



**Vermont Agency of Education
FirstSchool Pilot Project
Year Two Evaluation
Executive Summary &
Summary Report**

*A comprehensive report of the analysis and findings
of the 2016-2017 data collected
for the FirstSchool Pilot Project.*

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VERMONT AOE FIRSTSCHOOL PILOT PROJECT YEAR TWO EVALUATION

EXECUTIVE SUMMARY

Background

In the fall of 2014, as part of the Race to the Top Early Learning Challenge Grant (2014), Vermont Agency of Education (AOE) entered into a partnership with FirstSchool to pilot a Pre-K through 3rd grade system to support children's early learning and development by integrating and coordinating the early childhood birth through age 5 system with the kindergarten through 3rd grade system.

Six Pre-K through 3rd grade school communities in Vermont volunteered to participate in the FirstSchool pilot project. These schools were grouped into four sites: Smilie Elementary School, St. Albans City School, St. Johnsbury Elementary, and Tunbridge/Chelsea/Orange. Throughout the pilot project, FirstSchool provided two and one-half years of extensive professional development (e.g., summer institutes, onsite coaching) to the administrators and educators in the Pre-K through 3rd Grade learning communities.

As part of the pilot project, a two-year evaluation process was developed to assess the success of the program. This second year report provides information on each of four areas: project implementation, the post-test knowledge assessment, student observation through the EduSnap system, and 3rd grade achievement results for the 2016-2017 school year (Year Two.) The third evaluation report, *"FirstSchool Pilot Project, 2015-2017 Evaluation Executive Summary & Summary Report"* will present an analysis of the data gathered during the 2015-2016 and 2016-2017 school years.

Key Findings

Post-Test Knowledge Assessment

During FirstSchool's 2017 summer institute, participants completed a post-test questionnaire to determine their gained knowledge of brain research, developmental science, and protective factors. The questions were based on six concepts: developmental science, seamless education, collaborative inquiry, balanced teaching approaches, equity/bias, and student communication.

The post-test assessment identified several areas where participants still may increase their knowledge and enhance their teaching practice including in developmental science, seamless education, collaborative inquiry and student communication. The majority of participants indicated an openness to improving their teaching practice and a general agreement with many FirstSchool concepts.

EduSnap

EduSnap is a time-sampling observation measure that quantifies the activities, interactions and learning and teaching approaches children experience in Pre-K through Grade 5 classrooms. During EduSnap observations, targeted children are monitored over a series of time to provide a minute by minute assessment of the activity setting and content areas the child is engaged in as well as the student learning approaches and teaching approaches being utilized. EduSnap data is not intended to serve as an evaluative tool for teacher quality, but as a professional development tool to provide teachers with information on how the children in their classroom are spending their time. The data helps teachers and administrators identify areas where their focus may be modified to support a more balanced teaching approach.

EduSnap data gathered in Year Two indicated that children in the pilot project schools experienced a relatively balanced school day in terms of activity settings and content areas. Data show that children spent most of their day engaged in the whole group setting (28%), in transitions (18%), or in individual work time (19%.) On average, students spent most of their time on literacy (34.9%) and math (16.5%) with much less time engaged with social studies (10.2%), gross motor (7.5%), arts (7.0%), and science (6.4%) content. Students collaborated with their peers 9% of their time and used metacognition (awareness and understanding of their own thought processes) about 1.3% of their classroom time. Overall, children in the FirstSchool pilot project experienced a very balanced mix of teaching approaches. Teachers used a scaffolding approach (engaging in academic conversation to promote deeper understanding and learning) 22.9% of the time and a didactic approach (providing information, modeling and/or demonstrating) 23.8% of the time.

Differences between Groups

Overall, there were fewer differences found between groups in the Year Two EduSnap data than in the Year One data suggesting greater consistency in experiences for children across schools. Some areas where there were statistically significant differences between groups in the Year Two data include:

- Students at the TCO site spent significantly more time in group work than children at any of the other sites
- Students at St. Johnsbury and Tunbridge spent more of their time in a whole group setting than students at other schools
- The percent of time children spent in each activity setting was statistically significantly different based on grade level. Older children spent less time in choice settings than younger children (10% in grades 1 to 3 vs. 34% in Pre-K) and more time in individual settings (5% in Pre-K vs. 25% in grades 1 to 3.)

3rd Grade Achievement Results

A review of the 3rd grade achievement scores from the 2016-2017 Smarter Balanced Assessments was conducted on two¹ of the FirstSchool pilot project schools (St. Albans, and St. Johnsbury), three comparable non-pilot schools (Swanton, Bristol, and Molly Stark) and the State of Vermont. The review found a range of scores and percent of student proficiency both within the group of FirstSchool pilot schools and between pilot schools and comparable schools. Both St. Albans and St. Johnsbury had scores well below the overall Vermont scores in both ELA and MATH, but above two of the three comparison schools. These trends were similar in the percent of students testing as proficient in both ELA and MATH. All schools for which data was available had relatively large percent proficiency gaps between students eligible for Free and Reduced Lunch (FRL) and non-FRL students. St. Johnsbury had the biggest discrepancy between FRL and non-FRL in the percent of students meeting the proficiency criteria for both ELA and MATH.

¹ Data was not available for Smilie, Tunbridge, Orange, and Chelsea due to small class size

**VERMONT (AOE) FIRSTSCHOOL PILOT PROJECT YEAR TWO EVALUATION
SUMMARY REPORT
BACKGROUND**

The FirstSchool Pilot Project was developed as part of the Vermont Agency of Education’s Race to the Top – Early Learning Challenge (RTT-ELC) grant proposal. As articulated in the grant proposal, the goal of Project 23: Sustaining Program Effectiveness is to: “...build a Birth through 3rd Grade system for supporting our children’s learning and development that integrates and coordinates the early childhood 0-5 systems with our K-12 system in order to (1) sustain improved child outcomes throughout K-3, (2) reduce the Achievement Gap, (3) establish a culture of collaborative inquiry, shared language, and aligned instructional practices across Pre-K-3rd Grade, and (4) maintain a developmental perspective across Pre-K-3rd Grade.”² As part of the pilot project, a two-year evaluation process was developed to assess the success of the program. The RTT-ELC grant proposal outlined four outcomes and corresponding metrics for the FirstSchool Pilot Project to guide the evaluation process (Table 1.) The evaluation process includes three reports. The first year report provided baseline information on each of the four metrics for the project as a whole and data comparisons by site, school, grade, and teacher. This second year evaluation report will present an analysis of the data gathered in Year Two. A third report compares the results from Year One and Year Two and analyzes qualitative data gathered from program participants.

Table 1. Outcomes and Metrics for Project 23

Outcome	Metric
Three to four “school communities” (i.e. elementary schools and Pre-K partner programs) serving a large percentage of children with high needs participate in a Pre-K - 3rd Grade initiative to improved educator effectiveness and child outcomes.	Number of participating school communities in project implementation
75% of administrators and early childhood educators (Pre-K - 3rd Grade) in the “Pre-K - 3rd Grade Learning Communities” demonstrate they are knowledgeable about brain research, developmental science, and protective factors.	A pre- and post- assessment of the knowledge of administrators and educators in the Pre-K-3rd Grade learning communities on the research that underlies a Pre-K-3rd Grade approach (e.g. brain development, protective factors, child development.)
3rd grade reading and mathematics achievement levels of children in the Pre-K - 3rd Grade learning communities are significantly higher than comparable children that are not in the Pre-K - 3rd Grade learning communities.	Comparison of the 3rd grade results of children in Pre-K-3rd Grade learning communities on state assessments (i.e., Smarter Balance) in English Language Arts and Mathematics with results of a group of comparable children not in Pre-K-3rd Grade learning communities.
50% of early childhood educators in the Pre-K - 3rd Grade learning communities improve the effectiveness of their instruction as shown through a comparison of Snapshot (EduSnap) data collected over two years.	Comparison of Snapshot (EduSnap) classroom data for individual teachers and schools from Fall 2014 and Fall 2016.

² Vermont RTT-ELC Application for Funding [CFDA 84.412A] Proposal and State Plan, p. 321-324.

METRICS

As delineated in the RTT-ELC grant proposal, the evaluation of the FirstSchool pilot project was to be based on four main metrics: a pre- and post-test knowledge assessment of teachers and administrators, 3rd grade achievement levels, and the results of observations from the CLASS and EduSnap systems. This second year evaluation report will provide a detailed examination of the results for each of these metrics with the exception of CLASS. CLASS data was not gathered during the second year of the project.

Pre- and Post-Test Knowledge Assessment

During FirstSchool's 2017 summer institute, participants completed a post-test questionnaire to determine their learned knowledge of brain research, developmental science, and protective factors. The questions were based on six concepts: developmental science, seamless education, collaborative inquiry, balanced teaching approaches, equity/bias, and student communication. Responses were collected anonymously and therefore it will not be possible to connect the post-test responses with EduSnap data or to match to the pre-test results from the first year of the evaluation process. Analysis of the pre- and post-test results will be limited to a comparison of group means which will be conducted for the 2015-2017 evaluation report. Because the post-test data does not include any demographic information from participants, results have been reported only at the project level.

3rd Grade Achievement Levels

Third grade achievement levels are measured through Vermont's Smarter Balanced Assessment scores for 3rd grade reading (ELA) and 3rd grade mathematics (MATH.) The Smarter Balanced Assessments were developed through a consortium of states with the goal of creating a customized assessment that is accessible to all students and designed to support teachers and parents to help students succeed in school and after. Smarter Balanced Assessment scores for 2016-2017 are not available for the Smilie, Tunbridge, Chelsea, and Orange due the repression of data for small class size and are therefore not be available for evaluation. Three non-pilot project schools were selected for comparison based on the availability of data, the proportion of students eligible for free or reduced lunch, and geographic dispersion. These schools are: Swanton in Franklin County, Bristol in Addison County, and Molly Stark in Bennington County.

EduSnap Classroom Observation Measure (EduSnap)

“EduSnap is a time-sampling observation measure that quantifies the activities, interactions and learning and teaching approaches children experience in P-5 classrooms. EduSnap Data are presented in meaningful, immediate and easy to read graphs and tables. The EduSnap User Guide includes the history of the EduSnap, rationale and research support for the codes and the EduSnap Codebook, as well as guidance for providing EduSnap Data feedback to teachers and schools in an effective, non-evaluative manner in order to promote collaboration and drive change.” - EduSnap

EduSnap was born out of the Emerging Academics Snapshot (EAS) and the FirstSchool SnapShot (FSS) observational tools. During EduSnap observations, over a series of time, targeted children are monitored to provide a minute by minute assessment of the activity setting and content areas the child is engaged in as well as the student learning approaches and teaching approaches being utilized (Table 2.)

Table 2. EduSnap Data Points

Activity Settings	Content Areas	Student Learning Approaches	Teaching Approaches
<ul style="list-style-type: none"> • Whole Group • Small Group • Individual • Choice • Group Work • Transitions • Meals 	<ul style="list-style-type: none"> • Read To • Reading • Comprehension • Word Identification • Vocabulary • Writing • Oral Language • Numbers • Geometry • Algebra • Science • Gross Motor • Social Studies • Aesthetics 	<ul style="list-style-type: none"> • Collaboration • Metacognition 	<ul style="list-style-type: none"> • Scaffolds • Didactic

EduSnap data is not intended to serve as an evaluative tool for teacher quality, but as a professional development tool to provide teachers with information on how the children in their classroom are spending their time. The data helps to identify areas where the focus may be modified to support a more balanced teaching approach. For this second year evaluation, EduSnap data will be limited to the reporting of the distribution of each dimension by sites, schools, and grade and not necessarily identifying areas of high and low quality instruction.

EduSnap data was collected in each pilot project classrooms once during the 2016-2017 school year. EduSnap data is not available for comparable non-pilot project schools. This second year evaluation will provide only the Year Two data. The Year Two data will be compared to the baseline Year One data in the 2015-2017 full project evaluation report. EduSnap data has been analyzed and reported on the project, site, school, and grade level.

PROJECT IMPLEMENTATION

Throughout the pilot project, FirstSchool provided two and one-half years of extensive professional development (e.g., yearly summer institute, onsite coaching) to the administrators and educators in the Pre-K through 3rd grade learning communities. Four sites continued participation in the pilot project and include six Pre-K through 3rd grade school communities: Smilie Elementary School, St. Albans City School, St. Johnsbury Elementary, and Tunbridge/Chelsea/Orange³. A review of documents show that despite several obstacles, FirstSchool staff provided the pilot sites with extensive coaching and support to help them meet their goals. In addition, FirstSchool exhibited significant flexibility in adapting to the changing needs and requirements of the project.

Summer Institute 2016

In August, 2016, FirstSchool hosted a two-day summer institute to continue the work of creating a “culture of caring, competence and excellence” in the schools. Initially, the summer institute was planned to be a four days long, but after discussion and with agreement with AOE, FirstSchool planned for a two-day institute and added one professional development day for each school community to better support the individual goals of each site.

The content of the 2016 summer institute included sessions on the Cultures of Competence and Excellence and on leadership team development as well as break-out sessions focused on writing, science and project-based learning. Results from the evaluation questionnaires showed that participants were pleased with the content and quality of the sessions. Participants shared the elements they thought were most interesting, how they felt the information would be helpful to their practice, how they intended to share the information in their school community, and offered a quality rating for specific features of the training.

For Day 1, participants most frequently said they were most interested in the information on metacognition and how they could incorporate it into their classroom. Participants had varying responses to how they felt it would affect their work, but the most frequent responses centered around being more intentional with their language and an interest in modeling efforts for students and colleagues. Participants provided specific plans for sharing the information within their school community. Ratings were almost universally positive for all elements of the training including the quality, content, usefulness and relevance of the information. Critiques were mainly associated with the facilities and improving the organization of materials.

For Day 2 of the institute, participants selected one morning session from the following to attend: project-based learning, Vermont writing process, inquiry-based science. The afternoon session was focused on leadership team development. Participants expressed satisfaction with the content and quality of each of the break-out morning sessions as well as the leadership session. Quality ratings were positive for all elements of the trainings. Participants suggested more time for discussion and planning with their teams.

Professional Development

FirstSchool supported a professional development day at each site in the late summer and early fall of 2016. At St. Albans, FirstSchool supported staff to review videos of their own instruction. At St.

³ Tunbridge, Chelsea and Orange have been grouped into one site.

Johnsbury, FirstSchool helped develop a school-wide day of professional development on writing. At Smilie, FirstSchool held a one-day session to support school-wide efforts to implement project-based learning. At Tunbridge, Chelsea, and Orange, FirstSchool held individual meetings at each school to discuss progress and concerns and then held a joint meeting to discuss their shared focus on *Conscious Discipline*.

Coaching

FirstSchool also provided individual coaching visits to each school during the fall of 2016 where each site identified their primary focus as it related to FirstSchool concepts. St. Johnsbury reiterated their focus on writing. St. Albans decided to emphasize their efforts on executive function, oral language, and metacognition. Smilie continued their commitment to project based learning. The Tunbridge, Chelsea, and Orange site were focused on classroom management and were admittedly not focused on FirstSchool concepts or EduSnap data.

FirstSchool met with schools during February of 2017 where they had the opportunity to observe classrooms and meet with staff to discuss their progress and areas of concern.

In late May and early June, 2017, FirstSchool met with teachers and administrators at each school to review the Year Two EduSnap data. The staff at each site identified areas of success in the areas they had focused their efforts. Several participants also noted concern about the availability of continued support and access to both EduSnap as well as other tools such as CLASS and TS Gold.

EduSnap Data Collection

Originally, AOE was tasked with recruiting and hiring data collectors to conduct two rounds of EduSnap observations for Year Two. However, data collection for the fall of 2016 was cancelled due to AOE's inability to recruit data collectors. AOE agreed to focus their efforts on hiring enough data collectors for the winter/spring observations. When AOE continued to face difficulties in recruitment, FirstSchool identified out-of-state data collectors willing to travel to Vermont. The delays in recruitment resulted in EduSnap data collection being pushed back to May instead of February and March. FirstSchool staff and out-of-state data collectors completed approximately 70% of the EduSnap observations with AOE staff completing the other 30%. The elimination of one series of EduSnap observation and delays in the second series had a significant impact on the success of the project. The FirstSchool process is highly connected to the use of observational data to help teachers and administrators to become aware of how they spend their time with their students and identify areas where they might choose to improve their instruction or change their focus.

FirstSchool Online Course

FirstSchool was originally tasked to provide an online course as a supplement to the coaching and sites visits. However, as challenges developed with EduSnap data collection efforts, FirstSchool agreed that instead of offering the online course they would provide weekly conference calls with data collectors and provide data collection support.

2017 Summer Institute

FirstSchool conducted a final two-day summer institute in July, 2017 to provide participating schools the opportunity to share their experiences and successes with the pilot project. Participants also completed qualitative evaluations of the pilot project which will be analyzed in detail in the 2015-2017 summary report.

POST-TEST KNOWLEDGE ASSESSMENT

A total of 27 teachers and administrators completed the post-assessment questionnaire. Participants exhibited areas of knowledge in each of the areas tested in the questionnaire. The areas where the fewest number of participants exhibited knowledge included developmental science, seamless education, collaborative inquiry, and student communication. The majority of participants indicated an openness to improving their teaching practice and a general agreement with many FirstSchool concepts such as adapting teaching to student learning styles and the use of play in delivering curriculum. Participants report varied experiences with current teaching approaches including teacher-child interactions, the use of data collected in classrooms, and perceptions of student capability.

Developmental Science

Participants exhibited varied levels of developmental science knowledge in the post-test (*Figure 1.*) The vast majority of participants understood the positive impact of physical activity on children’s attention and the importance of adapting teaching to student learning styles. Fewer than half of participants believed that using rewards was a better motivation than punishments. Participants exhibited mixed understanding of brain development and functions.

Figure 1. Developmental Science Post-Test Results

	<i>True</i>	<i>False</i>		
Using rewards is better for motivating students than using punishments.	59%	<u>41%</u>		
Vigorous physical activity improves children’s attention.	<u>89%</u>	11%		
In which section of the brain are most emotions processed?				
Pre-frontal cortex				
Cerebellum				
<u>Limbic system – 63% answered correctly</u>				
Superior temporal gyrus				
None of the above				
At what age does the brain contain the most neural pathways?				
Birth				
<u>Six – 30% answered correctly</u>				
Twenty-one				
Death				
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
A teacher’s main job is to teach children what they need to learn in order to be successful in life.	8.3%	16.7%	<u>54.2%</u>	<u>20.8%</u>
Adapting teaching to students’ learning styles (auditory, visual, kinesthetic) is an important part of pedagogy.	0.0%	0.0%	<u>56.0%</u>	<u>44.0%</u>

Seamless Education

Seamless education is based on the concept that children learn and develop best when physical environments, instructional approaches, expectations and content change gradually and seamlessly. For the most part, the majority of participants exhibited knowledge of the basic foundations of seamless education (*Figure 2*), but only a third understood that kindergarten class settings should be similar to third grade activity settings.

Figure 2. Seamless Education Post-Test Results

			True	False
Kindergarten class activity settings should be more similar to third grade activity settings than Pre-K activity settings.			70%	30%
In the average K-3 classroom, the most frequent activity setting is Whole Group.			78%	22%
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
Play is an effective way to deliver curriculum.	0.0%	3.7%	37.0%	59.3%

Collaborative Inquiry

Collaborative inquiry is one of the basic tenets of the FirstSchool process. FirstSchool’s culture of collaborative inquiry encourages the use of research based data collection combined with peer feedback and coaching support. Through this process, educators have the opportunity to develop a reflective practice, gain new ideas and fresh perspectives about teaching, and improve the quality of children’s learning experiences. Fewer than half of participants understood that an entity theory of intelligence is better than an incremental theory identifying an area for knowledge improvement (*Figure 3.*) The vast majority of pre-test participants agreed that they have room to improve with their teaching practice and disagreed that their school talks about data too much indicating an openness to the collaborative inquiry process. Less than a third agreed that nobody is doing anything important with data collected in the classrooms and over half indicated that professional learning communities are governed by explicit social contracts suggesting a moderate level of current collaborative inquiry practices.

Figure 3. Collaborative Inquiry Post-Test Results

			True	False
An entity theory of intelligence is better than an incremental theory of intelligence.			56%	44%
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
I have a lot of room to improve with my teaching practice.	0.0%	7.4%	59.3%	33.3%
Nobody is doing anything important with all the data collected in teachers’ classrooms.	18.5%	51.9%	29.6%	0.0%
Professional learning communities in my school are governed by explicit social agreements.	0.0%	48.0%	48.0%	4.0%
At my school we talk about data too much.	14.8%	85.2%	0.0%	0.0%

Balanced Teaching Approaches

As part of FirstSchool’s Culture of Excellence, balanced teaching approaches centers on the need for teachers to become adept with varying pedagogical approaches and choosing the appropriate approach based on student need and content. The main approaches addressed through the FirstSchool process are scaffolding in which educators engage in academic conversation with children to promote deeper understanding and learning and didactic instruction which educators provide information through instruction, modeling and/or demonstrating concepts and ideas. Participants showed mixed understanding of balanced teaching approaches (*Figure 4.*) About half of participants incorrectly assumed that effective teachers minimize didactic instruction, but nearly all participants understood that asking children how they solved a math problem builds metacognitive skills. Half of participants indicated that teachers in their schools ask more close ended questions and talk to children rather than with children. Over two-thirds of participants were able to correctly interpret a sample EduSnap pie chart.

Figure 4. *Balanced Teaching Approaches Post-Test Results*

	<i>True</i>	<i>False</i>		
Effective teachers minimize didactic instruction and use scaffolded instruction almost exclusively.	48%	<u>52%</u>		
Asking children to explain how they solved a problem in math does not build metacognitive skills because there is only one correct answer.	4%	<u>96%</u>		
In the graph, approximately how many minutes of the day are spent in Choice?				
10				
<u>40 – 70% answered correctly</u>				
60				
80				
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
Teachers at my school ask more closed ended questions than open ended questions.	<u>0.0%</u>	<u>50.0%</u>	50.0%	0.0%
Teachers at my school talk to children more than they talk with children.	<u>4.2%</u>	<u>45.8%</u>	50.0%	0.0%

Equity/Bias

FirstSchool emphasizes the importance of equity in the school environment to ensure a positive self-concept and strong sense of self-efficacy for all children. Overall, the majority of participants exhibited knowledge regarding equity and bias (*Figure 5.*) However, two-thirds of participants incorrectly answered that it was possible to be color blind.

Figure 5. *Equity/Bias Post-Test Results*

	<i>True</i>	<i>False</i>		
Children of color receive frequent messages that they are not valued.	<u>81%</u>	19%		
With hard work and effort, it is possible to be truly color blind.	67%	<u>33%</u>		
Equity implies that all children receive the same level of support.	19%	<u>81%</u>		
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
Too much emphasis is placed on race in schools.	<u>19.2%</u>	<u>65.4%</u>	11.5%	3.8%
Some students cannot meet learning expectations, no matter what teachers and other school staff do, because of their home environment and related factors.	<u>33.3%</u>	<u>44.4%</u>	22.2%	0.0%

Student Communication

FirstSchool prioritizes the promotion of student communication. Nearly all participants understood the importance of improving students’ vocabularies to improve their decoding skills (

Figure 6), but the vast majority also incorrectly assumed that children are more effective than adults at scaffolding each other's oral language. Most participants indicated that they support student communication with over two thirds disagreeing with the statement that they speak to children more than the children speak to them. Seventy-two percent of participants also indicated that they felt that their students stayed on topic and no participants felt that keeping student talk to a minimum helped ensure that lessons are paced more effectively.

Figure 6. Student Communication Post-Test Results

			<i>True</i>	<i>False</i>
Improving students' vocabularies improve their decoding skills.			<u>89%</u>	11%
Children are more effective than adults at scaffolding one another's oral language.			81%	<u>19%</u>
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Agree</i>	<i>Strongly agree</i>
When I design activities that promote student conversation, they generally stay on topic.	0.0%	28.0%	<u>64.0%</u>	<u>8.0%</u>
Keeping student talk to a minimum during whole group time ensures that lessons are paced more effectively.	<u>40.0%</u>	<u>60.0%</u>	0.0%	0.0%
I talk to my children more than they talk to me.	<u>7.4%</u>	<u>63.0%</u>	29.6%	0.0%

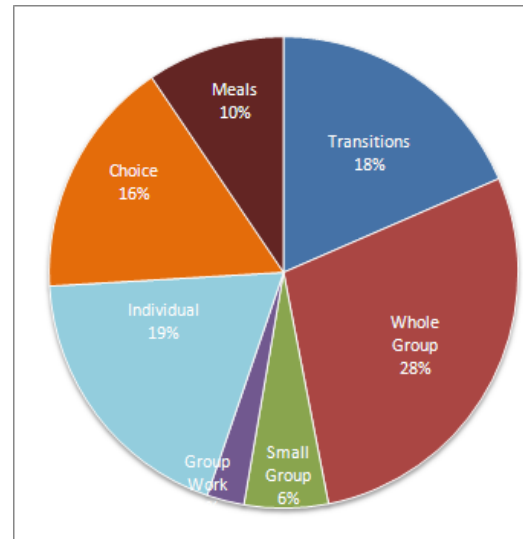
Project Level Results

Children in the pilot project schools experienced a relatively balanced school day in terms of activity settings and content areas.

Activity Settings

When examining the project level results of activity settings aggregated across all teachers, data show that children spent most of their day engaged in the whole group setting (28%), in transitions (18%), or in individual work time (19%.) Children spent only 3% of their time in group work and 6% of their time in a small group setting (Figure 7.)

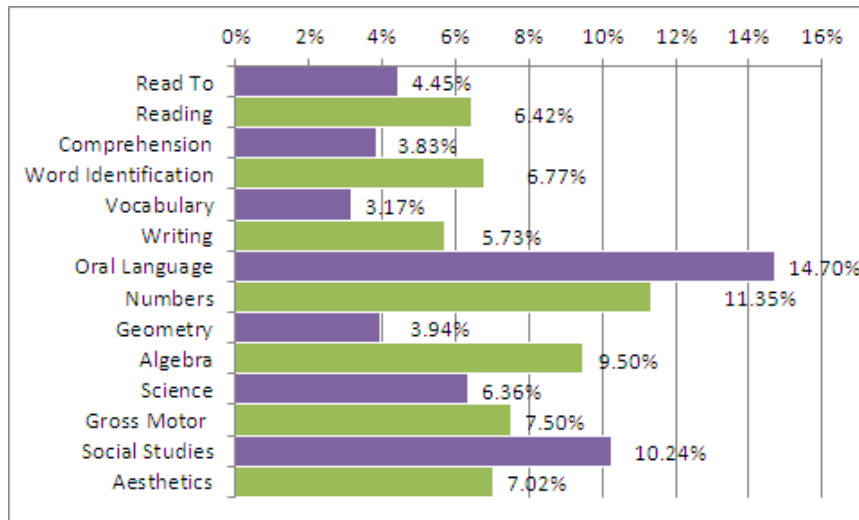
Figure 7. Percent of Time by Activity Settings – Project Level Results



Content Areas

On average, students spent most of their time on literacy (34.9%) and math (16.5%) with much less time engaged with social studies (10.2%), gross motor (7.5%), arts (7.0%), and science (6.4%) content. Children spent nearly 14.7% of their day engaged with oral language and 11.4% occupied with numbers (Figure 8.)

Figure 8. Percent of Time by Content Area - Project Level Results



Student Learning Approaches

For the most part, children in the pilot project schools use the student learning approaches tracked by EduSnap. Students used collaboration nearly 9% and metacognition (awareness and understanding of their own thought processes) 1.3% of their classroom time (*Figure 9.*)

Teaching Approaches

Overall, children in the FirstSchool pilot project experienced a very balanced mix of teaching approaches. Teachers used a scaffolding approach (engaging in academic conversation to promote deeper understanding and learning) 22.9% of the time and a didactic approach (providing information, modeling and/or demonstrating) 23.8% of the time (*Figure 10.*)

Figure 9. Percent of Time by Student Approaches

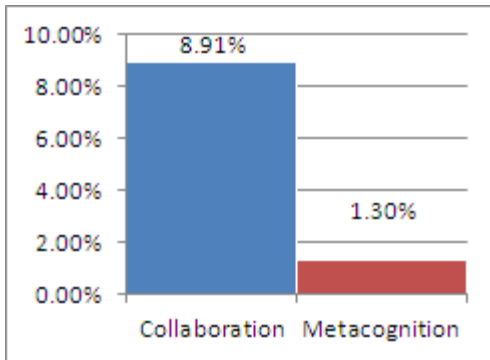
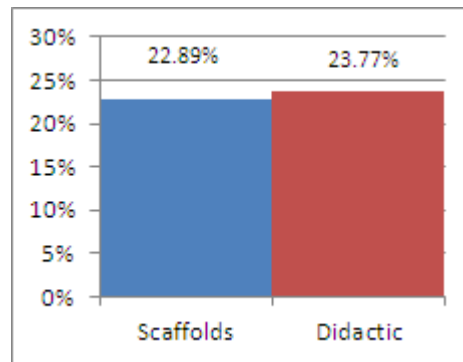


Figure 10. Percent of Time by Teaching Approaches

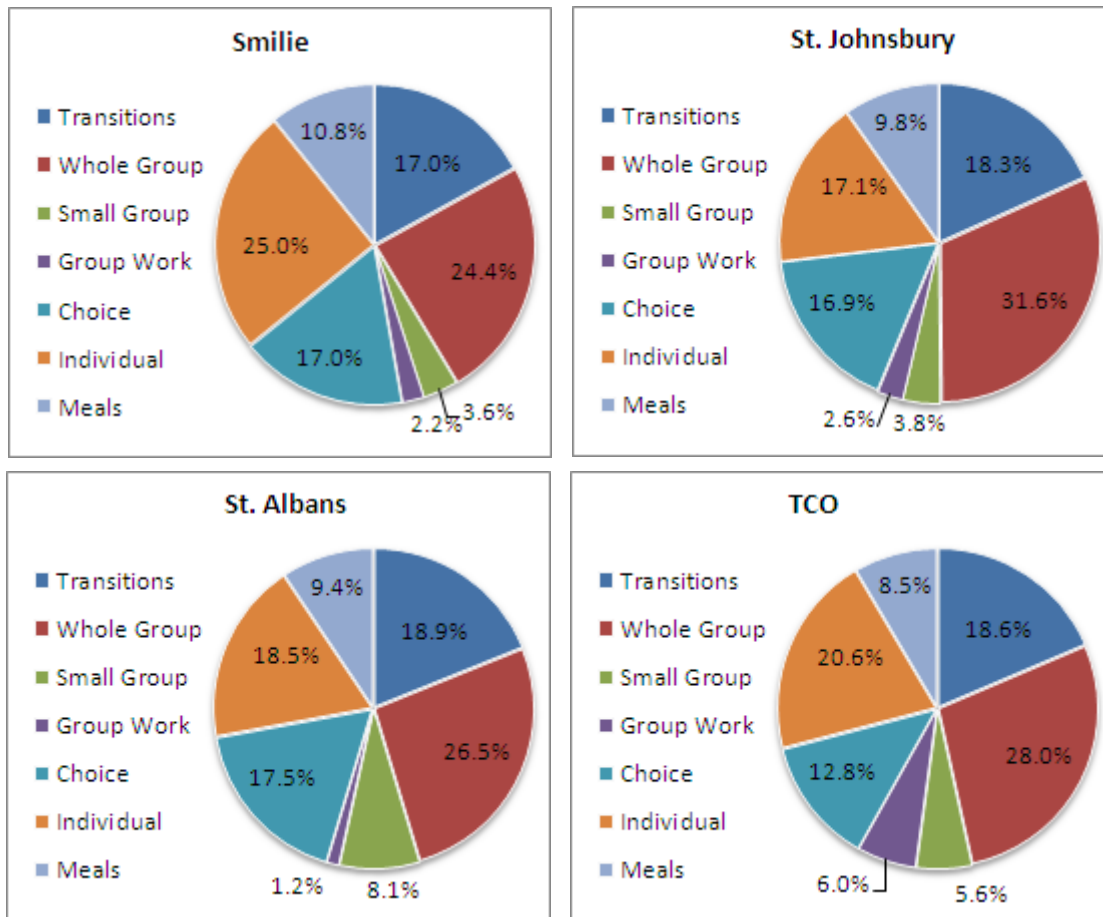


Site Level Results

Activity Settings

Analysis of EduSnap activity settings data do not show statistically significant differences between the amount of time children at each site spent in each setting with the exception of group work⁴. Students at the TCO site spent significantly more time in group work than children at any of the other sites. As shown in Figure 11 below, children at all sites spent the greatest amount of time in whole group setting with the exception of Smilie where children spent most of their time in individual activity settings. Children in St. Albans spent the most amount of time in small groups at 8.1%. Students at all sites spent about the same amount of time in transitions and meals.

Figure 11. Percent of Time Spent in Activity Settings by Site



⁴ A one-way between subjects ANOVA was conducted to compare the percentage of time children at each site spend in each activity setting. Results showed statistically significant differences between sites in the amount of time children spent in group work ($F=6.114, p=.001$.)

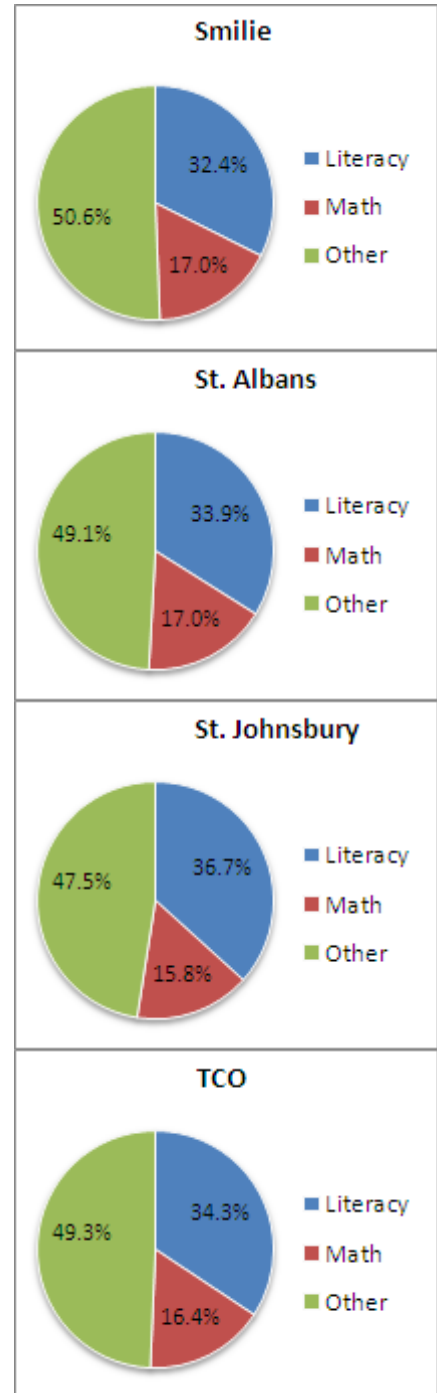
Content Areas

Overall, analysis of the content area data showed no statistically significant differences in the amount of time spent in content areas between sites (Figure 12.) There is also no significant difference in the amount of time children spent in each content category by site (Table 3.)

Figure 12. Percent of Time Spent in Content Categories by Site

Table 3. Percent of Time Spent in Content Areas by Site

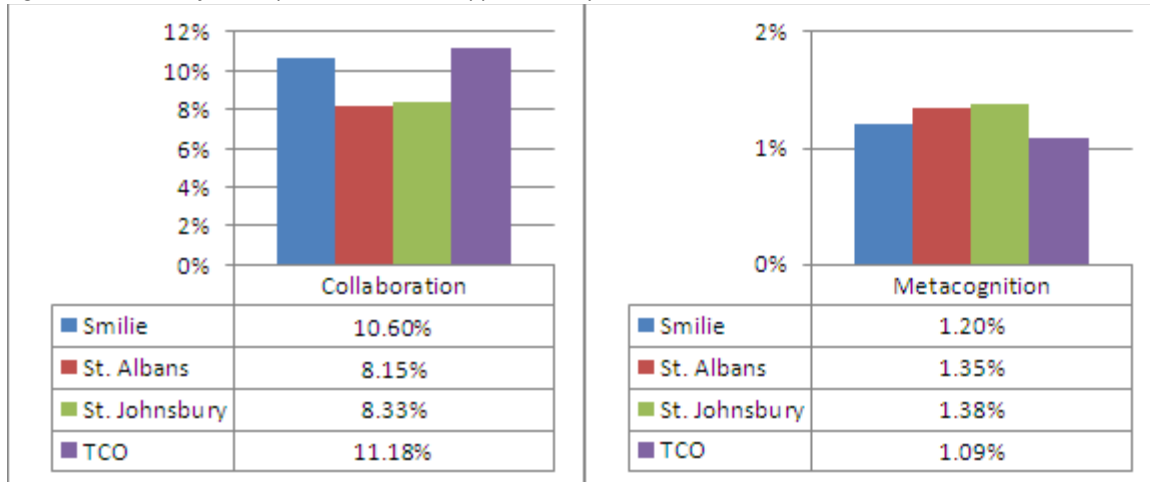
Content Area	Smilie	St. Albans	St. Johnsbury	TCO
Read To	3.40%	4.65%	4.13%	5.18%
Reading	7.20%	4.96%	7.71%	6.73%
Comprehension	2.20%	3.23%	4.04%	5.55%
Word Identification	6.60%	6.92%	7.17%	5.64%
Vocabulary	2.80%	3.27%	3.08%	3.27%
Writing	7.40%	5.15%	5.67%	6.45%
Oral Language	9.40%	15.81%	15.38%	13.00%
Numbers	12.40%	12.31%	10.25%	11.00%
Geometry	4.20%	3.62%	4.63%	3.09%
Algebra	9.80%	8.65%	9.38%	11.64%
Science	1.60%	6.35%	7.17%	6.82%
Gross Motor	6.80%	8.96%	6.42%	6.73%
Social Studies	6.20%	10.69%	11.08%	9.18%
Aesthetics	5.00%	7.04%	6.79%	8.36%



Student Approaches

Analysis revealed no significant difference between sites in how often students engaged in collaboration and metacognition (Figure 13.)

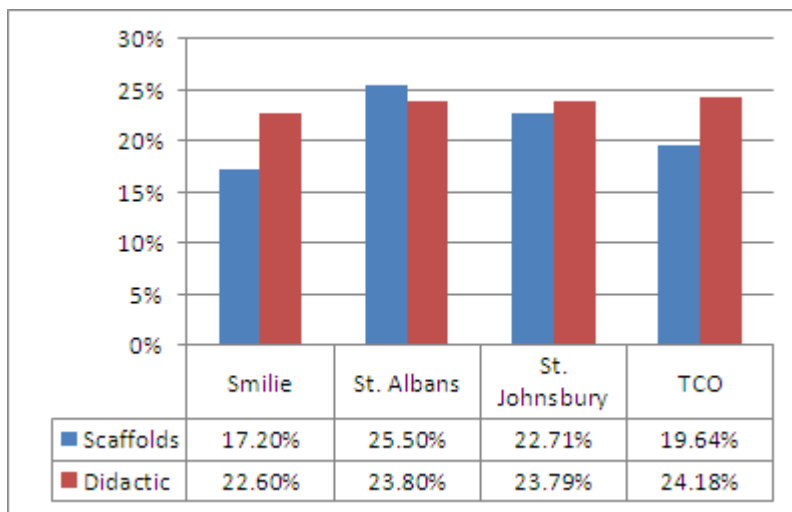
Figure 13. Percent of Time Spent with Student Approaches by Site



Teaching Approaches

Analysis of EduSnap data did not reveal significant differences in the amount of time children were instructed by teachers using a scaffolding approach or using didactic instruction between sites (Figure 14.)

Figure 14. Percent of Time Spent with Teaching Approaches by Site

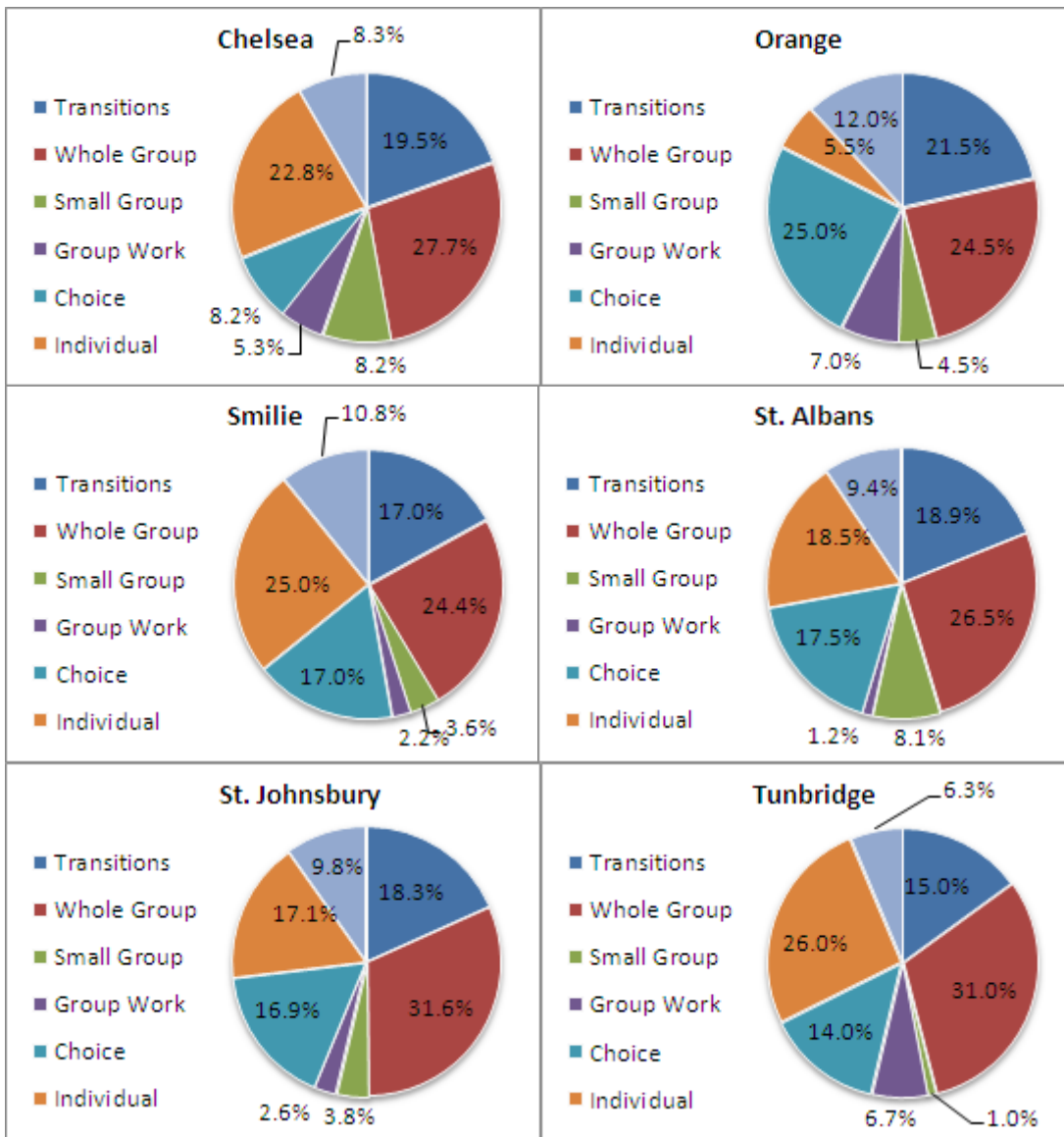


School Level Results

Activity Settings

EduSnap data revealed statistically significant differences between schools in the amount of time children spent in whole group settings (Figure 15.)⁵ Students at St. Johnsbury and Tunbridge spent nearly a third of their time in a whole group setting whereas students in all other schools spent closer to a quarter of their time in that setting.

Figure 15. Percent of Time Spent in Activity Settings by School



⁵ A one-way between subjects ANOVA was conducted to compare the percentage of time children at each school spent in each activity settings. Results showed statistically significant differences between schools in the amount of time children spent in whole group settings (F=3.635 p=.006.)

Content Areas

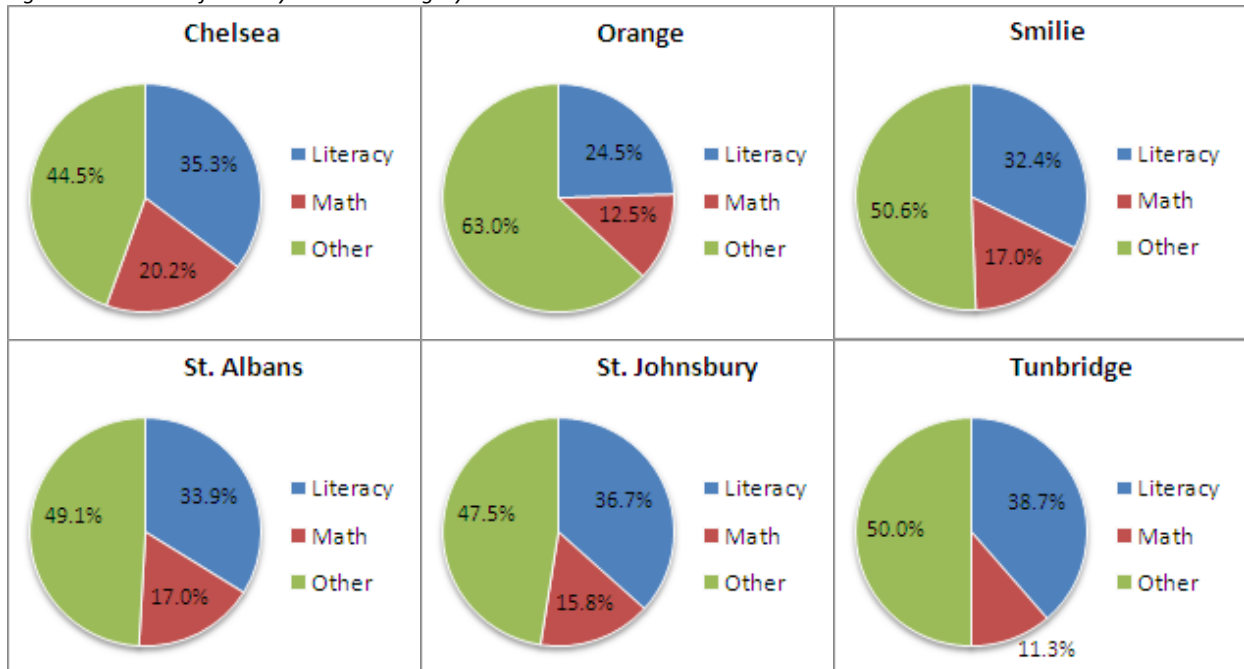
Overall, EduSnap data showed no statistically significant differences in the amount of time spent in content areas between schools (Table 4.)

Table 4. Percent of Time Spent in Content Area by School

Content Area	Chelsea	Orange	Smilie	St. Albans	St. Johnsbury	Tunbridge
Read To	4.00%	4.50%	3.40%	4.65%	4.13%	8.00%
Reading	7.50%	2.50%	7.20%	4.96%	7.71%	8.00%
Comprehension	4.83%	3.50%	2.20%	3.23%	4.04%	8.33%
Word Identification	6.83%	3.50%	6.60%	6.92%	7.17%	4.67%
Vocabulary	3.17%	2.00%	2.80%	3.27%	3.08%	4.33%
Writing	7.00%	0.50%	7.40%	5.15%	5.67%	9.33%
Oral Language	13.50%	14.00%	9.40%	15.81%	15.38%	11.33%
Numbers	14.50%	4.00%	12.40%	12.31%	10.25%	8.67%
Geometry	2.50%	3.50%	4.20%	3.62%	4.63%	4.00%
Algebra	15.83%	6.50%	9.80%	8.65%	9.38%	6.67%
Science	4.33%	14.50%	1.60%	6.35%	7.17%	6.67%
Gross Motor	5.00%	10.50%	6.80%	8.96%	6.42%	7.67%
Social Studies	9.67%	9.50%	6.20%	10.69%	11.08%	8.00%
Aesthetics	6.00%	16.00%	5.00%	7.04%	6.79%	8.00%

Despite the variation in the percentages of time children spent in literacy and math between schools shown in Figure 16, analysis did not reveal a statistically significant difference suggesting the variance between schools is not meaningful.

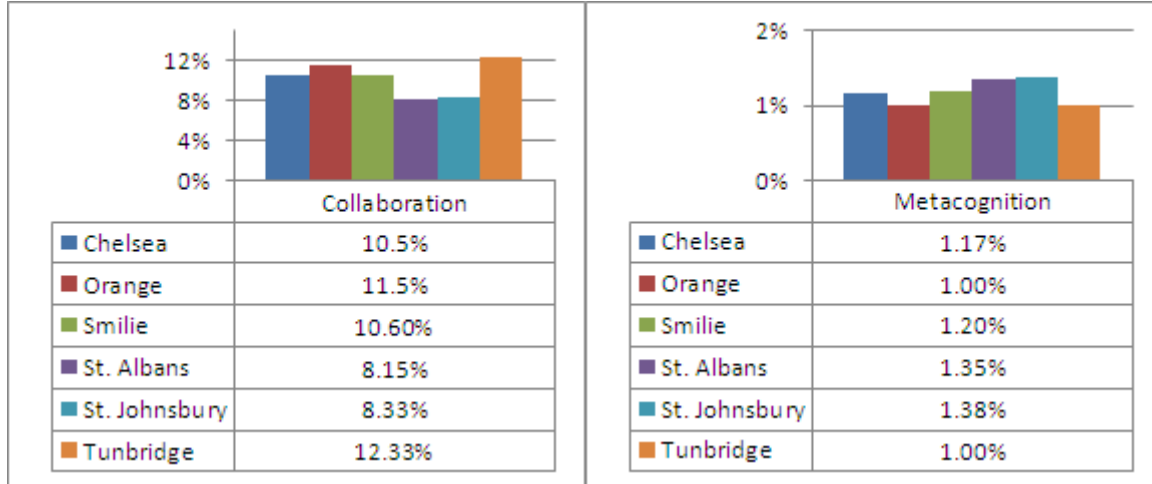
Figure 16. Percent of Time by Content Category and School



Student Approaches

Statistically significant differences were not found between schools in the amount of time that children spend using collaboration or metacognition (Figure 17.)

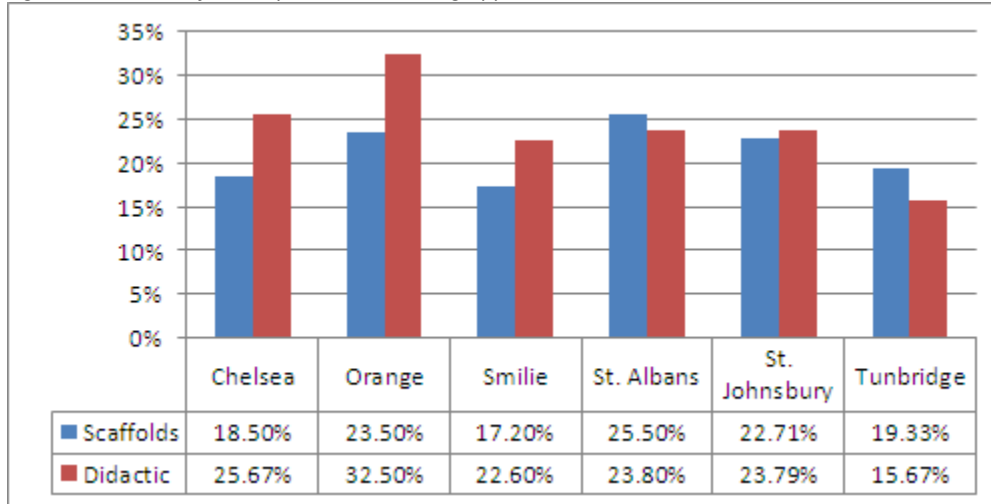
Figure 17. Percent of Time Spent with Student Approaches by School



Teaching Approaches

Statistically significant differences were not found between schools in the amount of time children experienced scaffolding instruction and didactic instruction (Figure 18.)

Figure 18. Percent of Time Spent with Teaching Approaches



Grade Level Results

Activity Settings

EduSnap results showed statistically significant differences between grade levels in the amount of time students spend in whole group, individual, choice, and meal settings⁶. As shown in **Error! Reference source not found.**, children spent less time in choice settings as they aged going from 34.4% of their time in Pre-K down to 15% in Kindergarten and almost 10% in grades 1 to 3. In contrast, children spend progressively more time involved in individual work settings as they age. Children in Pre-K spent only 22% in the whole group setting while children in Kindergarten spent 29% and children in grades 1 to 3 spent 31% of their time in whole group.

EduSnap data showed statistically significant differences⁷ between grade level in the amount of time children were engaged in reading, word identification, writing, algebra, social studies, and aesthetic content areas (

Table 5.) Children in kindergarten and grades 1 to 3 spent much more of their time reading and writing than children in Pre-K. They also spent more time engaged with algebra. Pre-K students spent more time engaged with social studies and aesthetics than either kindergarteners or children in grades 1 to 3.

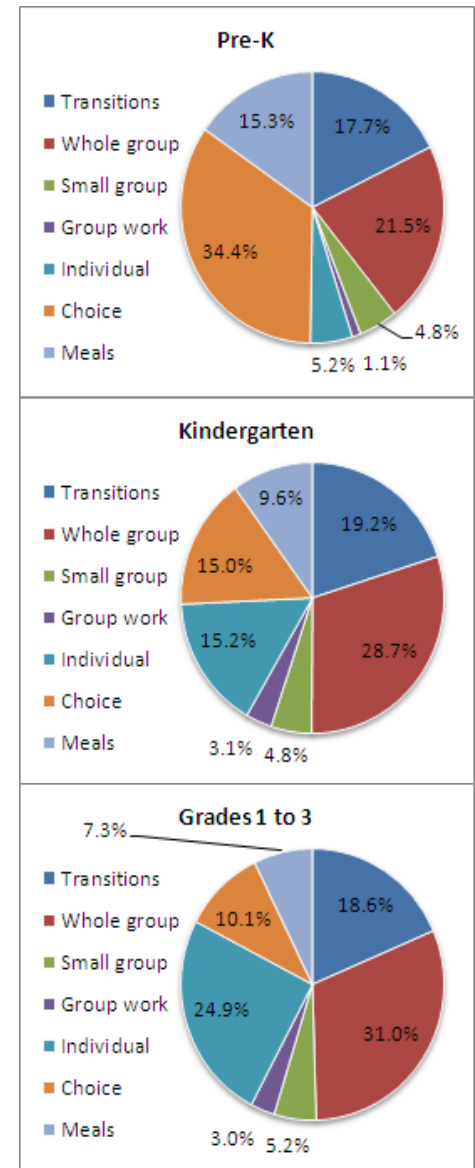
Table 5. Percent of Time Spent in Content Areas by Grade Level

Content Area	Pre-K	K	Gr 1 to 3
Read To	3.73%	4.73%	4.65%
Reading	2.47%	6.55%	7.87%
Comprehension	1.53%	2.73%	5.00%
Word Identification	6.67%	11.27%	5.58%
Vocabulary	2.40%	3.09%	3.48%
Writing	0.33%	4.64%	8.05%
Oral Language	15.07%	15.82%	14.25%
Numbers	5.53%	10.91%	13.65%
Geometry	5.60%	4.18%	3.25%
Algebra	4.33%	9.64%	11.40%
Science	8.47%	7.55%	5.25%
Gross Motor	8.33%	6.73%	7.40%
Social Studies	17.87%	9.55%	7.57%

⁶ A one-way between subjects ANOVA was conducted to compare the percentage of time children in each grade level were engaged with activity settings. Results showed statistically significant differences between grade level in the amount of time children spent in whole group (F=6.143 p=.004), individual (F=41.516, p=.000), choice (F=57.909, p=.000), and meal (F=36.593, p=.000) settings.

⁷ A one-way between subjects ANOVA was conducted to compare the percentage of time children in each grade level were engaged with content areas. Results showed statistically significant differences between grade level in the amount of time children spent engaged with reading (F=17.815 p=.000), word identification (F=9.600, p=.000), vocabulary (F=3.687, p=.030), writing (F=6.101, p=.004), oral language (F=5.923, p=.004), numbers (F=14.528, p=.000), geometry (F=12.855, p=.000), algebra (F=7.964, p=.001), gross motor (F=10.274, p=.000), social studies (F=4.264, p=.018), and aesthetics (F=7.679, p=.001).

Figure 17. Activity Setting by Grade Level

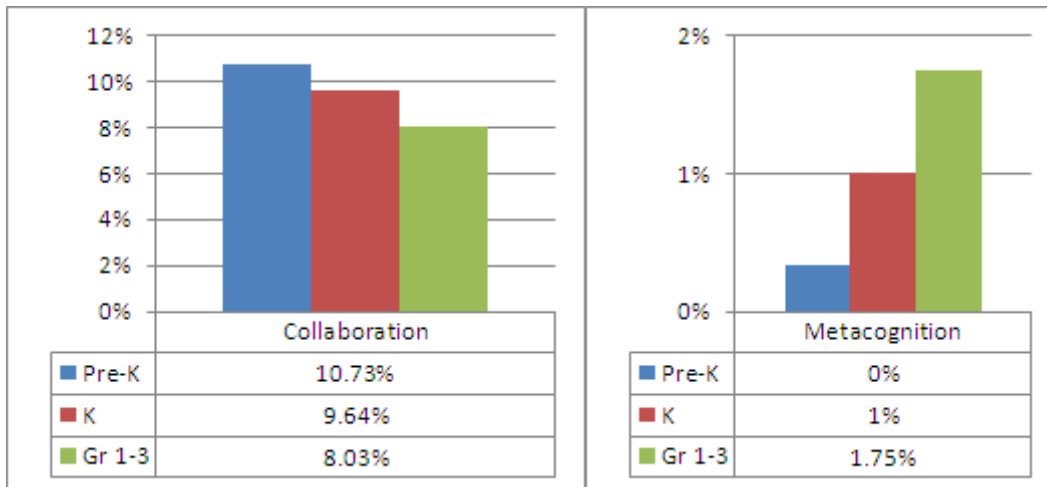


Aesthetics	13.60%	7.73%	4.35%
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Student Learning Approaches

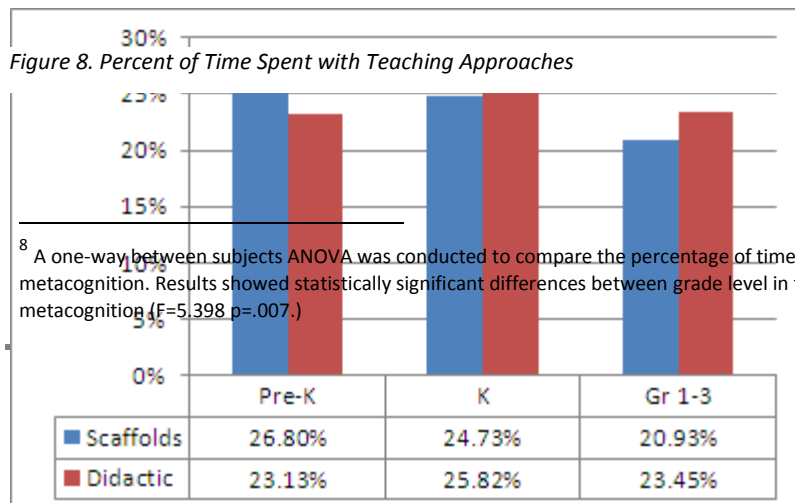
While children in Pre-K spent somewhat more of their day engaged with collaboration (*Figure*), analysis revealed no statistically significant difference between grade levels. Students in grades 1 to 3 engaged in metacognition statistically significantly more time than the other grades.⁸

Figure 20. Percent of Time Spent with Student Approaches by Grade Level



Teaching Approaches

No statistically significant difference was found by grade level in the amount of time children experienced either a scaffolding approach or a didactic approach (*Figure 21*).

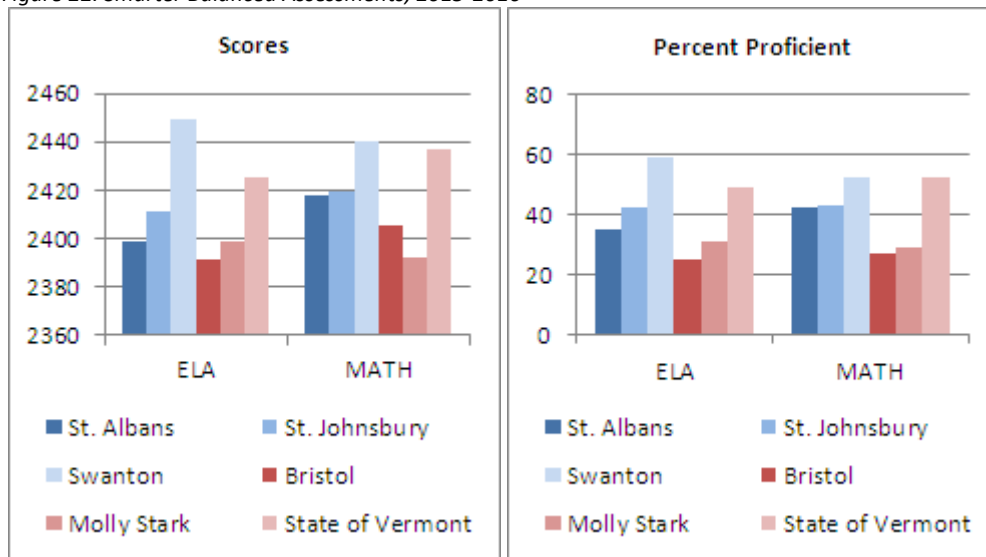


⁸ A one-way between subjects ANOVA was conducted to compare the percentage of time children in each grade level engaged in metacognition. Results showed statistically significant differences between grade level in the amount of time children engaged in metacognition ($F=5.398, p=.007$.)

3RD GRADE ACHIEVEMENT LEVELS

A review of the 3rd grade achievement scores from the 2016-2017 Smarter Balanced Assessments was conducted on two⁹ of the FirstSchool pilot project schools (St. Albans and St. Johnsbury), three comparable non-pilot schools (Swanton, Bristol, and Molly Stark) and the State of Vermont. The review found a range of scores and percent of students testing proficient both within the group of FirstSchool pilot schools and between pilot schools and comparable schools (*Figure .*) Both St. Albans and St. Johnsbury had scores well below the overall Vermont scores in both ELA and MATH, but above two of the three comparison schools. These trends were similar in the percent of students testing as proficient in both ELA and MATH.

Figure 22. Smarter Balanced Assessments, 2015-2016



One of the key goals of the RTT-ELC is to reduce the achievement gap between economically advantaged and disadvantaged students. In the 2016-2017 school year, FRL students scored significantly lower than other non-FRL students in both pilot schools and non-pilot schools (*Figure.*) All schools for which data was available had relatively large percent proficiency gaps between FRL and non-FRL students. St. Johnsbury had the biggest discrepancy between FRL and non-FRL in the percent of students meeting the proficiency criteria for both ELA and MATH (*Figure.*)

⁹ Data was not available for Smilie, Tunbridge, Orange, and Chelsea due to small class size

Figure 23. Smarter Balanced Assessments, Average Scores, 2016-2017, FRL/Non-FRL

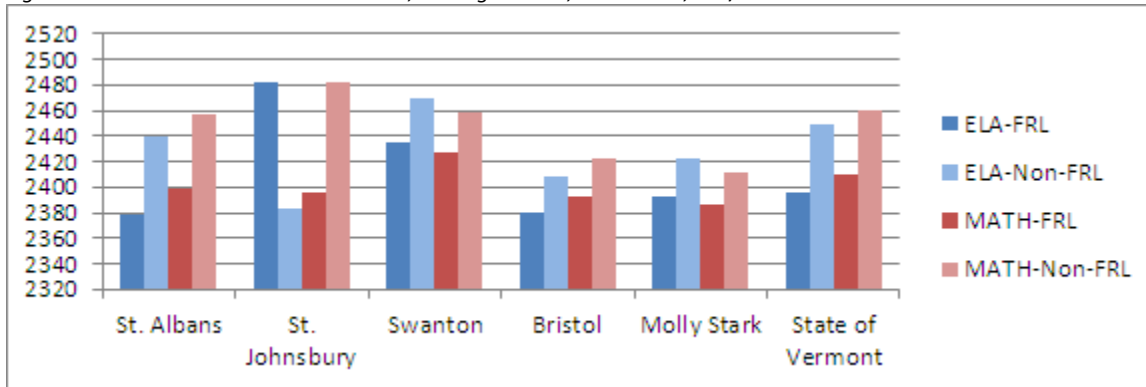
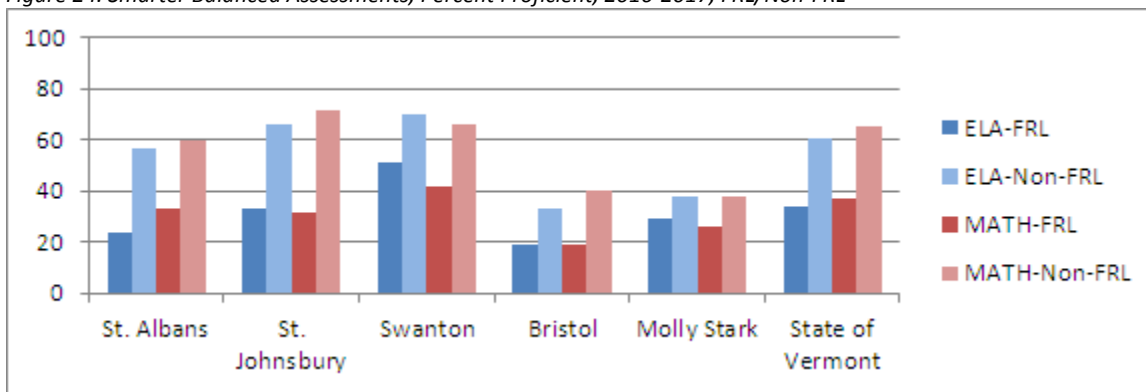


Figure 24. Smarter Balanced Assessments, Percent Proficient, 2016-2017, FRL/Non-FRL



DATA NOTES

Table 6. Number of Teachers in Pilot Project by Site and School

Site	School	Number of Teachers	Percent of Total
Smilie	Smilie	6	9.1%
St. Albans	St. Albans	25	37.9%
St. Johnsbury	St. Johnsbury	24	36.4%
TCO	Tunbridge	3	4.5%
TCO	Chelsea	6	9.1%
TCO	Orange	2	3.0%

Table 7. Re-Categorization of Grade Level and Number of Teachers by Grade Level

Original Categories			Re-categorization		
Grade	Number	Percent	Grade	Number	Percent
Pre-K	10	15.1%	Pre-K	15	22.7%
Pre-K Community	2	3.0%			
Pre-K School	3	4.5%			
K	11	16.7%	K	11	16.7%
1	6	9.1%	1-3	40	60.6%
2	4	6.1%			
3	8	12.1%			
1 & 2	4	6.1%			
2 & 3	0	0%			
3 & 4	1	1.5%			
Explorers (1-3)	5	7.6%			
Imagination (1-3)	4	6.1%			
Investigators (1-3)	4	6.1%			
Travelers (1-3)	4	6.1%			