstrate a variety of strategies like summarizing, inferencing 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 assessment, 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," the 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

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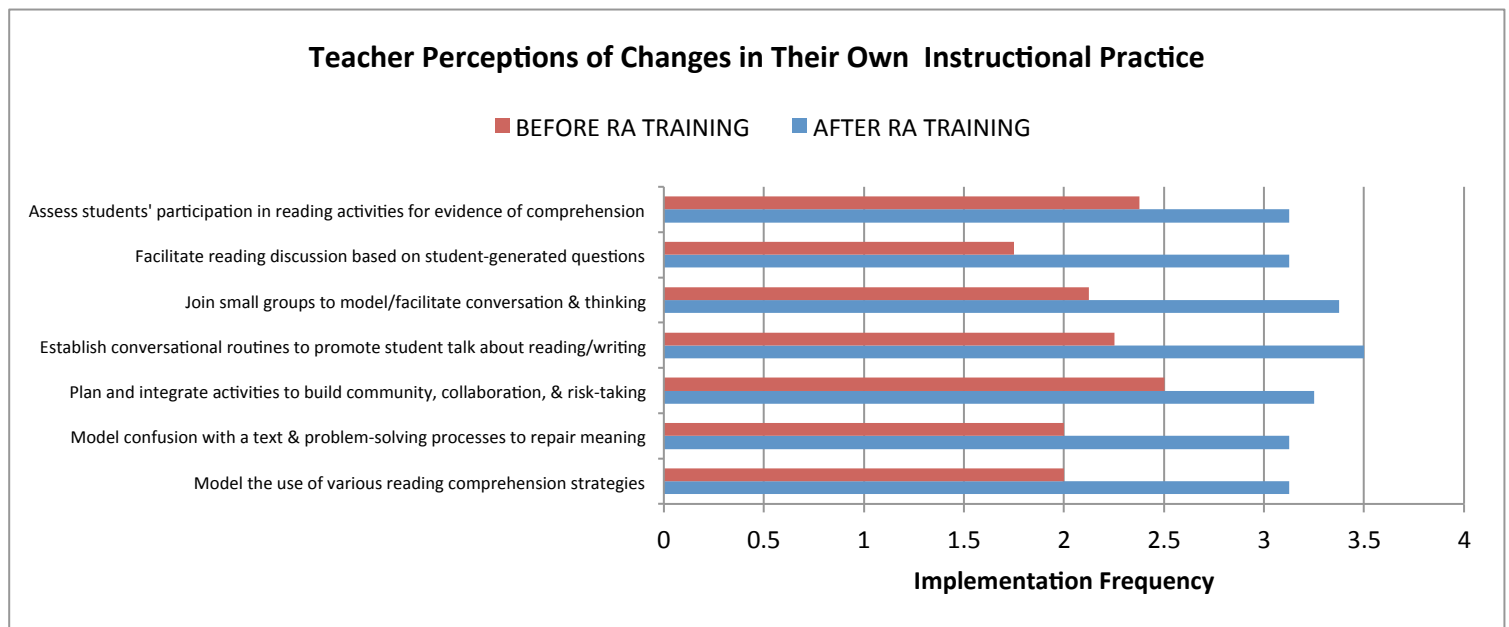
Figure 2

On the horizontal axis in the chart in Figure 2, the frequency of implementation is described as follows:

> 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 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 Day 2 feedback form, one teacher wrote that she needed to, "learn how to take a step back and allow [her] students to become more responsible, accountable, and have ownership of their reading… [and] learn how to let students do the work." On the post-implementation survey, another teacher commented that, "Students were given more responsibility for their learning, which is always a good thing!"

> **Top 5 Most Successful RA Instructional Practices**
> 1. Think Aloud/Reciprocal Think Aloud
> 2. Talk to the Text
> 3. Curriculum Embedded Reading Assessment (CERA)
> 4. LINK (List, Inquire, Note, Know)
> 5. Good Reader Strategy Lists

Of the top 5 most successful RA instructional practices used by these teachers, think aloud, talk to the text, and charting good reader strategies 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 and Cognitive Strategies portions of the CERA. Teachers also recognized the value of the CERA as a formative assessment to inform teacher planning and document student reading growth. LINK was a strategy used in order to promote the building knowledge category of the CERA and help teachers recognize the importance of students engaging in cognitive struggle with a text. One high school business teacher wrote, "The training program incentivized me to incorporate a purposeful reading program into the classroom. As a result, students are demonstrating improvements and growth in comprehension and analysis of text. These two elements have injected a new excitement into my practice by evidencing that students are becoming more prepared for their post-secondary journey."
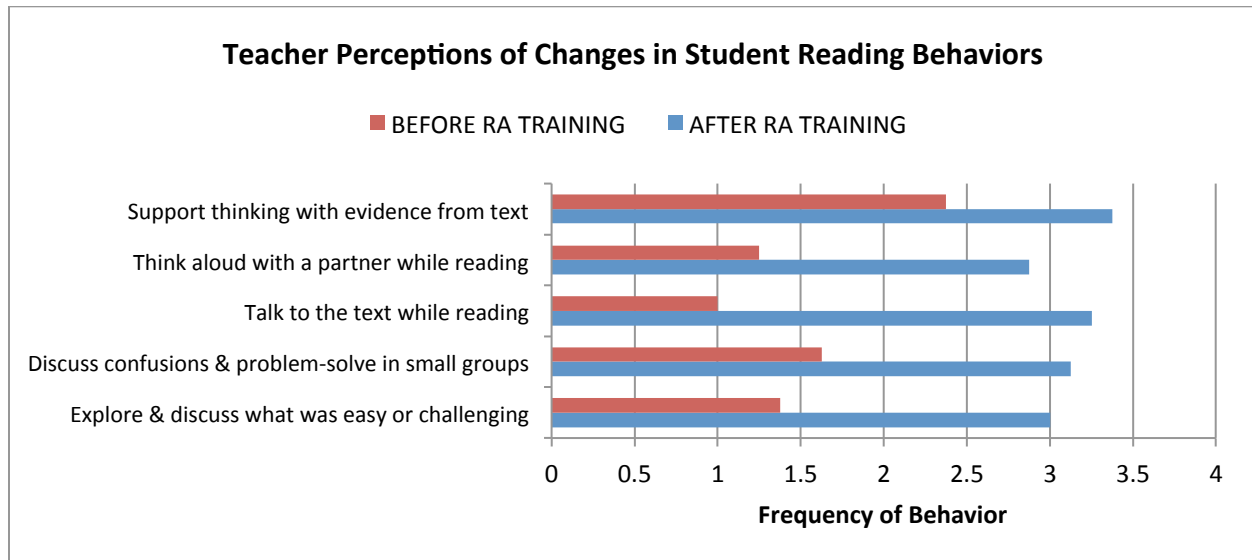
How did Student Reading Behavior in the Classroom Change?

Figure 3 shows teacher perceptions of changes in in-class student reading behaviors over the course of the training and implementation period.

Figure 3

Teacher Perceptions of Changes in Student Reading Behaviors

■ BEFORE RA TRAINING   ■ AFTER RA TRAINING

Support thinking with evidence from text
Think aloud with a partner while reading
Talk to the text while reading
Discuss confusions & problem-solve in small groups
Explore & discuss what was easy or challenging

0   0.5   1   1.5   2   2.5   3   3.5   4

Frequency of Behavior

The frequency of behavior in Figure 3 is described as follows:

> 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

Just like the PA Core standards, reading apprenticeship emphasize the use of textual evidence to support reasoning. Teachers reported that they see students supporting their thinking with evidence from text more frequently because of their implementation of the reading apprenticeship framework.

Over the implementation period, teachers observed more frequent student discussion about their strategies for repairing confusion and making meaning from a text. On the post-implementation survey, one English Language Arts teacher noted, "I think that [my students] are more aware of their strengths and weaknesses." Another World Language teacher wrote, "Students are now open to the purpose of content texts above and beyond simple translation and interpretation of vocabulary. They use texts for meaningful social interaction. They are aware of their strategies for overcoming difficulties."

What did teachers say about IU 13's Reading Apprenticeship Training?

"I really enjoyed having instantly implementable strategies that had an impact on my lessons and student understanding."

~ Kasey Lee, English Language Arts Teacher

"I have new activities I am excited to implement and the training reminded me of activities I need to do again. It gave me confidence that I am doing meaningful activities in my classes."

~Lisa Gleason, Reading Specialist & Learning Support Teacher

"This training was one of the most beneficial trainings that I have experienced as a teacher. I truly appreciate the structure that allowed all participants to utilize RA strategies to better understand how to implement the program into our classrooms."