Four-Year-Old At-Risk Program
Final Evaluation

Presented to the State Board of Education

January 2002

by

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EXECUTIVE SUMMARY

As part of the school finance formula for 1998-1999, the legislature and governor approved funding of a half-day educational program for 1,350 at-risk four-year-olds. Funding for the program and the number of children served through the program have increased each year. During the 2000-2001 school year, 2,097 children participated.

Four-year-olds are identified for the at-risk program, by the local school districts that receive grants, using multiple criteria. A child can be included if one or more of the following are true. The child (1) is living in poverty, (2) is living in a single parent family, (3) is a referral from SRS or from another early childhood program, (4) has teen parents, (5) has parents who lack a high school diploma or GED, (6) has limited English proficiency, or (7) is developmentally or academically delayed, based on reliable assessments. Forty percent of the children were selected for the program, based on one of the at-risk factors. The rest were selected because of multiple risk factors, with nine percent of the children having four or more risk factors. The table below indicates some of the characteristics of the children served by the program during its first three years.

CHARACTERISTICS OF STUDENTS IN FOUR-YEAR-OLD AT-RISK PROGRAM

Characteristic	% of Children in 1999	% of Children in 2000	% of Children in 2001
Is from a lower socioeconomic status family	71	69	68
Lives in a single parent family	35	36	34
Is an SRS referral	3	3	3
Was born to teen parents	14	16	15
Has at least one parent who is lacking a high school diploma/GED	24	22	23
Is limited-English-speaking	13	14	17
Is developmentally or academically delayed	35	23	31
Is a referral from another early childhood program	14	4	6

In addition to an educational program, 84 percent of the children were provided with nutrition services, 57 percent with health services, 32 percent with transportation services, 36 percent with counseling services, and 29 percent with social work services.

Approximately one-third of the children served in 1998-1999 were selected for a longitudinal study being conducted by the Kansas State Department of Education (KSDE). These children have been observed and rated by their teachers in the fall and spring of three school years, using The Work Sampling System Developmental Checklists developed by Jablon, Marsden, Meisels, and Dichtelmiller. The Checklists comply with the NAEYC guidelines and assist teachers in observing and documenting individual children's growth and progress. They cover seven domains: Personal & Social Development, Language & Literacy, Mathematical Thinking, Scientific Thinking, Social Studies, The Arts, and Physical Development. Teachers complete the Checklists

as the children engage in tasks appropriate to their age and skill level. The Guidelines that accompany the Checklists provide teachers with clear rationales and examples of performance so that they can complete the Checklists reliably and interpret the indicators in a consistent manner. Possible ratings[1] on the Checklists are 'Not Yet,' 'In Process,' and 'Proficient.'

A group of comparison children was selected for the longitudinal study at the beginning of the 1999-00 school year. Teachers completed Developmental Checklists and student information sheets for each of these children when the children were in kindergarten and first grade. The number of students from the original sample remaining in schools where they could be followed during the fall of the 2000-2001 school year, the children's first grade year, was 243 children, or less than 50 percent of the original number. The number of comparison students remaining in the study was 157 in the fall of 2000. By the spring of 2001, the number of students in the program and comparison groups decreased to 238 and 156, respectively.

In addition to the longitudinal study, one-third of the children served in the preschool program during the 2000-2001 school year were selected for a one-year study; therefore, teachers completed Developmental Checklists and information sheets on these children. And, program directors in selected programs were interviewed to obtain information about program implementation and operation. Some of the findings from the evaluation follow.

- As in the first two years of the program, among the preschool group, the most growth occurred during the year in the Mathematical Thinking domain and the least growth occurred in Physical Development. The same was true for the first grade group.

- Checklist data were analyzed by number of risk factors associated with each child. For last year's preschoolers, there were significant differences in all seven domains in the fall and in all domains except The Arts and Physical Development in the spring. Although all of these children are at-risk, children with one or two risk factors began and ended the year with higher ratings than children with more than two risk factors. For last year's first grade group, there were statistically significant differences by number of at-risk factors, when these children were kindergartners, in all domains in the fall and in all domains except The Arts in the spring. During the children's first grade year, there were statistically significant differences in Mathematical Thinking, Social Studies, and Physical Development in the fall and in Mathematical Thinking and Physical Development in the spring. Children with three or more risk factors were rated lower than other children.

- Data were further analyzed to identify the at-risk factors that made the most difference in achievement and adjustment. For last year's preschool group, children with developmental delays were rated significantly lower in all domains in the fall and in all except Personal & Social Development in the spring. There were significant differences by English as a Second Language (ESL) designation in the fall

[1] For data analyses, Not Yet = 1, In Process = 2, and Proficient = 3.

for all domains and in the spring for all domains except The Arts and Physical Development. When data were analyzed by socioeconomic status (SES), there were significant differences in the fall for The Arts and Physical Development and in the spring for Physical Development. Children who were not ESL or from lower SES families received higher ratings. For last year's first graders, kindergarten domain means were significantly different by SES in all domains in the fall and in all domains except Scientific Thinking, Social Studies, and Physical Development in the spring. During the first grade year, there were statistically significant differences by SES in Mathematical Thinking, Scientific Thinking, and Social Studies in the fall and in all domains except Physical Development in the spring. There was a significant difference by ESL designation during the fall of the kindergarten year in Language and Literacy, Mathematical Thinking, and Scientific Thinking. During the spring of the kindergarten year and the spring and fall of the first grade year, there were no statistically significant differences by ESL designation. In other words, during the first grade year ESL designation became less of a factor in achievement and SES became more important.

- Although gender is not one of the risk factors, data were also analyzed by gender. In the preschool data, there were significant differences in the fall for Language, The Arts, and Physical Development and in the spring for all except Scientific Thinking. For last year's first graders, there were significant differences in the fall of the kindergarten year in all domains and in the spring in all except Mathematical Thinking and Scientific Thinking. During the first grade year, there were significant differences in all domains except Mathematical Thinking in the fall and in all domains except Mathematical Thinking and Scientific Thinking in the spring. Girls received higher ratings.

- Preschool experience was related to more children being proficient at the beginning of the kindergarten year in all domains. Students with preschool experience were still at a slight advantage in the spring of the kindergarten year, but not significantly so. By first grade, there were no statistically significant differences in proficiency ratings between children with and without preschool experience.

- Statistically significant differences are not always educationally significant differences. Effect sizes range from 0 to1 and are often used to judge the educational significance of differences between groups. Medium and large effect sizes, those above .4, indicate a real difference in performance. Some medium but no large effect sizes were found in the preschool and first grade data. In most cases for the preschoolers, the magnitude of the differences in performance in each of the domains, based on characteristics of the children, diminished from fall to spring, as the children participated in the program. For those children with multiple risk factors, however, effect size increased in four of the seven domains. In the first grade data, the gap for ESL children became smaller and the gap for lower SES children became larger.

- Items listed on the Checklist for each age group are meant to measure the knowledge and skills that most children of that age master at some time during the year. For this

reason, a proficiency index was computed for each domain. A child was marked as proficient if the child's teacher gave him/her a rating of 2.5 or higher on the 3-point scale. From the fall to the spring of the preschool year, there was significant growth in the percent of children who were rated proficient in each domain. Nearly 60 percent more children were rated proficient in the spring than in the fall in Personal and Social Development, Language and Literacy, and Mathematical Thinking. Thus, program curriculum seems to cover the knowledge and skills thought to be important for this age group.

- A classification prediction analysis (discriminant analysis) was run on the fall and spring proficiency data in the three areas that program directors said were the focus of their at-risk four-year-old programs: Personal and Social Development, Language and Literacy, and Mathematical Thinking. When "number of at-risk factors" was used as the independent variable, children were correctly identified as being proficient or not proficient in a domain at least two-thirds of the time. The variable was a better predictor in the fall than in the spring, indicating that the program may have lessened the influence of the at-risk factors on the children's achievement.

- There is little variation among programs when it comes to program goals. Without exception, one goal is to prepare the children for success in kindergarten. Many districts also emphasize the importance of facilitating a seamless transition between preschool and kindergarten and of closing the gap between at-risk and non-at-risk children in terms of their preparedness and readiness to learn in kindergarten and beyond.

- Finding classroom space, solving transportation problems, and finding and retaining teachers are the most serious problems faced by program directors. The benefits of the program, according to these directors, are children who are prepared to succeed in kindergarten, more involved parents, and more collaboration among preschool and elementary teachers.

What Next?

Although the benefits of the at-risk preschool seem to fade by the children's first grade year, this may not be a fair reflection of the results for at least three reasons. First, there are only four requirements of the programs: (1) enroll children who have at least one at-risk factor and who will be eligible for kindergarten the following year; (2) operate the program for at least 2.5 hours a day or a minimum of 465 hours a year; (3) hire teachers who have elementary or early childhood certification in Kansas; and (4) provide a developmentally appropriate educational program. Among the programs, there was wide variation in length of day/year, teacher background, and curriculum quality. For example, at least one program was a full-day program, teacher backgrounds ranged from first assignment of an elementary education teacher to the twenty-sixth year of experience for an early childhood certified teacher, and curriculum ranged from teacher developed activities to adoption of a research-based curriculum. Since results from all of the

programs were aggregated, it is impossible to know whether some programs were more successful than others or to know the characteristics of the successful programs.

The second major problem with interpreting results has to do with the evaluation itself. When the at-risk program was funded, there were no resources allocated for oversight of the program or for program evaluation. The program has grown each year, but there is still no money for these tasks. An evaluation was designed by the Kansas Department of Education (KSDE) during the first year of the program. Because funds for programs had already been awarded to districts, program funding was not dependent on participation in the evaluation. Most program directors provided some, if not most, of the data requested, but the following occurred.

- In some districts, control students were not selected, or the control students selected had attended another preschool.
- Training on observing children and completing the Work Sampling Checklist was offered by KSDE, but it was not mandatory. Many teachers did not receive the training, which can affect rater reliability.
- Often at least one data collection period's data were not turned in by a program or were not turned in correctly.
- Districts lost track of which students were in the program and control groups. Less than half of the initial study sample remained through grade one.

The third problem has to do with restrictions in the type of data collected. Many studies have shown that the benefits of preschool for at-risk children include much more than academic benefits. For example, children who attend preschool often have better attendance, are referred to special education or retained less frequently, create fewer discipline problems, and graduate from high school at higher rates than other children. For this evaluation, these types of behavioral and referral data were not collected.

It is suggested that the following are needed in order to evaluate the true impact of the Four-Year-Old At-Risk program. There must be more definite program requirements about such things as curriculum, instruction, and teacher preservice and inservice education. Major differences allowed should be reflected in the evaluation in order to determine the effects of the differences; and the evaluation should include a broader range of child-level indicators. There must be a requirement that districts that receive program money fully participate in the statewide evaluation. Finally, resources must be found for program administration and evaluation. Administration is important in order to allow preschool teacher training and technical assistance and to ensure appropriate implementation of the curriculum and collection of evaluation data. Evaluation is important to identify those program characteristics that help provide the maximum benefits to preschool at-risk children.

Introduction

There are approximately 35,000 four-year-olds in the state. Of this number, it is estimated that 10,000 children meet one or more criteria that would identify them as at risk. Head Start and Special Education serve 4,500 of these children, leaving 5,500 who could benefit from a four-year-old at-risk program. As part of the school finance formula for 1998-1999, the legislature and governor approved funding for a half-day educational program for 1,350 at-risk four-year-olds. Funding for the program has increased each year and in 2000-2001 there were 2,097 at-risk four-year-olds served. Many districts combine the children and resources from all of their programs for four-year-olds (i.e., Special Education, Head Start, Even Start, Title I, Four-Year-Old At-Risk) in order to provide better service to all of the children.

Any public school district in Kansas may apply for four-year-old at-risk funds through a competitive grant process. The district programs must meet the minimum number of hours of operation as required for a kindergarten program: 2.5 hours a day or a minimum of 465 hours a year. Teaching staff must have elementary or early childhood education certification in Kansas. Districts are required to provide a developmentally appropriate educational program that focuses on cognitive, language, social, emotional, physical, cultural, and aesthetic development. Students receive services such as counseling, health, transportation, and nutrition services in addition to an educational program to prepare them for success in K-12 education.

The Work Sampling Developmental Checklists measure areas of focus in the program and are providing one source of data for the evaluation of the Four-Year-Old At-Risk program. The Checklists -- written by Judy Jablon, Dorothea Marsden, Samuel Meisels, and Margo Dichtelmiller -- comply with the NAEYC guidelines and assist teachers in observing and documenting individual children's growth and progress. There is a separate form of the Checklist for each age group in this study, each form covering seven domains: Personal & Social Development, Language and Literacy, Mathematical Thinking, Scientific Thinking, Social Studies, The Arts, and Physical Development. Teachers complete the Checklists as the children engage in tasks appropriate to their age and skill level. The Guidelines that accompany the Checklists provide teachers with clear rationales and examples of performance so that they can complete the Checklists reliably and interpret the indicators in a consistent manner. Possible ratings on the Checklists are 'Not Yet,' 'In Process,' and 'Proficient.'

2000-2001 Preschool Group Results

Last year, preschool teachers completed Student Information Sheets for 2,097 students. Information from the sheets show that most of the children served during the 2000-2001 school year were from lower socioeconomic families, and more than one-third lived in single parent families. The characteristics of the children closely matched those of the children served in the first years of the program. Table 1 more fully describes the characteristics of the children.

TABLE 1: CHARACTERISTICS OF STUDENTS IN FOUR-YEAR-OLD AT-RISK PROGRAM: 2000-2001 SCHOOL YEAR

At-Risk Factor	Count	%
Lower SES	1435	68
Single parent family	710	34
SRS referral	57	3
Born to teen parent	325	15
Parent has less than HS	491	23
Is limited English speaking	356	17
Developmentally or academically delayed	646	31
Referral from another EC program	131	6

In addition to an educational program, 84 percent of the children were provided with nutrition services, 57 percent with health services, 32 percent with transportation services, 36 percent with counseling services, and 29 percent with social work services.

During the school year, preschool teachers were to observe one-third of their students and then rate them, using the Work Sampling Developmental Checklists: once in the fall and once in the spring. Of the 738 children selected for the study sample, 51 percent were male and 49 percent were female. There were no significant differences in characteristics or in services received between the group selected for the one-year study and the other children served. Forty-five children in the sample moved during the school year and five checklists could not be matched to a demographic sheet. Also, some teachers did not observe the children in all domains. Therefore, counts on tables will vary from 738.

Ratings for the 61 items on the Preschool-4 Checklist collapse into 25 sub-domain and 7 domain ratings. Fall and spring ratings are shown in Table 2. A rating of "1" means "Not Yet," a rating of "2" means "In Process," and a rating of "3" means "Proficient." There was growth in all domains. As with the groups in the previous years, the most growth occurred in Mathematical Thinking and the least growth occurred in Physical Development.

Table 2: Domain and Sub-Domain Means: Four-Year-Old Sample Group

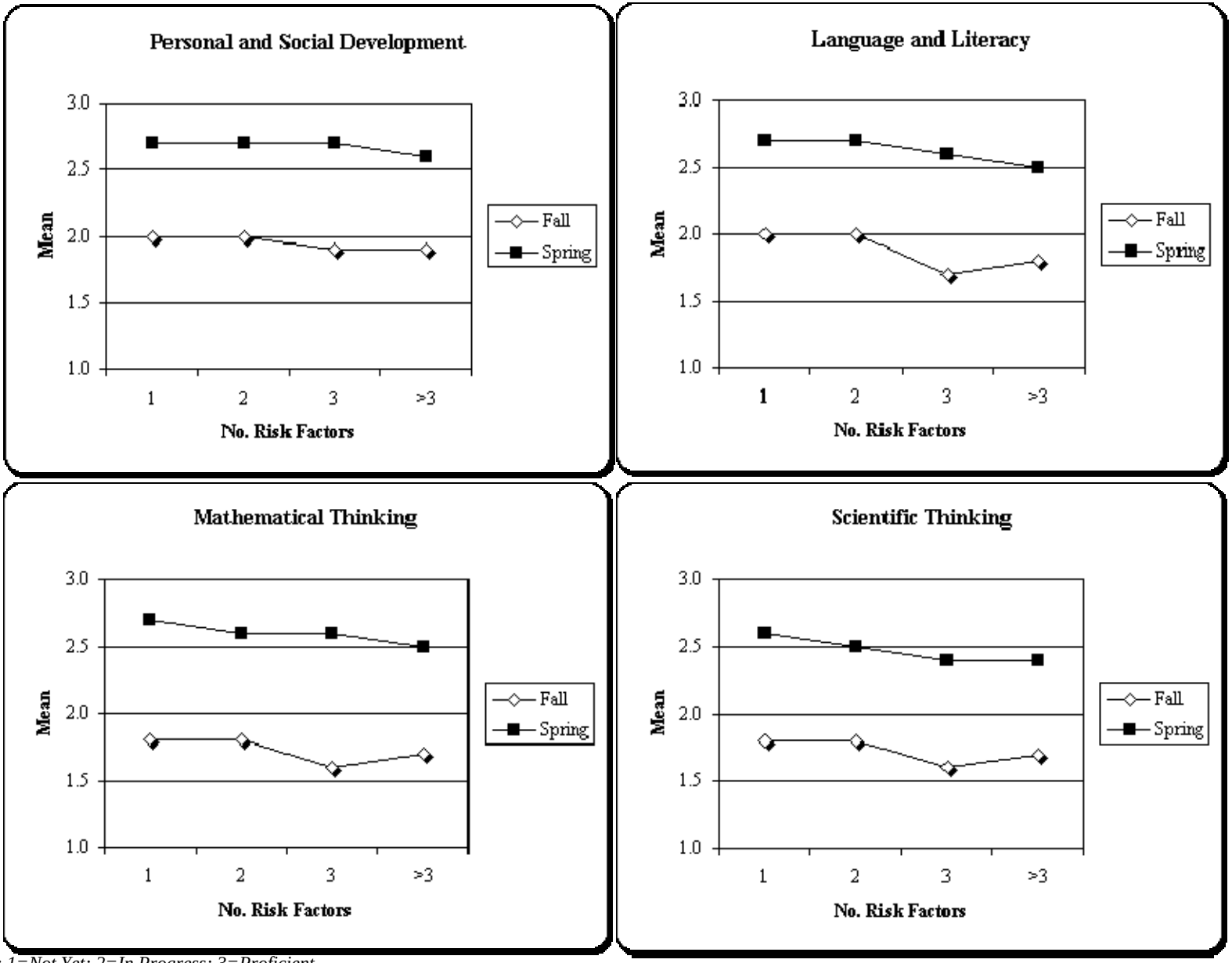
Domains	Fall			Spring			Change
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	
Self concept	738	1.96	0.56	674	2.73	0.42	0.76
Self control	738	2.12	0.50	674	2.81	0.34	0.69
Approach to learning	738	1.94	0.51	675	2.68	0.39	0.74
Interactions with others	738	2.06	0.51	675	2.76	0.34	0.70
Conflict resolution	738	1.83	0.56	675	2.61	0.45	0.78
Personal & Social Development	738	1.98	0.45	675	2.72	0.32	0.73
Listening	738	1.94	0.57	675	2.68	0.45	0.74
Speaking	738	2.05	0.62	675	2.68	0.45	0.63
Literature & reading	738	1.88	0.52	675	2.64	0.42	0.76
Writing	738	1.73	0.58	675	2.67	0.43	0.94
Language and Literacy	738	1.90	0.47	675	2.67	0.35	0.77
Patterns & relationships	672	2.64	0.44	672	2.64	0.44	0.00
Geometry & spatial relations	738	1.80	0.59	671	2.70	0.41	0.90
Measurement	736	1.67	0.51	672	2.49	0.47	0.83
Mathematical Thinking	738	1.78	0.48	675	2.63	0.39	0.85
Observing & investigating	738	1.79	0.49	673	2.53	0.46	0.74
Scientific Thinking	738	1.73	0.51	673	2.49	0.49	0.76
Human interdependence	738	1.74	0.47	673	2.50	0.47	0.76
Rights & responsibilities	738	1.78	0.53	672	2.53	0.50	0.75
People & where they live	722	1.49	0.52	664	2.30	0.58	0.81
Social Studies	738	1.71	0.43	674	2.49	0.44	0.78
Expression & representation	737	2.04	0.54	671	2.73	0.37	0.69
The Arts	738	1.92	0.50	671	2.66	0.40	0.74
Gross motor development	738	2.21	0.54	670	2.81	0.37	0.61
Fine motor development	738	2.09	0.52	670	2.80	0.36	0.71
Personal health & safety	737	2.23	0.48	666	2.86	0.30	0.63
Physical Development	738	2.17	0.45	671	2.82	0.28	0.65

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

In all three years of the program, the sub-domains of Measurement and People and Where They Live were rated the lowest in fall and spring.

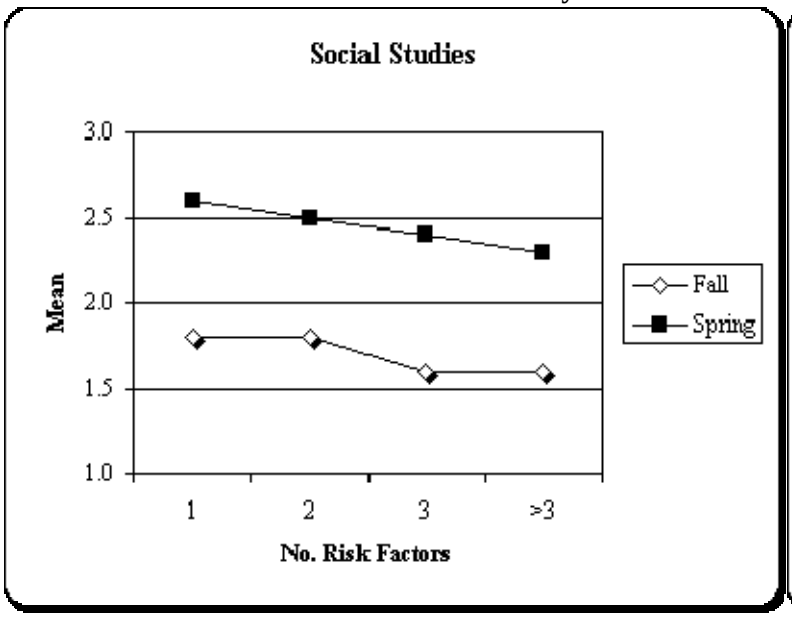
The number of at-risk factors faced by a child can affect the child's ability to adjust to school and to achieve. Therefore, the Checklist data were analyzed by number of risk factors associated with each child. The graphs on pages 4 and 5 show the results. There were significant differences in all seven domains in the fall and in all domains except The Arts and Physical Development in the spring. Although all of these children are at-risk, children with one or two risk factors began and ended the year with higher ratings than children with more than two risk factors.

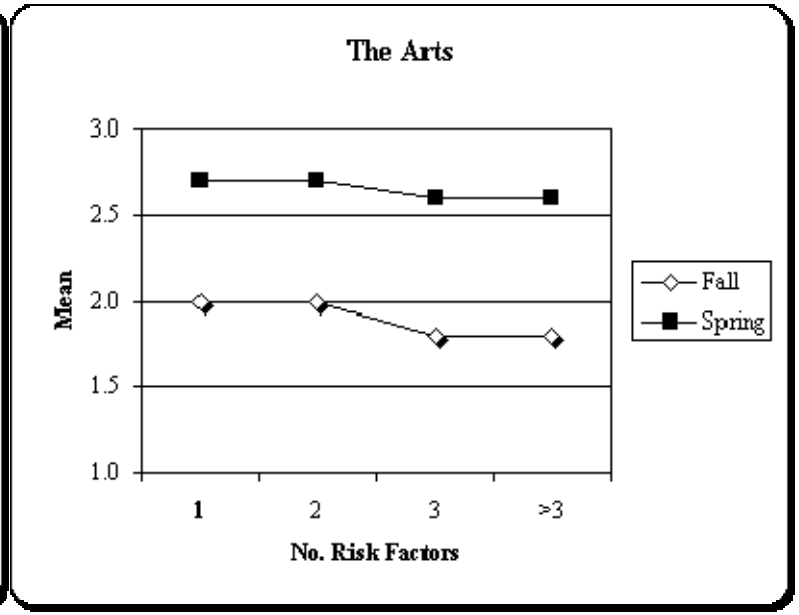
Domain Means by Number of At-Risk Factors: Four-Year-Olds

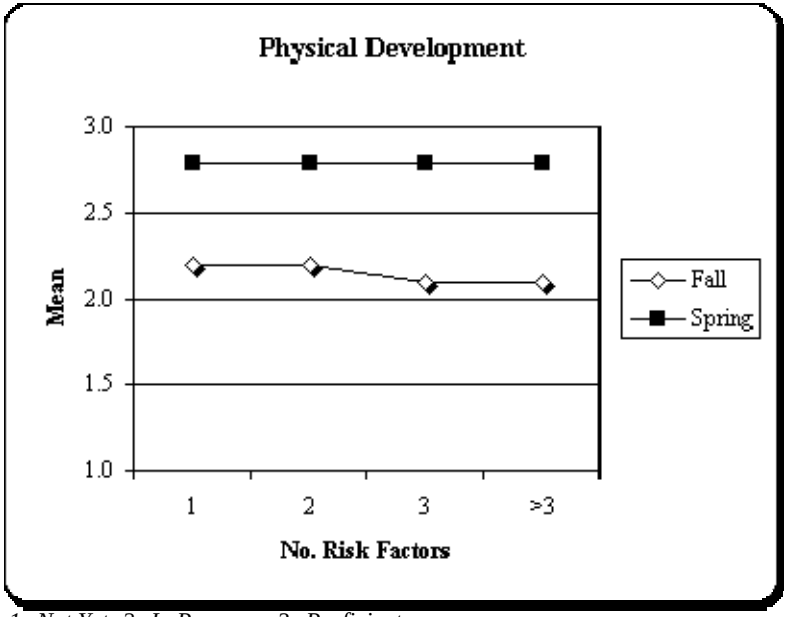


Scale: 1=Not Yet; 2=In Progress; 3=Proficient
Significant differences in all domains in the fall and in all except The Arts and Physical Development in the spring.

Domain Means by Number of At-Risk Factors: Four-Year-Olds Continued







Scale: 1=Not Yet; 2=In Progress; 3=Proficient
Significant differences in all domains in the fall and in all except The Arts and Physical Development in the spring

Data were further analyzed to identify the at-risk factors that made the most difference in achievement and adjustment. Children with developmental delays were rated significantly lower in all domains in the fall and in all except Personal & Social Development in the spring. There were significant differences by English as a Second Language (ESL) designation in the fall for all domains and in the spring for all domains except The Arts and Physical Development. Socioeconomic status (SES) of the family made some difference, but not as much as the developmental delay or ESL factors. When data were analyzed by socioeconomic status (SES), there were significant differences in the fall for The Arts and Physical Development and in the spring for Physical Development. Although gender is not one of the risk factors, data were also analyzed by gender. There were significant differences in the fall for Language, The Arts, and Physical Development and in the spring for all except Scientific Thinking. Where differences existed, children without the at-risk factor and girls received higher ratings. Graphs on the next pages show the fall and spring domain means for the ESL, developmental delay, SES, and gender groups; and Table A1 in Appendix A includes mean and standard deviation data for all domains and sub domains.

Although there are statistically significant differences between some of the groups, those differences are affected by sample size and might not be educationally significant. Effect sizes give a better estimate of educational significance and were computed for these data by subtracting one subgroup mean from the other and then dividing by the standard deviation for the total group. An effect size under .4 is considered small or relatively insignificant, an effect size between .4 and .75 is considered medium, and an effect size over .75 is considered large or very significant. The shaded cells in Table 3 indicate comparisons that were statistically significant in the prior analyses (ANOVAS). There were no large effect sizes in any of these comparisons and no medium effect sizes, when data were analyzed by SES and gender. When data were analyzed by ESL designation, there were medium effect sizes for all domains except for Physical Development in the fall, but only for Language and Literacy in the spring. When data were analyzed by developmental delay, there were medium effect sizes for Language and Literacy, Social Studies, and Physical Development in the fall, but for no area in the spring. The analysis for number of risk factors compared the children with one risk factor to the children with more than three risk factors. There were medium or close to medium effect sizes for Personal and Social Development, Language and Literacy, Mathematical Thinking, and Social Studies, and the effect sizes increased from fall to spring. In most cases the magnitude of the differences in performance in each of the domains, based on characteristics of the children, diminished from fall to spring, as the children participated in the program. For those children with multiple risk factors, however, the size increased in five of the seven domains; and in the gender comparison, there were increases in six domains.

Table 3: Effect Sizes for Preschool Group

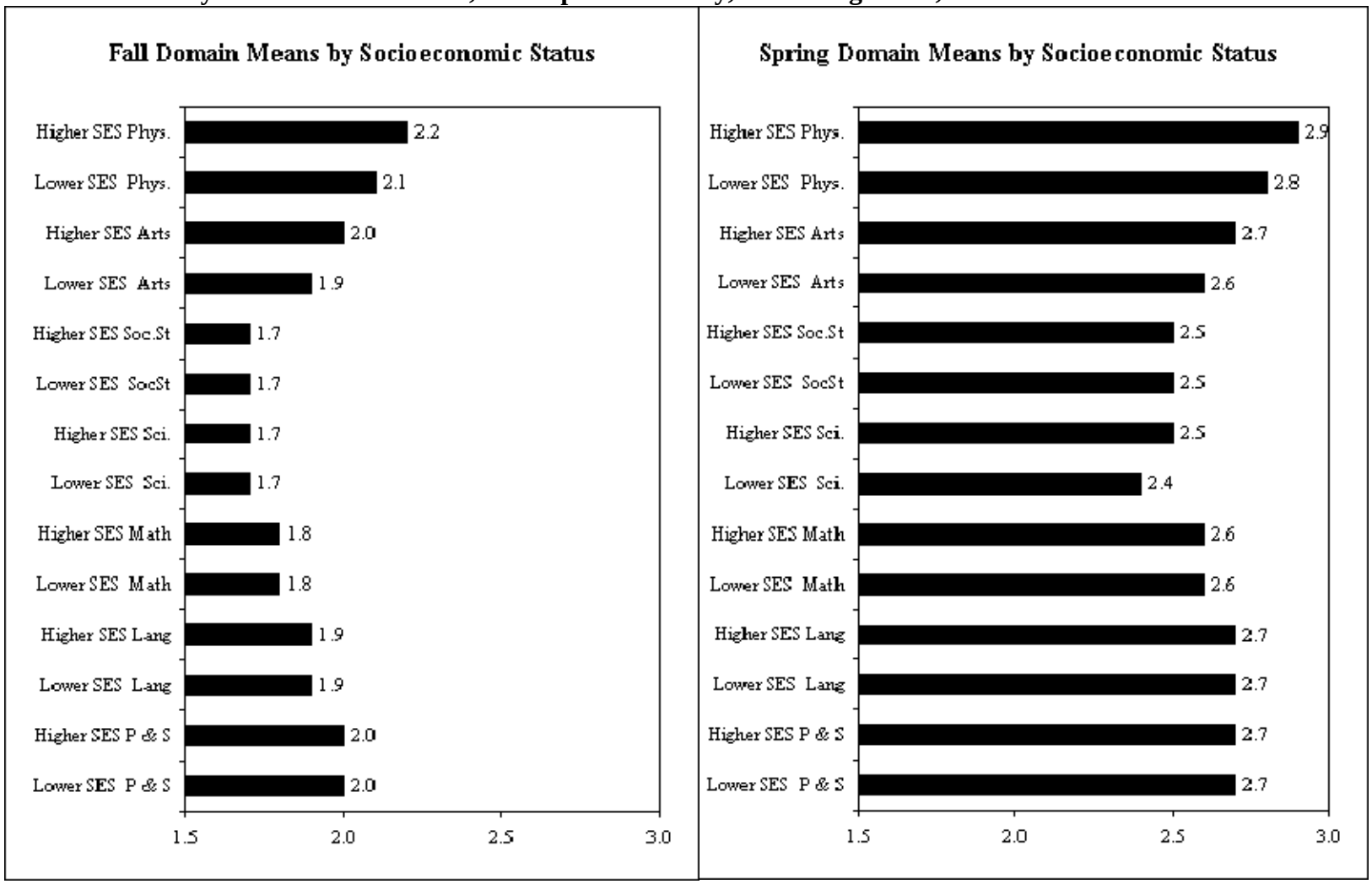
Domain	SES		Gender	
	Fall	Spring	Fall	Spring
Personal & Social Development	0.08	0.13	0.11	0.25
Language and Literacy	0.07	0.01	0.26	0.33
Mathematical Thinking	0.03	0.03	0.12	0.22
Scientific Thinking	0.10	0.14	0.08	0.01
Social Studies	0.07	0.01	0.12	0.17
The Arts	0.20	0.11	0.27	0.34
Physical Development	0.25	0.19	0.18	0.27
Domain	**Developmental Delay**		**No. At-Risk Factors***	
	Fall	**Spring**	**Fall**	**Spring**
Personal & Social Development	0.34	0.16	0.40	0.44
Language and Literacy	0.49	0.36	0.46	0.64
Mathematical Thinking	0.34	0.37	0.38	0.56
Scientific Thinking	0.23	0.22	0.21	0.25
Social Studies	0.40	0.17	0.50	0.52
The Arts	0.35	0.20	0.27	0.26
Physical Development	0.45	0.27	0.25	0.17
Domain	**ESL**			
	Fall	**Spring**		
Personal & Social Development	0.52	0.21		
Language and Literacy	0.69	0.44		
Mathematical Thinking	0.59	0.25		
Scientific Thinking	0.71	0.37		
Social Studies	0.57	0.23		
The Arts	0.47	-.01		
Physical Development	0.30	-.01		

**Children with One Risk Factor Compared to Those with More than Three*

Items listed on the Checklist for each age group are meant to measure the knowledge and skills that most children of that age master at some time during the year. For this reason, a proficiency index was computed for each domain. A child was marked as proficient if the child's teacher gave him/her a rating of 2.5 or higher on the 3-point scale: 1=Not Yet; 2=In Progress; and 3=Proficient. As the chart on page 12 illustrates, from the fall to the spring there was significant growth in the percent of children who were rated proficient in each domain. In the fall, there were more children rated proficient in The Arts and in Physical Development than in the other domains. These were also the domains in which there was the least amount of change from fall to spring. Nearly 60 percent more children were rated proficient in the spring in Personal and Social Development, Language and Literacy, and Mathematical Thinking. Thus, program curriculum seems to cover the knowledge and skills thought to be important for this age group.

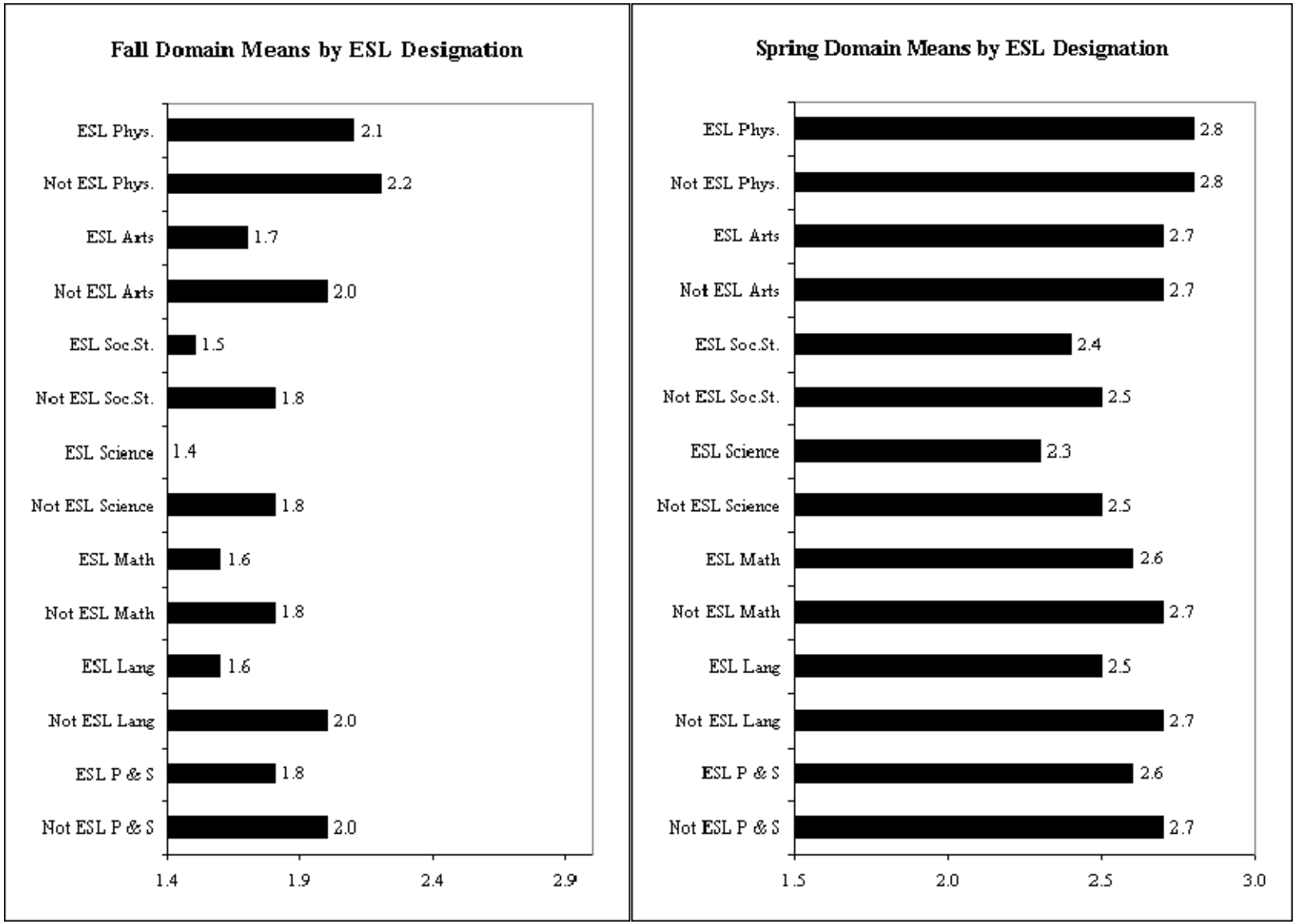
Fall proficiency percentages in The Arts and Physical Development were significantly higher in 2000-2001 than in either of the prior program years. In the first two years of the program, about 10 percent of the children were rated proficient in The Arts and 25 percent were rated proficient in Physical Development. During 2000-2001, there percentages were 55 and 80 percent, respectively. Spring proficiency percentages for Personal and Social Development have increased about three percent per year.

Domain Means by Socioeconomic Status, Developmental Delay, ESL Designation, and Gender: Four-Year-Olds



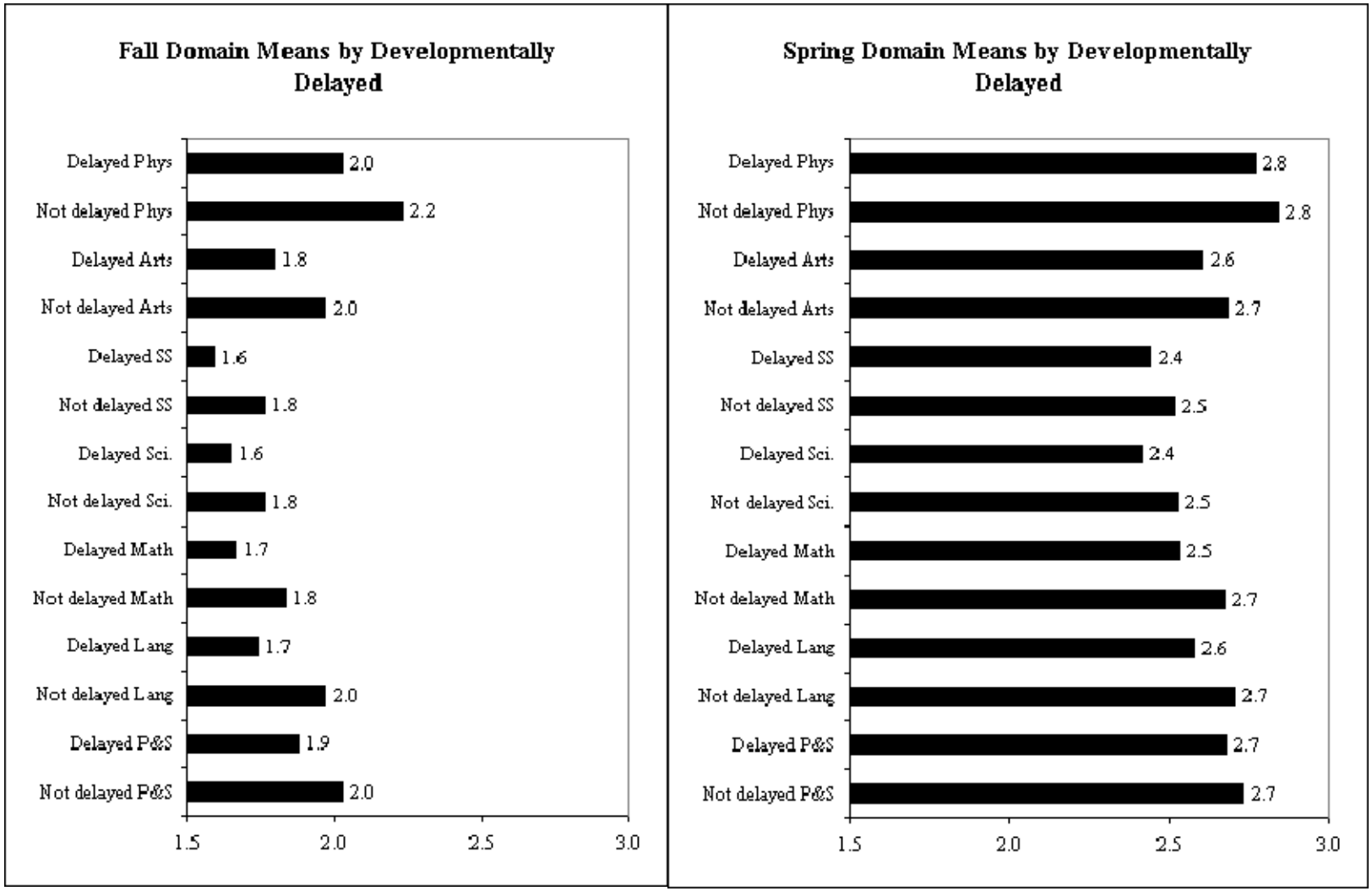
Significant differences in fall for The Arts and Physical Development and in the spring for Physical Development.
Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Domain Means by Socioeconomic Status, Developmental Delay, ESL Designation, and Gender: Four-Year-Olds



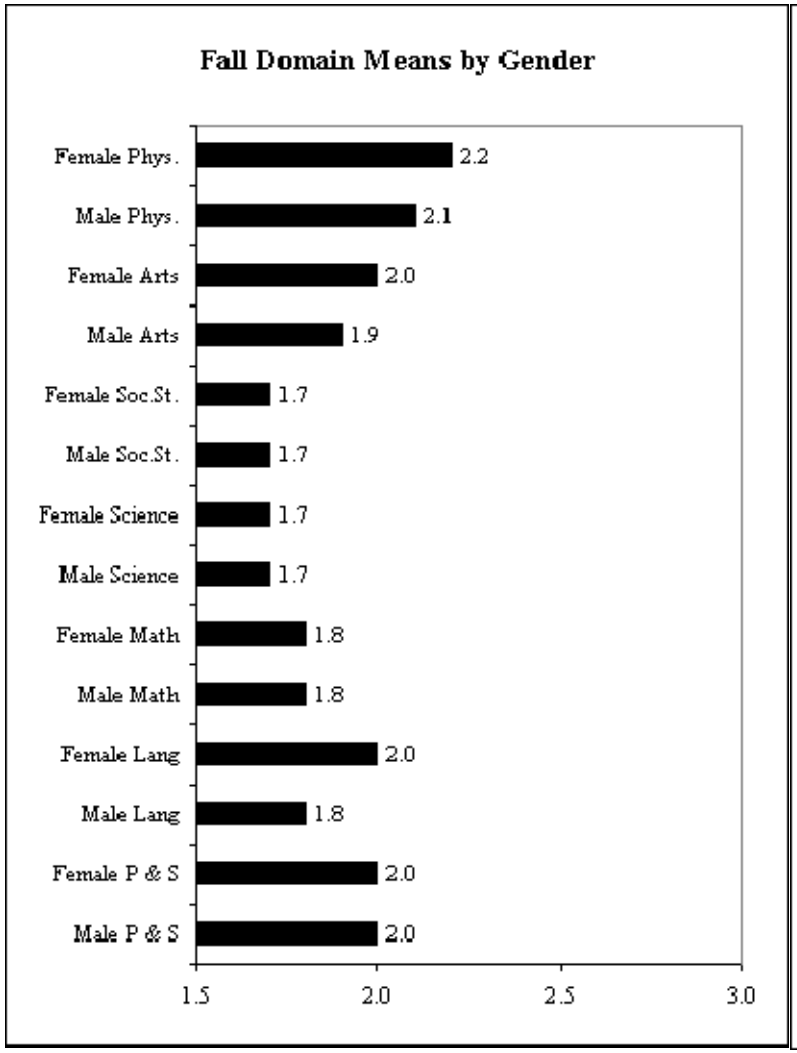
Significant differences in fall for all domains and in the spring for all except The Arts & Physical Development.
Scale: 1=Not Yet; 2=In Progress; 3=Proficient

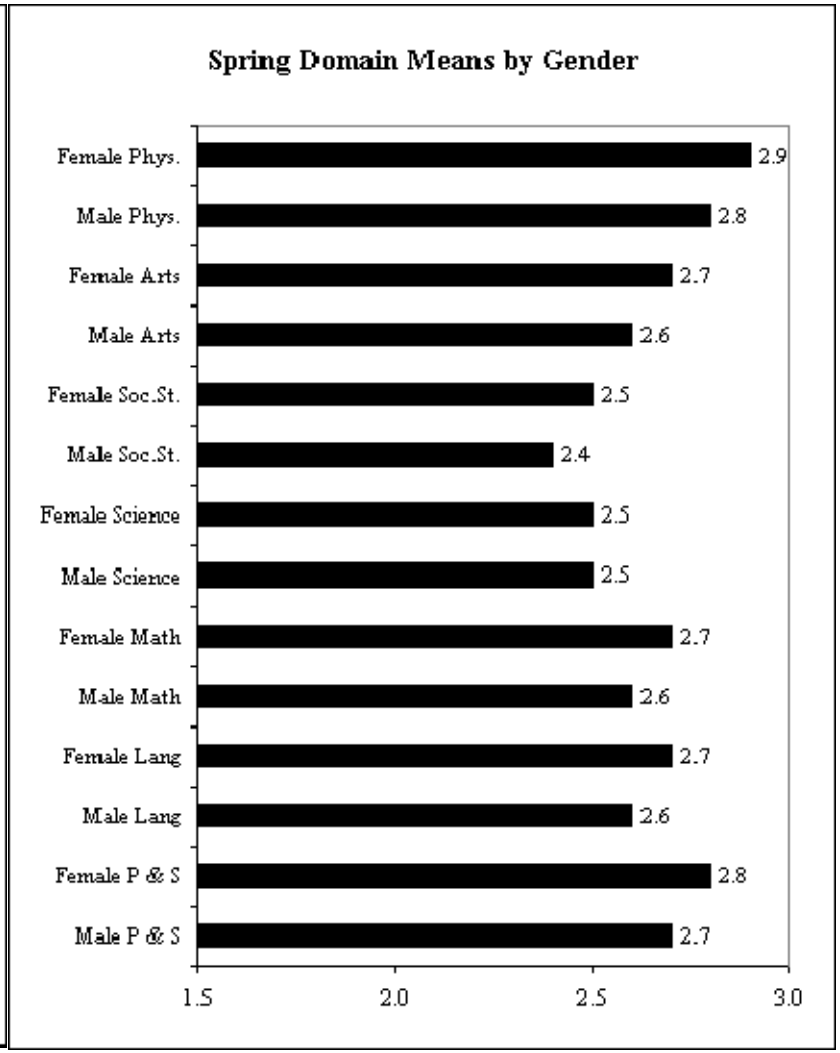
Domain Means by Socioeconomic Status, Developmental Delay, ESL Designation, and Gender: Four-Year-Olds



Significant differences in fall for all domains and in the spring for all except Personal & Social
Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Domain Means by Socioeconomic Status, Developmental Delay, ESL Designation, and Gender: Four-Year-Olds





Significant differences in fall for Language, The Arts, & Physical Development and in the spring for all except Scientific Thinking
Scale: 1=Not Yet; 2=In Progress; 3=Proficient

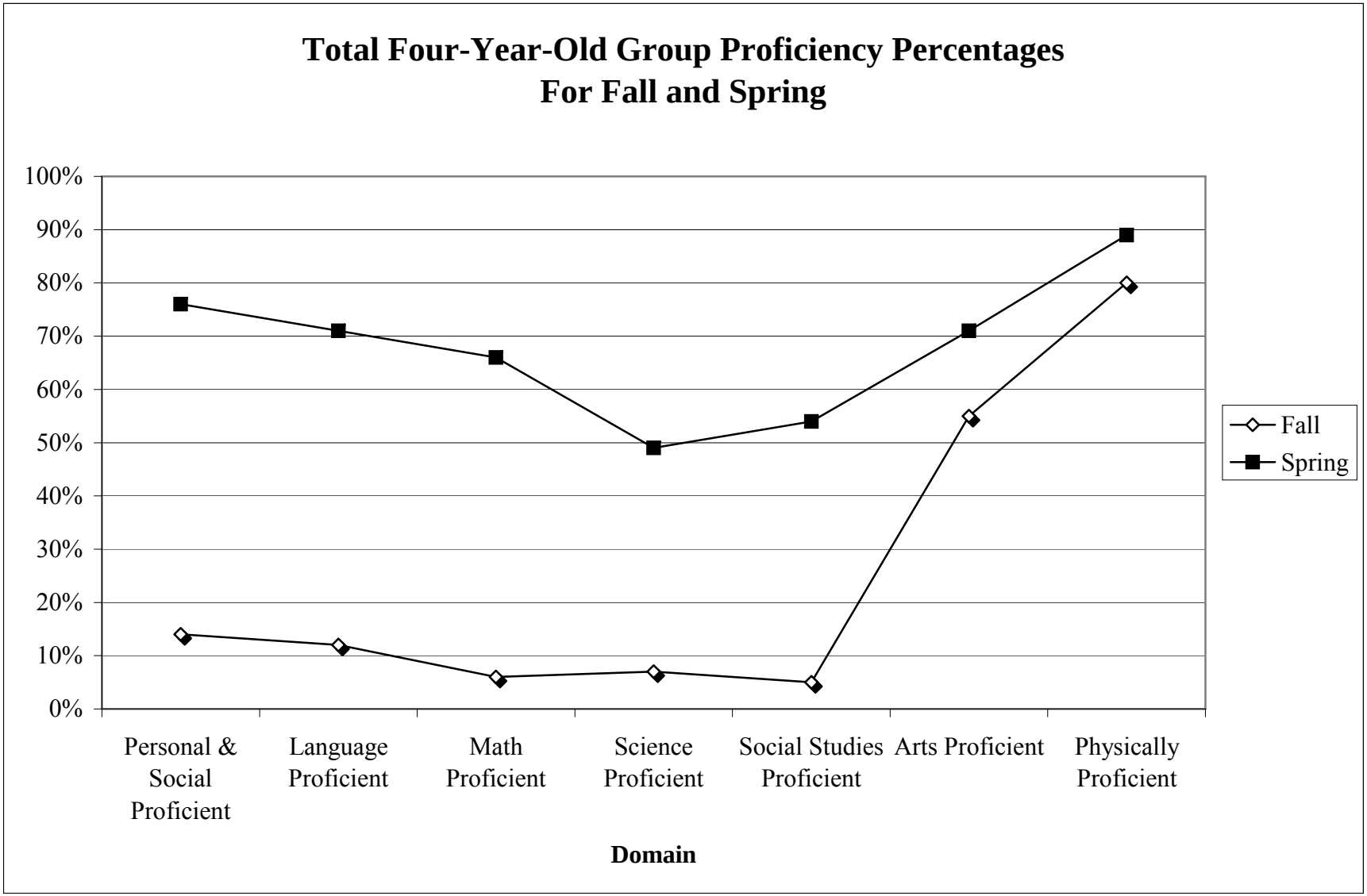


Chart represents percent of children who received a rating of 2.5 or better on 3-point scale

Discriminant analyses were run on the fall and spring proficiency data in the three areas that program directors said were the focus of their at-risk four-year-old programs: Personal and Social Development, Language and Literacy, and Mathematical Thinking. When "number of at-risk factors" was used as the independent variable, children were correctly identified as being proficient or not proficient in a domain at least two-thirds of the time (Table 4). The variable was a better predictor in the fall than in the spring, indicating that the program may have lessened the influence of the at-risk factors on the children's achievement.

Table 4: Correct Classification Percentage, Using Total Number of At-Risk Factors Variable

Domain	Fall	Spring
Personal & Social Development	86%	76%
Language & Literacy	88%	71%
Mathematical Thinking	94%	67%

2000-2001 First Grade Group Results

Kindergarten teachers were given the names of children in the longitudinal study sample: the sample of children upon which the first year's report was based. Teachers were asked to match each child in the study sample with a similar (comparison) child, using the matching variables of gender, socioeconomic status of family, English language proficiency, and time of year of birth. If possible, they were to select children who had not attended preschool as four-year-olds. Unfortunately, comparison students were not selected in each of the districts, and many comparison students who were selected had attended preschool (65 students). The number of students from the original sample remaining in schools where they could be followed during the fall of the 2000-2001 school year, the children's first grade year, was 243 children, or less than 50 percent of the original number. The number of comparison students remaining in the study was 157 in the fall of 2000. By the spring of 2001, the number of students in the program and comparison groups decreased to 238 and 156, respectively.

Ratings for the 74 items on the First Grade Checklist collapse into 27 sub-domain and 7 domain ratings. Fall and spring ratings are shown in Table 5. The scale is the same as the one for the preschool Checklist: 1=Not Yet; 2=In Process; and 3=Proficient. Consistent with growth in the previous years, the most growth during the year occurred in Mathematics and the least occurred in Physical Development. Explaining and Forming Conclusions, Measurement, Writing, and Questioning and Predicting were the lowest rated sub-domains in the fall. Explaining and Forming Conclusions and Questioning and Predicting remained the lowest ratings in the spring.

Table 5: Domain and Sub-Domain Means: First Grade Group

	First Grade Fall Means			First Grade Spring Means			
Domain	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**Change**
Self concept	563	2.14	0.6	563	2.56	0.5	0.42
Self control	563	2.38	0.6	563	2.70	0.4	0.32
Approach to learning	563	2.14	0.6	563	2.61	0.5	0.47
Interactions with others	563	2.35	0.5	563	2.71	0.4	0.36
Conflict resolution	563	2.00	0.5	563	2.47	0.5	0.47
Personal & Social Development	563	2.20	0.5	563	2.61	0.4	0.41
Listening	563	2.08	0.6	563	2.56	0.5	0.48
Speaking	563	2.13	0.6	563	2.57	0.6	0.44
Literature & reading	563	2.12	0.5	563	2.63	0.4	0.51
Writing	563	1.65	0.5	563	2.36	0.5	0.71
Spelling	563	1.79	0.6	563	2.51	0.5	0.72
Language and Literacy	563	1.95	0.5	563	2.52	0.4	0.57
Approach to math thinking	563	1.79	0.5	563	2.42	0.6	0.63
Patterns & relationships	563	2.23	0.5	563	2.75	0.4	0.52
Number concept & operations	563	1.80	0.4	563	2.51	0.4	0.71
Geometry & spatial relations	563	1.90	0.5	563	2.54	0.5	0.64
Measurement	563	1.60	0.5	563	2.38	0.5	0.78
Probability & statistics	563	1.84	0.5	563	2.50	0.5	0.66
Mathematical Thinking	563	1.87	0.4	563	2.52	0.4	0.65
Observing & investigating	563	1.74	0.5	563	2.37	0.5	0.63
Questioning & predicting	563	1.68	0.6	563	2.25	0.6	0.57
Explaining & forming conclusions	563	1.55	0.5	563	2.13	0.6	0.58
Scientific Thinking	563	1.66	0.4	563	2.25	0.5	0.59
Human similarities & difference	563	2.02	0.5	563	2.56	0.5	0.54
Human interdependence	563	1.71	0.5	563	2.36	0.5	0.65
Rights & responsibilities	563	2.00	0.5	563	2.49	0.5	0.49
People & where they live	563	1.70	0.5	563	2.31	0.5	0.61
Social Studies	563	1.81	0.4	563	2.39	0.4	0.58
Expression & representation	563	1.91	0.5	563	2.38	0.5	0.47
Artistic appreciation	563	1.86	0.5	563	2.28	0.5	0.42
The Arts	563	1.89	0.5	563	2.33	0.5	0.44
Gross motor development	563	2.49	0.6	563	2.76	0.4	0.27
Fine motor development	563	2.41	0.5	563	2.74	0.4	0.33
Physical Development	563	2.37	0.5	563	2.71	0.4	0.34

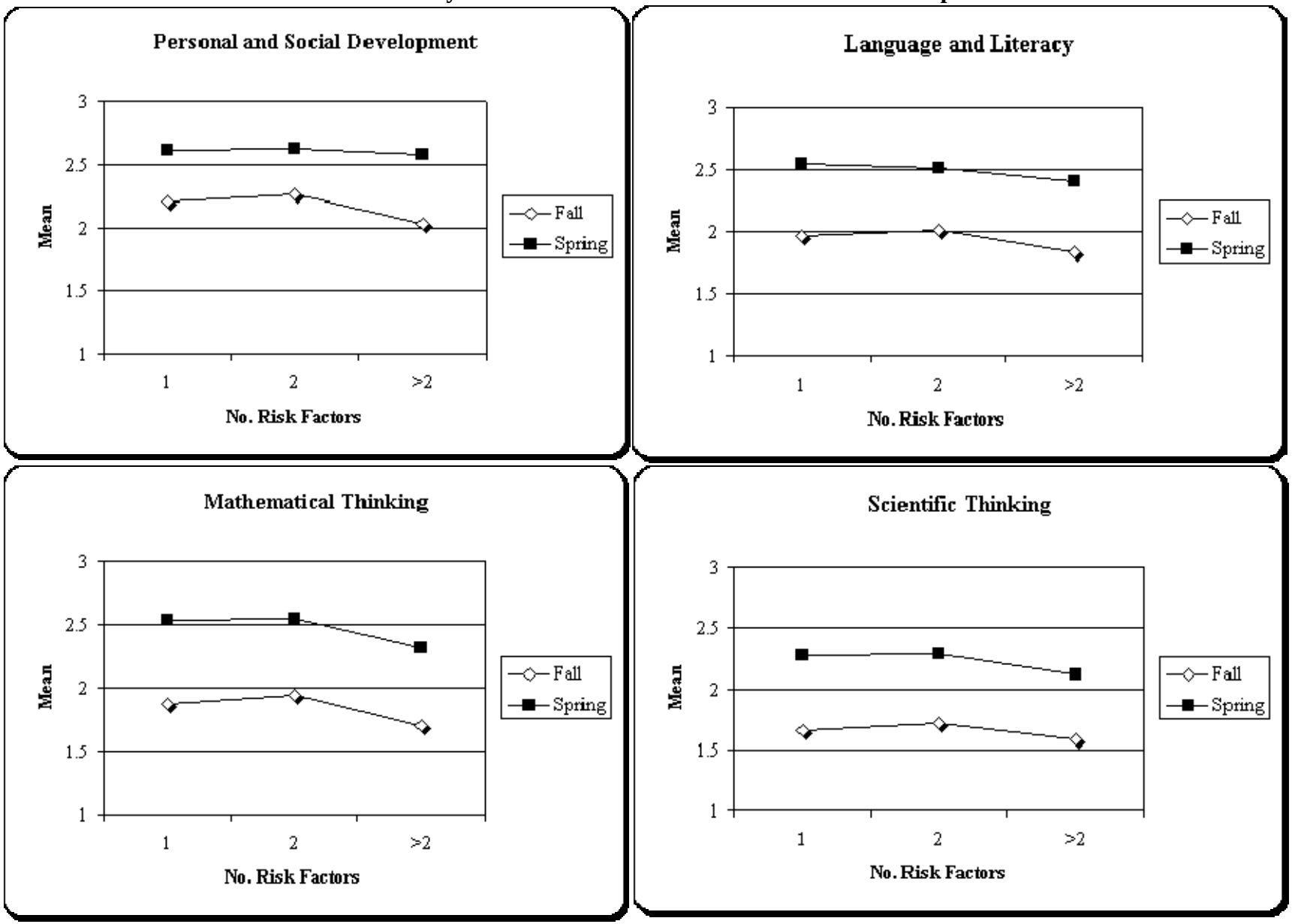
Scale: 1=Not Yet; 2=In Process; 3=Proficient

The number of at-risk factors faced by a child can affect the child's ability to adjust to school and to achieve. Therefore, the Checklist data were analyzed by the number of risk factors associated with each child. The graphs on pages 16 and 17 show the results for the first grade year. There were statistically significant differences by number of at-risk factors, when these children were kindergartners, in all domains in the fall and in all domains except The Arts in the spring. During the children's first grade year, there were statistically significant differences in Mathematical Thinking, Social Studies, and Physical Development in the fall

and in Mathematical Thinking and Physical Development in the spring. Children with three or more risk factors were rated lower than other children.

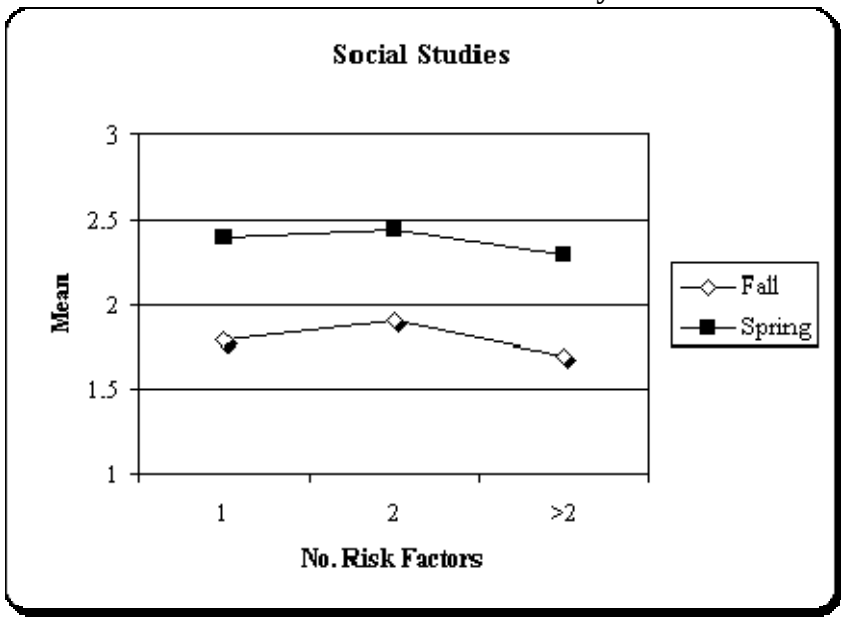
Data were analyzed to identify which of the risk factors made the most difference in domain ratings. When these children were in kindergarten, there were statistically significant differences in ratings by SES in all domains in the fall and in all domains except Scientific Thinking, Social Studies, and Physical Development in the spring. During the first grade year, there were statistically significant differences by SES in Mathematical Thinking, Scientific Thinking, and Social Studies in the fall and in all domains except Physical Development in the spring. There was a significant difference by ESL designation during the fall of the kindergarten year in Language and Literacy, Mathematical Thinking, and Scientific Thinking. In the spring, there were no significant differences in any domain. During the first grade year, there were no statistically significant differences by ESL designation in the fall or spring. Although gender is not one of the risk factors, data were also analyzed by gender. There were significant differences in the fall of the kindergarten year in all domains and in the spring in all except Mathematical Thinking and Scientific Thinking. During the first grade year, there were significant gender differences in all domains except Mathematical Thinking in the fall and in all domains except Mathematical Thinking and Scientific Thinking in the spring. In the area of preschool attendance, there were significant differences during the fall of the kindergarten year in all domains and in the spring of the kindergarten year as well as the fall and spring of the first grade year in no domains. When there were significant differences, higher SES, non-ESL, and female children received the highest ratings. Table A3 in Appendix A includes mean and standard deviation data for all domains and sub domains for the children's first grade year.

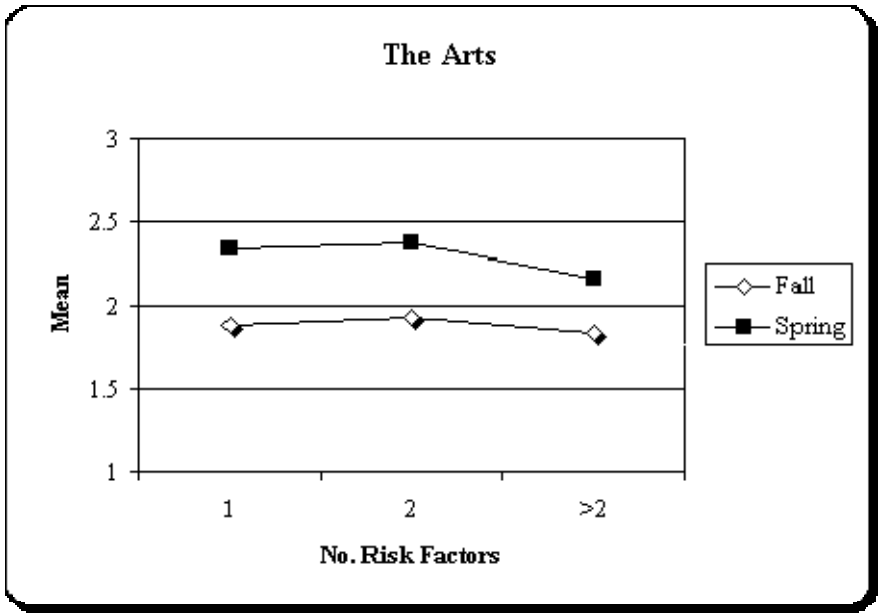
Domain Means by Number of At-Risk Factors: First Grade Group

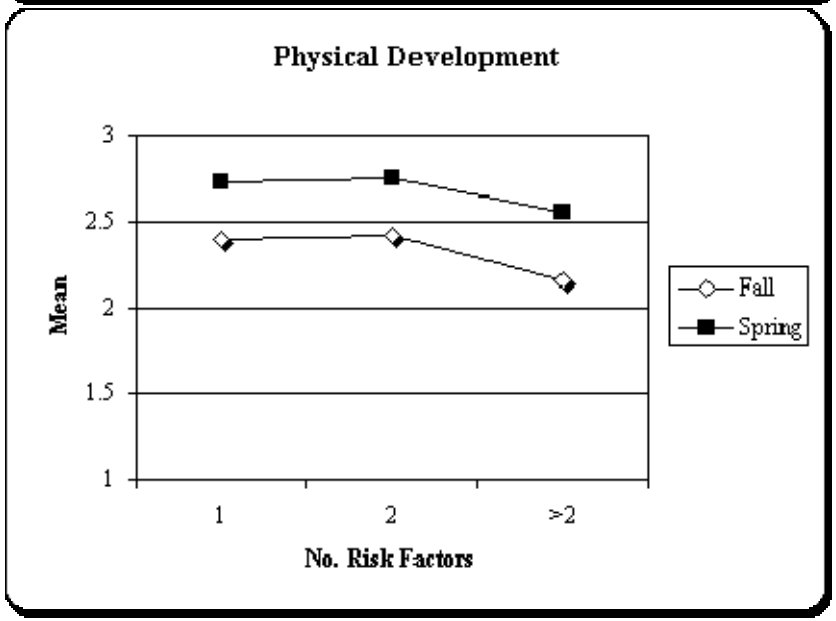


Scale: 1=Not Yet; 2=In Progress; 3=Proficient
Significant differences in Mathematical Thinking, Social Studies, and Physical Development in the fall and in Mathematical Thinking and Physical Development in the spring.

Domain Means by Number of At-Risk Factors: First Grade Group







Scale: 1=Not Yet; 2=In Progress; 3=Proficient
Significant differences in Mathematical Thinking, Social Studies, and Physical Development in the fall and in Mathematical Thinking and Physical Development in the spring.

Although there are statistically significant differences between some of the groups, those differences are affected by sample size and might not be educationally significant. Effect sizes give a better estimate of educational significance and were computed for these data by subtracting one subgroup mean from the other and then dividing by the standard deviation for all of the children. An effect size under .4 is considered small or relatively insignificant, an effect size between .4 and .75 is considered medium, and an effect size over .75 is considered large or very significant. The shaded cells in Table 6 indicate comparisons that were statistically significant in previous analyses (ANOVAS). There were no large effect sizes for any comparisons and no medium effect sizes, when data were analyzed by preschool experience. When data were analyzed by SES, there were medium effect sizes for Language and Literacy and Mathematical Thinking in the fall of the kindergarten year and in The Arts in the spring of the first grade year. Effect size increased in all domains from the fall to the spring of the first grade year. When data were analyzed by gender, there were medium effect sizes for Personal and Social Development and The Arts in both the fall of the kindergarten and fall of first grade years and in The Arts in the spring of the kindergarten year. The analysis for number of risk factors compared the children with one risk factor to the children with more than two risk factors. There was a medium effect size for Mathematical Thinking and for Physical Development in the fall and spring of the first grade year. The effect sizes for Personal and Social Development and for Physical Development decreased from fall to spring. All other effect sizes increased. It appears from the data that the gap for ESL children is becoming smaller and the gap for lower SES children is becoming larger as the children progress through the grades. Unfortunately, the benefits gained from preschool seem to be diminishing.

As mentioned previously, items listed on the Checklist for each age group are meant to measure the knowledge and skills that most children of that age master at some time during the year. As with the preschoolers, a proficiency index was computed for each first grader. A child was marked as proficient if the child's teacher gave him/her a rating of 2.5 or higher on the 3-point Checklist scale. A summary of the results is shown in the graph on page 20. In the fall and spring, there were more children rated proficient in the areas of Personal and Social Development and Physical Development than in other domains. At the end of the year, about one-third of the children were given proficient ratings in Scientific Thinking, Social Studies, and The Arts. Slightly more than half were rated proficient in Language and Literacy and Mathematical Thinking. With the exceptions of Personal and Social Development and Physical Development, less than 40 percent of the first grade children with multiple risk factors were rated proficient in any domain on the first grade Checklist (Table A4, Appendix A).

Table 6: Effect Sizes by Characteristics of Students*

SES Subgroups

	Kindergarten Fall	Kindergarten Spring	1st Gr. Fall	1st Gr. Spring
Personal & Social Development	.38	.19	.17	.20
Language and Literacy	.41	.28	.16	.28
Mathematical Thinking	.44	.32	.25	.37
Scientific Thinking	.37	.14	.22	.38
Social Studies	.33	.14	.25	.29
The Arts	.30	.21	.19	.42
Physical Development	.33	.16	.08	.14

Gender Subgroups

	Kindergarten Fall	Kindergarten Spring	1st Gr. Fall	1st Gr. Spring
Personal & Social Development	-.46	-.35	-.46	-.39
Language and Literacy	-.36	-.30	-.31	-.21
Mathematical Thinking	-.27	-.16	-.14	-.13
Scientific Thinking	-.21	-.12	-.26	-.14
Social Studies	-.33	-.28	-.27	-.27
The Arts	-.54	-.45	-.40	-.35
Physical Development	-.39	-.25	-.27	-.28

Preschool Experience Subgroups

	Kinder. Fall	Kinder. Spring	1st Gr. Fall	1st Gr. Spring
Personal & Social Development	0.30	0.09	0.05	-0.03
Language and Literacy	0.36	0.08	-0.06	0.01
Mathematical Thinking	0.34	0.18	-0.03	0.10
Scientific Thinking	0.22	0.18	0.00	0.04
Social Studies	0.23	0.13	-0.11	-0.03
The Arts	0.19	0.00	-0.10	0.03
Physical Development	0.35	0.17	0.18	0.15

1st Grade Number of At-Risk Factors Subgroups
Children with One Risk Factor Compared to Those with More than Two

	Fall	Spring
Personal & Social Development	.35	.08
Language and Literacy	.29	.36
Mathematical Thinking	.43	.56
Scientific Thinking	.18	.33
Social Studies	.23	.25
The Arts	.13	.38
Physical Development	.51	.46

*ESL effect sizes were not computed because there were insignificant differences between groups after the fall of the kindergarten year.

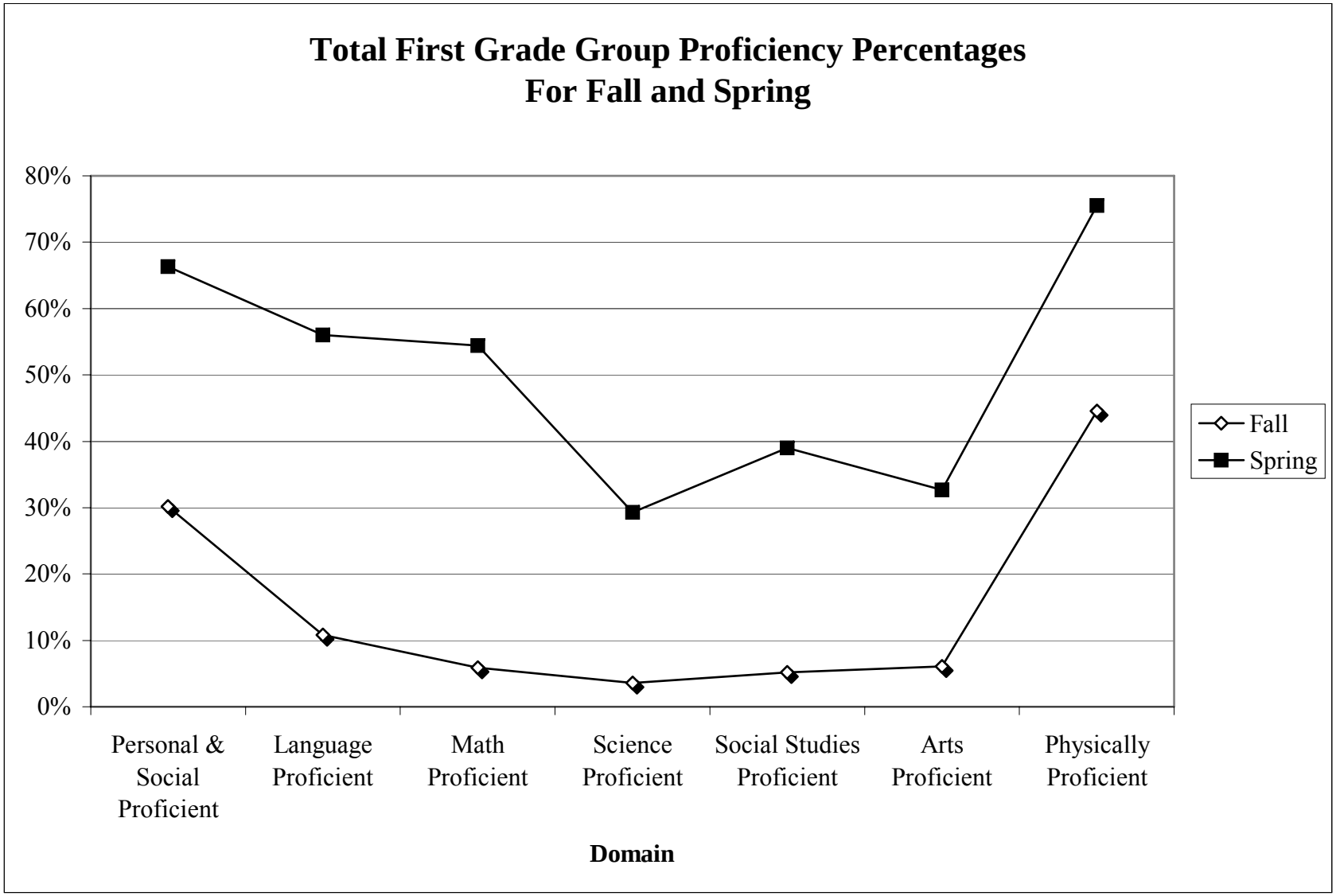


Chart represents percent of children who received a rating of 2.5 or better on 3-point scale

Discriminant analyses were run on the Language and Literacy and Mathematical Thinking spring proficiency data. When "number of at-risk factors" was used as the independent variable, children were correctly identified as being proficient or not proficient in a domain nearly 60 percent of the time. All of the children in the study are at-risk, but the number of at-risk factors associated with a child is still a good predictor of level of achievement. Preschool attendance is no longer an accurate predictor of achievement for these at-risk children.

Program Director Interview Information

Fourteen districts that have participated in the Four-Year-Old At-Risk program since the first year of funding were selected for in-depth interviews concerning the implementation and on-going operation of their programs. Interviews were conducted primarily with program directors; however, teachers and principals were occasionally included. Interviews were conducted between October 23rd and November 26th, 2001, with thirteen of the interviews completed in person and one interview completed over the telephone. A summary of the interview findings follow:

The number of four-year-old children in each district's program ranges from 17 to 1,242. About half of the districts have classrooms consisting of some combination of Four-Year-Old At-Risk program children, regular preschool children, Title I children, three year olds, and special education children. Teachers in the Four-Year-Old At-Risk program are certified primarily in early childhood, elementary education, or both. Other certifications include K-5, K-8, K-9, and early childhood special education. Student/teacher ratios range from 10/1 to 25/1. In addition, nearly all the classrooms receive the assistance of at least one paraprofessional. Some of the teachers in the Four-Year-Old At-Risk program are experienced teachers, with as many as 20 years experience in early childhood education. For many, however, this is their first teaching assignment. The Four-Year-Old At-Risk program teachers do participate in the training programs that are offered to all teachers in the district. Unfortunately, especially for the new teachers, this training does not specifically target the needs of four-year-olds or at-risk children.

Of the fourteen districts, only one offers an all-day early childhood program to its four-year-old at-risk children. This district is receiving additional, private funding that enables the extended program. Nearly all of the district directors said that they would like to be able to offer an all-day program.

There is little variation among programs when it comes to program goals. Without exception, one goal is to prepare the children for success in kindergarten. Many districts also emphasize the importance of facilitating a seamless transition between preschool and kindergarten and of closing the gap between at-risk and non-at-risk children in terms of their preparedness and readiness to learn in kindergarten and beyond. Fostering parent success and parent involvement in their children's education were explicitly stated in the goals of two of the districts; for most other districts, this was at least an implicit goal.

Most districts report that they have established developmentally appropriate, early childhood curriculums for their Four-Year-Old At-Risk programs. The curriculum and service content

were established through a collaborative process, most often involving teachers (usually Four-Year-Old At-Risk program teachers, language arts teachers, and special education teachers) and administrators. A variety of resources and models were utilized in the development of the goals and curriculum including High Scope goals, Head Start activities, National Association of Childcare standards, the Early Prevention of School Failure (EPSF) model, On the Way to Success, and Kansas State Department of Education benchmarks and standards. The most typical curriculum development process was to look at performance and learning expectations in kindergarten and align the preschool curriculum in a way that will have the children ready to learn when they first enter kindergarten. Aligning the curriculum in this manner also provides continuity of service between the Four-Year-Old At-Risk program, kindergarten, and other early primary grades. A very few districts do not have a formal curriculum for their programs. The directors say that they have the teachers assess the children and adapt instruction based on each child's specific needs. It is quite common for the program and kindergarten teachers to collaborate with each other and share materials. Many of the districts have deliberately located the Four-Year-Old At-Risk program in an elementary school in order to facilitate teacher collaboration and to get the children accustomed to a larger school environment.

According to program directors, due to the young age of the children, curriculum refers not to the more traditional concept of developing reading, writing, and math skills, but rather to fostering a "readiness" to learn these skills in kindergarten. For example, four-year-olds are not expected to learn to read, but they are expected to learn how to recognize letters and to develop their phonemic awareness skills. These skills provide the foundation that is needed for learning to read. While emphasis is placed primarily on literacy skills, other "curriculum" content includes development of math introductory skills, social skills, and fine and gross motor skills.

In order to meet the diversity of student needs, classroom activities are structured so that there are many chances for small group and individual activities with the teachers. Learning centers and one-on-one activities allow teachers to work closely with individual children and become familiar with each child's interests and strengths. Teachers often adapt existing models and activities, such as Head Start, in developing individual plans for each child.

Some of the districts have made a deliberate effort to include parents in their children's learning and have adapted models designed to educate parents about how to work with their children at home, such as Families Learning In Partnership, Parent As Teacher, and Project Ease. In one district, parents are strongly urged to participate in weekly parent/child time at the school. Many of the districts make books available to the children that can be taken home and read by parents, and some schools have evening activities for families, such as family literacy nights. Directors say that parents are always welcome to visit the classrooms and volunteer to assist with classroom and field trip activities.

Program directors say there are a number of factors that prevent parents from taking a more active role in their children's education. For example, some parents do not speak English and have difficulty communicating with school staff. Others have job schedules that do not allow them to give much assistance to their children or to their children's teachers. Although many

of the districts offer take-home books in other languages (most often in Spanish) so that parents who do not speak or read English can read to their preschool children, and although the preschool staff try to adapt schedules so that all parents can contact staff, there are few efforts to enable parents to assist their children in the years after preschool. Only one district reports that it formally assesses the parents' needs in addition to assessing the needs of the children. This district has seen an increase in the use of its Adult Learning Center. Many of the parents in this district have enrolled in ESL training, are working to get their GED, or are learning how to use computers.

Developmental literature and classroom observations indicate that a heavy emphasis should be placed on developing the literacy and social skills of the children and this tends to be the primary focus of most programs. Developing literacy skills has become even more pressing in districts that have English as Second Language (ESL) children. Of the fourteen districts interviewed, only three stated that they do not have any ESL children. While most districts have at least a few ESL children, one reported that approximately 64 percent of its children come from non-European cultures. Another district reported that, due to a large international community, anywhere from 30 to 40 different languages are spoken by children in district schools. A large variation was found among districts in the way language barriers between teachers and children are handled. In one district, nearly all of the Four-Year-Old At-Risk teachers are bilingual (Spanish/English), two of the teachers have ESL endorsements, and half of the classes are taught in Spanish. In other districts, no ESL services are provided and non-English-speaking children are expected to assimilate via immersion into English speaking classrooms. Most typically, however, the preschool program teachers have access to ESL staff support and/or at least one of the Four-Year-Old At-Risk teachers or paraprofessionals is bilingual (Spanish/English).

Some of the children in the Four-Year-Old At-Risk program have never been in daycare or preschool before. For these children, program staff often concentrate on accustoming the children to the school environment: learning appropriate classroom conduct, paying attention during story time, and becoming familiar with the school building itself. Directors report that many of their Four-Year-Old At-Risk program children are entering the program with existing behavior problems. In these instances the programs are able to provide early interventions designed to address and correct these behaviors so that, by kindergarten, they are no longer an issue. One of the indicators of the program's success often cited by the directors is that kindergarten teachers say they are spending much less time dealing with problem behaviors. Consequently, there are fewer classroom disruptions, the teachers are able to focus their time and attention on teaching, and all children learn more.

Two frequently reported problems that occurred during implementation of the program were finding the additional classroom space and getting the word about program availability out to parents of eligible children. In order to find additional classroom space, most schools had to rearrange classroom schedules (e.g., ½ day at-risk program, ½ day kindergarten). Frequent strategies that were used to reach the parents included poster campaigns, working with area social service agencies and day-care facilities to get referrals, and word of mouth. However, most districts stress that getting the word out to parents was only a problem initially. Once the parents understood what the program could do for their children, they were sold. One

indicator of the program's success cited by the directors is that they are now seeing younger siblings being enrolled in the program by satisfied parents.

Initially, there was some tension among the at-risk program teachers, special education teachers, and community daycare providers in many of the districts. Directors spoke of the confusion that seemed to exist about teachers' roles and program ownership. Daycare providers viewed the program as a threat to their business. Most of these issues were quickly resolved through fostering partnerships among the different groups and stressing the need to work together to address the needs of all the children. Other problems with initial program implementation included, getting all the children enrolled by the September 20th deadline, teacher recruitment and retention, and getting licensing and inspections completed on time.

A variety of transportation problems were reported. In one district, the program staff had to pick up and drop off the children using their own vehicles until arrangements could be made with Head Start to take on transportation. Another district reported that between ⅓ to ½ of its at-risk preschool budget goes toward transportation expenses. Transporting the children back and forth between preschool and daycare has also posed problems for parents. Because almost all of the programs are ½ day programs, parents must leave work during the middle of the day in order to shuffle their children between two settings. Transportation requirements are a serious problem for parents who do not own or have access to a vehicle and to parents who have employers who are unwilling to adjust work schedules. In some cases, parents have had to take their children out of the program because of transportation problems. The location of daycare centers has created transportation problems in some cases. For example, a student's home might be located within the district's attendance area, thereby making him or her eligible to ride the school bus. However, the school bus cannot be used to transport children between their school and their daycare if the daycare center is located outside of the attendance area.

When asked about ongoing problems, space was once again high on the directors' list. They say that classrooms are overcrowded and additional space is needed. The September 20th enrollment deadline continues to be a problem, especially if children move into the district after that date. Finally, teacher retention and student attrition are ongoing issues for most districts. Some feel that the "at-risk" label is stigmatizing. As an alternative, some would like to offer the preschool program to all four year olds. It is believed that this would remove the stigma and that it would be beneficial for the so-called at-risk children to be exposed to non at-risk peer models. Finally, nearly all of the districts would like to be able to provide an all-day preschool.

When asked, "In what ways has the program been successful?" respondents eagerly gave the following answers.

- The children are prepared for kindergarten. Kindergarten and 1st grade teachers report that the children are better prepared socially and emotionally, that they have better attention spans, and that they are performing better in class. Language gains are also seen in the ESL children by the time they enter kindergarten.
- Children and parents have already settled into a routine by the time they start kindergarten so they do not need to take time during kindergarten to acclimate

themselves to a new environment. They are familiar with the school building, the teachers, school policies, and transportation.

- The Four-Year-Old At-Risk program provides a much needed service to children who would otherwise go without preschool.
- Student needs and problems can be identified early and, consequently, early intervention can be provided at a time when more options are available. Furthermore, early interventions avert the perception in kindergarten that a student is a "problem" student or that he or she is failing.
- There is an increase in parent participation. Parents are actively looking at their children's attendance and are making sure that their children are at school every day and on time.

It is difficult to articulate the enthusiastic and animated responses that were given by directors when asked if there was anything else that they wanted the Kansas State Board of Education and the Kansas State Legislature to know about the Four-Year-Old At-Risk program. Without exception, they feel that the program is valuable and much needed and that it is reaching children that otherwise would go without preschool and other services. The directors appreciate the funding and support given by the State Legislature and Board of Education and would very much like to see the program continued, if not expanded. Several of the directors extended invitations to Board and Legislature members to come for on-site visits. The directors offered to personally make the arrangements. One director summed up the majority sentiment by saying, "Tell them it's one of the smartest things they've ever done."

APPENDIX A

DATA TABLES

Table A1: Disaggregated Means for Four-Year-Old Group

Personal & Social Development Means			Fall			Spring		
Variable		Sub Domain	Count	Mean	Std Dev.	Count	Mean	Std Dev.
Lower SES	**No**	self concept	229	2.0	0.6	229	2.7	0.4
		self control	229	2.1	0.5	229	2.8	0.4
		approach to learning	229	1.9	0.5	229	2.7	0.4
		interactions with others	229	2.0	0.6	229	2.7	0.3
		conflict resolution	229	1.8	0.5	229	2.6	0.5
	Yes	self concept	504	2.0	0.5	504	2.7	0.4
		self control	504	2.1	0.5	504	2.8	0.3
		approach to learning	504	2.0	0.5	504	2.7	0.4
		interactions with others	504	2.1	0.5	504	2.8	0.3
		conflict resolution	504	1.8	0.6	504	2.6	0.4
Developmental Delay	**No**	self concept	520	2.0	0.6	520	2.8	0.4
		self control	520	2.2	0.5	520	2.8	0.3
		approach to learning	520	2.0	0.5	520	2.7	0.4
		interactions with others	520	2.1	0.5	520	2.8	0.3
		conflict resolution	520	1.9	0.6	520	2.6	0.4
	Yes	self concept	213	1.8	0.5	213	2.6	0.5
		self control	213	2.0	0.5	213	2.8	0.3
		approach to learning	213	1.8	0.5	213	2.7	0.4
		interactions with others	213	2.0	0.5	213	2.7	0.3
		conflict resolution	213	1.7	0.5	213	2.6	0.5
Limited English speaking	**No**	self concept	590	2.0	0.6	590	2.7	0.4
		self control	590	2.2	0.5	590	2.8	0.3
		approach to learning	590	2.0	0.5	590	2.7	0.4
		interactions with others	590	2.1	0.5	590	2.8	0.3
		conflict resolution	590	1.9	0.6	590	2.6	0.4
	Yes	self concept	143	1.8	0.5	143	2.7	0.4
		self control	143	2.0	0.5	143	2.8	0.4
		approach to learning	143	1.8	0.5	143	2.6	0.4
		interactions with others	143	1.9	0.5	143	2.7	0.4
		conflict resolution	143	1.6	0.5	143	2.5	0.5
Gender	**Male**	self concept	378	2.0	0.5	378	2.7	0.4
		self control	378	2.1	0.5	378	2.8	0.4
		approach to learning	378	1.9	0.5	378	2.6	0.4
		interactions with others	378	2.0	0.5	378	2.7	0.3
		conflict resolution	378	1.8	0.5	378	2.6	0.4
	Female	self concept	360	2.0	0.6	360	2.8	0.4
		self control	360	2.2	0.5	360	2.9	0.3
		approach to learning	360	2.0	0.5	360	2.7	0.4
		interactions with others	360	2.1	0.5	360	2.8	0.3
		conflict resolution	360	1.9	0.6	360	2.7	0.4
No. of At-Risk Factors	**1**	self concept	288	2.0	0.6	288	2.8	0.4
		self control	288	2.2	0.5	288	2.8	0.3
		approach to learning	288	2.0	0.5	288	2.7	0.4
		interactions with others	288	2.1	0.5	288	2.8	0.3
		conflict resolution	288	1.9	0.6	288	2.7	0.4
	2	self concept	234	2.0	0.6	234	2.7	0.4
		self control	234	2.2	0.5	234	2.8	0.4
		approach to learning	234	2.0	0.6	234	2.7	0.4
		interactions with others	234	2.1	0.5	234	2.8	0.4
		conflict resolution	234	1.9	0.6	234	2.6	0.5
	3	self concept	146	1.8	0.5	146	2.7	0.4
		self control	146	2.0	0.5	146	2.8	0.3
		approach to learning	146	1.8	0.5	146	2.7	0.4
		interactions with others	146	1.9	0.5	146	2.8	0.3
		conflict resolution	146	1.7	0.5	146	2.6	0.4
	4 or 5	self concept	65	1.8	0.5	65	2.6	0.5
		self control	65	2.0	0.4	65	2.7	0.4
		approach to learning	65	1.9	0.4	65	2.6	0.4
		interactions with others	65	1.9	0.4	65	2.6	0.4
		conflict resolution	65	1.8	0.4	65	2.5	0.5

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Language & Literacy Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	listening	229	1.9	0.6	229	2.7	0.5
		speaking	229	2.0	0.7	229	2.7	0.5
		literature & reading	229	1.8	0.5	229	2.6	0.4
		writing	229	1.8	0.6	229	2.7	0.4
	Yes	listening	504	1.9	0.6	504	2.7	0.4
		speaking	504	2.1	0.6	504	2.7	0.4
		literature & reading	504	1.9	0.5	504	2.6	0.4
		writing	504	1.7	0.6	504	2.7	0.4
Developmental Delay	**No**	listening	520	2.0	0.6	520	2.7	0.4
		speaking	520	2.1	0.6	520	2.7	0.4
		literature & reading	520	2.0	0.5	520	2.7	0.4
		writing	520	1.8	0.6	520	2.7	0.4
	Yes	listening	213	1.8	0.6	213	2.6	0.5
		speaking	213	1.8	0.6	213	2.6	0.5
		literature & reading	213	1.7	0.5	213	2.5	0.4
		writing	213	1.6	0.6	213	2.6	0.4
Limited English speaking	**No**	listening	590	2.0	0.6	590	2.7	0.4
		speaking	590	2.2	0.6	590	2.7	0.4
		literature & reading	590	1.9	0.5	590	2.7	0.4
		writing	590	1.8	0.6	590	2.7	0.4
	Yes	listening	143	1.6	0.5	143	2.5	0.5
		speaking	143	1.6	0.6	143	2.5	0.5
		literature & reading	143	1.6	0.5	143	2.5	0.4
		writing	143	1.7	0.5	143	2.7	0.4
Gender	**Male**	listening	378	1.9	0.5	378	2.6	0.5
		speaking	378	2.0	0.6	378	2.6	0.5
		literature & reading	378	1.9	0.5	378	2.6	0.5
		writing	378	1.6	0.5	378	2.6	0.5
	Female	listening	360	2.0	0.6	360	2.7	0.4
		speaking	360	2.1	0.6	360	2.7	0.4
		literature & reading	360	1.9	0.5	360	2.7	0.4
		writing	360	1.9	0.6	360	2.8	0.4
No. of At-Risk Factors	**1**	listening	288	2.0	0.6	288	2.8	0.4
		speaking	288	2.1	0.6	288	2.8	0.4
		literature & reading	288	2.0	0.5	288	2.7	0.4
		writing	288	1.8	0.6	288	2.7	0.4
	2	listening	234	2.0	0.6	234	2.7	0.5
		speaking	234	2.1	0.6	234	2.7	0.5
		literature & reading	234	1.9	0.6	234	2.6	0.4
		writing	234	1.8	0.6	234	2.7	0.4
	3	listening	146	1.7	0.5	146	2.6	0.4
		speaking	146	1.9	0.6	146	2.6	0.5
		literature & reading	146	1.7	0.5	146	2.5	0.4
		writing	146	1.6	0.5	146	2.6	0.4
	4 or 5	listening	65	1.8	0.5	65	2.4	0.5
		speaking	65	1.9	0.7	65	2.6	0.5
		literature & reading	65	1.7	0.4	65	2.5	0.4
		writing	65	1.6	0.6	65	2.6	0.5

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Mathematics Means			Fall			Spring		
Variable		Sub Domain	Count	Mean	Std Dev.	Count	Mean	Std Dev.
Lower SES	**No**	approach to math thinking	229	2.0	1.0	229	3.0	1.0
		patterns & relationships	229	1.7	0.6	229	1.7	0.6
		number concept & operations	229	2.0	1.0	229	3.0	0.0
		geometry & spatial relations	229	1.8	0.6	229	2.7	0.4
		measurement	229	1.7	0.5	229	2.5	0.5
	Yes	approach to math thinking	504	2.0	1.0	504	3.0	1.0
		patterns & relationships	504	1.8	0.5	504	1.8	0.5
		number concept & operations	504	2.0	1.0	504	3.0	0.0
		geometry & spatial relations	504	1.8	0.6	504	2.7	0.4
		measurement	504	1.7	0.5	504	2.5	0.5
Developmental Delay	**No**	approach to math thinking	520	2.0	1.0	520	3.0	1.0
		patterns & relationships	520	1.8	0.6	520	1.8	0.6
		number concept & operations	520	2.0	1.0	520	3.0	0.0
		geometry & spatial relations	520	1.8	0.6	520	2.7	0.4
		measurement	520	1.7	0.5	520	2.5	0.5
	Yes	approach to math thinking	213	2.0	1.0	213	2.0	1.0
		patterns & relationships	213	1.7	0.5	213	1.7	0.5
		number concept & operations	213	2.0	1.0	213	3.0	1.0
		geometry & spatial relations	213	1.7	0.6	213	2.6	0.4
		measurement	213	1.6	0.5	213	2.4	0.5
Limited English speaking	**No**	approach to math thinking	590	2.0	1.0	590	3.0	1.0
		patterns & relationships	590	1.8	0.6	590	1.8	0.6
		number concept & operations	590	2.0	1.0	590	3.0	0.0
		geometry & spatial relations	590	1.9	0.6	590	2.7	0.4
		measurement	590	1.7	0.5	590	2.5	0.5
	Yes	approach to math thinking	143	2.0	1.0	143	3.0	1.0
		patterns & relationships	143	1.6	0.5	143	1.6	0.5
		number concept & operations	143	2.0	1.0	143	3.0	0.0
		geometry & spatial relations	143	1.4	0.5	143	2.5	0.5
		measurement	143	1.4	0.5	143	2.3	0.5
Gender	**Male**	approach to math thinking	378	2.0	1.0	378	3.0	1.0
		patterns & relationships	378	1.7	0.5	378	1.7	0.5
		number concept & operations	378	2.0	1.0	378	3.0	0.0
		geometry & spatial relations	378	1.8	0.6	378	2.7	0.4
		measurement	378	1.7	0.5	378	2.5	0.5
	Female	approach to math thinking	360	2.0	1.0	360	3.0	1.0
		patterns & relationships	360	1.8	0.6	360	1.8	0.6
		number concept & operations	360	2.0	1.0	360	3.0	0.0
		geometry & spatial relations	360	1.8	0.6	360	2.8	0.4
		measurement	360	1.7	0.5	360	2.5	0.5
No. of At-Risk Factors	**1**	approach to math thinking	288	2.0	1.0	288	3.0	1.0
		patterns & relationships	288	1.8	0.6	288	1.8	0.6
		number concept & operations	288	2.0	1.0	288	3.0	0.0
		geometry & spatial relations	288	1.9	0.6	288	2.8	0.4
		measurement	288	1.7	0.5	288	2.6	0.5
	2	approach to math thinking	234	2.0	1.0	234	3.0	1.0
		patterns & relationships	234	1.8	0.6	234	1.8	0.6
		number concept & operations	234	2.0	1.0	234	3.0	0.0
		geometry & spatial relations	234	1.8	0.6	234	2.7	0.4
		measurement	234	1.7	0.5	234	2.5	0.5
	3	approach to math thinking	146	2.0	1.0	146	3.0	1.0
		patterns & relationships	146	1.6	0.5	146	1.6	0.5
		number concept & operations	146	2.0	1.0	146	3.0	1.0
		geometry & spatial relations	146	1.6	0.5	146	2.6	0.4
		measurement	146	1.5	0.5	146	2.4	0.5
	4 or 5	approach to math thinking	65	2.0	1.0	65	2.0	1.0
		patterns & relationships	65	1.6	0.5	65	1.6	0.5
		number concept & operations	65	2.0	1.0	65	3.0	1.0
		geometry & spatial relations	65	1.7	0.6	65	2.6	0.5
		measurement	65	1.5	0.5	65	2.3	0.5

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Science Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	observing & investigating	229	1.7	0.5	229	2.5	0.5
		questioning & predicting	229	2.0	1.0	229	2.0	1.0
	Yes	observing & investigating	504	1.8	0.5	504	2.6	0.5
		questioning & predicting	504	2.0	1.0	504	2.0	1.0
Developmental Delay	**No**	observing & investigating	520	1.8	0.5	520	2.6	0.5
		questioning & predicting	520	2.0	1.0	520	2.0	1.0
	Yes	observing & investigating	213	1.7	0.5	213	2.5	0.4
		questioning & predicting	213	2.0	1.0	213	2.0	1.0
Limited English speaking	**No**	observing & investigating	590	1.8	0.5	590	2.5	0.5
		questioning & predicting	590	2.0	1.0	590	3.0	1.0
	Yes	observing & investigating	143	1.6	0.4	143	2.5	0.5
		questioning & predicting	143	1.0	0.0	143	2.0	1.0
Gender	**Male**	observing & investigating	378	1.8	0.5	378	2.5	0.5
		questioning & predicting	378	2.0	1.0	378	2.0	1.0
	Female	observing & investigating	360	1.8	0.5	360	2.5	0.5
		questioning & predicting	360	2.0	1.0	360	2.0	1.0
No. of At-Risk Factors	**1**	observing & investigating	288	1.8	0.5	288	2.6	0.5
		questioning & predicting	288	2.0	1.0	288	3.0	1.0
	2	observing & investigating	234	1.8	0.5	234	2.5	0.5
		questioning & predicting	234	2.0	1.0	234	2.0	1.0
	3	observing & investigating	146	1.7	0.5	146	2.5	0.5
		questioning & predicting	146	2.0	1.0	146	2.0	1.0
	4 or 5	observing & investigating	65	1.8	0.5	65	2.5	0.4
		questioning & predicting	65	2.0	1.0	65	2.0	1.0

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Social Studies Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	human similarities & differences	229	2.0	1.0	229	3.0	1.0
		human interdependence	229	1.7	0.5	229	2.5	0.5
		rights & responsibilities	229	1.7	0.6	229	2.5	0.5
		people & where they live	229	1.5	0.5	229	2.3	0.6
	Yes	human similarities & differences	504	2.0	1.0	504	3.0	1.0
		human interdependence	504	1.7	0.5	504	2.5	0.5
		rights & responsibilities	504	1.8	0.5	504	2.5	0.5
		people & where they live	504	1.5	0.5	504	2.3	0.6
Developmental Delay	**No**	human similarities & differences	520	2.0	1.0	520	3.0	1.0
		human interdependence	520	1.8	0.5	520	2.5	0.5
		rights & responsibilities	520	1.8	0.5	520	2.5	0.5
		people & where they live	520	1.5	0.5	520	2.3	0.6
	Yes	human similarities & differences	213	2.0	1.0	213	3.0	1.0
		human interdependence	213	1.6	0.4	213	2.4	0.5
		rights & responsibilities	213	1.7	0.5	213	2.5	0.5
		people & where they live	213	1.4	0.5	213	2.2	0.6
Limited English speaking	**No**	human similarities & differences	590	2.0	1.0	590	3.0	1.0
		human interdependence	590	1.8	0.5	590	2.5	0.5
		rights & responsibilities	590	1.8	0.5	590	2.5	0.5
		people & where they live	590	1.5	0.5	590	2.3	0.6
	Yes	human similarities & differences	143	2.0	1.0	143	3.0	1.0
		human interdependence	143	1.5	0.4	143	2.4	0.5
		rights & responsibilities	143	1.6	0.5	143	2.5	0.5
		people & where they live	143	1.3	0.4	143	2.2	0.5
Gender	**Male**	human similarities & differences	378	2.0	1.0	378	3.0	1.0
		human interdependence	378	1.7	0.5	378	2.5	0.5
		rights & responsibilities	378	1.7	0.5	378	2.5	0.5
		people & where they live	378	1.5	0.5	378	2.3	0.6
	Female	human similarities & differences	360	2.0	1.0	360	3.0	0.0
		human interdependence	360	1.8	0.5	360	2.5	0.5
		rights & responsibilities	360	1.8	0.5	360	2.6	0.5
		people & where they live	360	1.5	0.5	360	2.3	0.6
No. of At-Risk Factors	**1**	human similarities & differences	288	2.0	1.0	288	3.0	1.0
		human interdependence	288	1.8	0.5	288	2.6	0.5
		rights & responsibilities	288	1.8	0.5	288	2.6	0.5
		people & where they live	288	1.6	0.6	288	2.4	0.6
	2	human similarities & differences	234	2.0	1.0	234	3.0	1.0
		human interdependence	234	1.8	0.5	234	2.5	0.5
		rights & responsibilities	234	1.9	0.6	234	2.5	0.5
		people & where they live	234	1.5	0.5	234	2.3	0.6
	3	human similarities & differences	146	2.0	0.0	146	3.0	1.0
		human interdependence	146	1.6	0.4	146	2.4	0.4
		rights & responsibilities	146	1.6	0.4	146	2.4	0.5
		people & where they live	146	1.3	0.4	146	2.2	0.5
	4 or 5	human similarities & differences	65	2.0	0.0	65	3.0	1.0
		human interdependence	65	1.6	0.4	65	2.3	0.5
		rights & responsibilities	65	1.6	0.5	65	2.3	0.6
		people & where they live	65	1.4	0.5	65	2.1	0.6

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Arts Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	expression & representation	229	2.0	0.6	229	2.7	0.4
		artistic appreciation	229	2.0	1.0	229	3.0	1.0
	Yes	expression & representation	504	2.1	0.5	504	2.7	0.4
		artistic appreciation	504	2.0	1.0	504	3.0	1.0
Developmental Delay	**No**	expression & representation	520	2.1	0.6	520	2.7	0.4
		artistic appreciation	520	2.0	1.0	520	3.0	1.0
	Yes	expression & representation	213	1.9	0.5	213	2.7	0.4
		artistic appreciation	213	2.0	1.0	213	3.0	1.0
Limited English speaking	**No**	expression & representation	590	2.1	0.5	590	2.7	0.4
		artistic appreciation	590	2.0	1.0	590	3.0	1.0
	Yes	expression & representation	143	1.9	0.6	143	2.7	0.4
		artistic appreciation	143	2.0	1.0	143	3.0	0.0
Gender	**Male**	expression & representation	378	2.0	0.5	378	2.7	0.4
		artistic appreciation	378	2.0	1.0	378	3.0	1.0
	Female	expression & representation	360	2.1	0.5	360	2.8	0.3
		artistic appreciation	360	2.0	1.0	360	3.0	1.0
No. of At-Risk Factors	**1**	expression & representation	288	2.1	0.5	288	2.7	0.4
		artistic appreciation	288	2.0	1.0	288	3.0	0.0
	2	expression & representation	234	2.1	0.6	234	2.7	0.4
		artistic appreciation	234	2.0	1.0	234	3.0	1.0
	3	expression & representation	146	2.0	0.5	146	2.7	0.3
		artistic appreciation	146	2.0	1.0	146	3.0	1.0
	4 or 5	expression & representation	65	1.9	0.5	65	2.7	0.4
		artistic appreciation	65	2.0	1.0	65	3.0	1.0

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Physical Development Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	gross motor development	229	2.1	0.5	229	2.8	0.4
		fine motor development	229	2.0	0.5	229	2.8	0.4
		personal health & safety	229	2.2	0.5	229	2.8	0.3
	Yes	gross motor development	504	2.2	0.5	504	2.8	0.4
		fine motor development	504	2.1	0.5	504	2.8	0.3
		personal health & safety	504	2.3	0.5	504	2.9	0.3
Developmental Delay	**No**	gross motor development	520	2.3	0.5	520	2.8	0.3
		fine motor development	520	2.2	0.5	520	2.8	0.3
		personal health & safety	520	2.3	0.5	520	2.9	0.3
	Yes	gross motor development	213	2.0	0.5	213	2.7	0.4
		fine motor development	213	1.9	0.5	213	2.7	0.4
		personal health & safety	213	2.1	0.5	213	2.9	0.3
Limited English speaking	**No**	gross motor development	590	2.2	0.5	590	2.8	0.4
		fine motor development	590	2.1	0.5	590	2.8	0.4
		personal health & safety	590	2.3	0.5	590	2.9	0.3
	Yes	gross motor development	143	2.1	0.5	143	2.8	0.4
		fine motor development	143	2.0	0.6	143	2.8	0.3
		personal health & safety	143	2.1	0.5	143	2.8	0.3
Gender	**Male**	gross motor development	378	2.2	0.6	378	2.8	0.4
		fine motor development	378	2.0	0.5	378	2.7	0.4
		personal health & safety	378	2.2	0.5	378	2.8	0.3
	Female	gross motor development	360	2.2	0.5	360	2.8	0.3
		fine motor development	360	2.2	0.5	360	2.9	0.3
		personal health & safety	360	2.3	0.5	360	2.9	0.3
No. of At-Risk Factors	1	gross motor development	288	2.2	0.5	288	2.8	0.3
		fine motor development	288	2.1	0.5	288	2.8	0.4
		personal health & safety	288	2.2	0.5	288	2.9	0.3
	2	gross motor development	234	2.2	0.6	234	2.8	0.4
		fine motor development	234	2.1	0.5	234	2.8	0.4
		personal health & safety	234	2.3	0.5	234	2.8	0.3
	3	gross motor development	146	2.1	0.6	146	2.8	0.4
		fine motor development	146	2.0	0.5	146	2.8	0.4
		personal health & safety	146	2.1	0.5	146	2.9	0.3
	4 or 5	gross motor development	65	2.1	0.6	65	2.8	0.4
		fine motor development	65	2.0	0.5	65	2.8	0.4
		personal health & safety	65	2.2	0.4	65	2.8	0.3

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A1: Disaggregated Means for Four-Year-Old Group Continued

Domain Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
Lower SES	**No**	Personal & Social Development	229	2.0	0.5	229	2.7	0.3
		Language and Literacy	229	1.9	0.5	229	2.7	0.4
		Mathematical Thinking	229	1.8	0.5	229	2.6	0.4
		Scientific Thinking	229	1.7	0.5	229	2.4	0.5
		Social Studies	229	1.7	0.4	229	2.5	0.4
		The Arts	229	1.9	0.5	229	2.6	0.4
		Physical Development	229	2.1	0.5	229	2.8	0.3
	Yes	Personal & Social Development	504	2.0	0.4	504	2.7	0.3
		Language and Literacy	504	1.9	0.5	504	2.7	0.3
		Mathematical Thinking	504	1.8	0.5	504	2.6	0.4
		Scientific Thinking	504	1.7	0.5	504	2.4	0.5
		Social Studies	504	1.7	0.4	504	2.5	0.5
		The Arts	504	2.0	0.5	504	2.6	0.4
		Physical Development	504	2.2	0.4	504	2.8	0.3
Developmental Delay	**No**	Personal & Social Development	520	2.0	0.5	520	2.7	0.3
		Language and Literacy	520	2.0	0.5	520	2.7	0.3
		Mathematical Thinking	520	1.8	0.5	520	2.7	0.4
		Scientific Thinking	520	1.8	0.5	520	2.5	0.5
		Social Studies	520	1.8	0.4	520	2.5	0.4
		The Arts	520	2.0	0.5	520	2.7	0.4
		Physical Development	520	2.2	0.4	520	2.8	0.3
	Yes	Personal & Social Development	213	1.9	0.4	213	2.7	0.3
		Language and Literacy	213	1.7	0.4	213	2.6	0.4
		Mathematical Thinking	213	1.7	0.5	213	2.5	0.4
		Scientific Thinking	213	1.6	0.5	213	2.4	0.5
		Social Studies	213	1.6	0.4	213	2.4	0.4
		The Arts	213	1.8	0.5	213	2.6	0.4
		Physical Development	213	2.0	0.4	213	2.8	0.3
Limited English speaking	**No**	Personal & Social Development	590	2.0	0.4	590	2.7	0.3
		Language and Literacy	590	2.0	0.5	590	2.7	0.3
		Mathematical Thinking	590	1.8	0.5	590	2.7	0.4
		Scientific Thinking	590	1.8	0.5	590	2.5	0.5
		Social Studies	590	1.8	0.4	590	2.5	0.4
		The Arts	590	2.0	0.5	590	2.7	0.4
		Physical Development	590	2.2	0.4	590	2.8	0.3
	Yes	Personal & Social Development	143	1.8	0.4	143	2.6	0.3
		Language and Literacy	143	1.6	0.4	143	2.5	0.4
		Mathematical Thinking	143	1.6	0.4	143	2.6	0.4
		Scientific Thinking	143	1.4	0.4	143	2.3	0.5
		Social Studies	143	1.5	0.4	143	2.4	0.4
		The Arts	143	1.7	0.5	143	2.7	0.4
		Physical Development	143	2.1	0.5	143	2.8	0.3
Gender	**Male**	Personal & Social Development	378	2.0	0.4	378	2.7	0.3
		Language and Literacy	378	1.8	0.4	378	2.6	0.4
		Mathematical Thinking	378	1.8	0.5	378	2.6	0.4
		Scientific Thinking	378	1.7	0.5	378	2.5	0.5
		Social Studies	378	1.7	0.4	378	2.4	0.5
		The Arts	378	1.9	0.5	378	2.6	0.4
		Physical Development	378	2.1	0.4	378	2.8	0.3
	Female	Personal & Social Development	360	2.0	0.5	360	2.8	0.3
		Language and Literacy	360	2.0	0.5	360	2.7	0.3
		Mathematical Thinking	360	1.8	0.5	360	2.7	0.4
		Scientific Thinking	360	1.7	0.5	360	2.5	0.5
		Social Studies	360	1.7	0.4	360	2.5	0.4
		The Arts	360	2.0	0.5	360	2.7	0.4
		Physical Development	360	2.2	0.4	360	2.9	0.2

Domain Means			Fall			Spring		
Variable		**Sub Domain**	**Count**	**Mean**	**Std Dev.**	**Count**	**Mean**	**Std Dev.**
No. of At-Risk Factors	**1**	Personal & Social Development	288	2.0	0.5	288	2.7	0.3
		Language and Literacy	288	2.0	0.5	288	2.7	0.3
		Mathematical Thinking	288	1.8	0.5	288	2.7	0.4
		Scientific Thinking	288	1.8	0.5	288	2.6	0.5
		Social Studies	288	1.8	0.4	288	2.6	0.4
		The Arts	288	2.0	0.5	288	2.7	0.4
		Physical Development	288	2.2	0.4	288	2.8	0.3
	2	Personal & Social Development	234	2.0	0.5	234	2.7	0.3
		Language and Literacy	234	2.0	0.5	234	2.7	0.4
		Mathematical Thinking	234	1.8	0.5	234	2.6	0.4
		Scientific Thinking	234	1.8	0.5	234	2.5	0.5
		Social Studies	234	1.8	0.5	234	2.5	0.5
		The Arts	234	2.0	0.5	234	2.7	0.4
		Physical Development	234	2.2	0.5	234	2.8	0.3
	3	Personal & Social Development	146	1.9	0.4	146	2.7	0.3
		Language and Literacy	146	1.7	0.4	146	2.6	0.4
		Mathematical Thinking	146	1.6	0.4	146	2.6	0.4
		Scientific Thinking	146	1.6	0.5	146	2.4	0.5
		Social Studies	146	1.6	0.3	146	2.4	0.4
		The Arts	146	1.8	0.5	146	2.6	0.4
		Physical Development	146	2.1	0.5	146	2.8	0.3
	4 or 5	Personal & Social Development	65	1.9	0.3	65	2.6	0.3
		Language and Literacy	65	1.8	0.4	65	2.5	0.4
		Mathematical Thinking	65	1.7	0.4	65	2.5	0.4
		Scientific Thinking	65	1.7	0.5	65	2.4	0.5
		Social Studies	65	1.6	0.4	65	2.3	0.5
		The Arts	65	1.8	0.4	65	2.6	0.4
		Physical Development	65	2.1	0.4	65	2.8	0.3

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A2: Percent of Four-Year-Olds Who Are Proficient in Each Domain, Disaggregated

Variable		Domain	Fall Count	Fall %	Spring Count	Spring %
Lower SES	**No**	Personal & Social Proficient	32	14%	162	74%
		Language Proficient	29	13%	149	68%
		Math Proficient	20	9%	155	71%
		Science Proficient	11	5%	102	46%
		Social Studies Proficient	9	4%	116	53%
		Arts Proficient	122	53%	122	65%
		Physically Proficient	181	79%	181	84%
	Yes	Personal & Social Proficient	68	14%	344	76%
		Language Proficient	57	11%	326	72%
		Math Proficient	24	5%	290	64%
		Science Proficient	40	8%	228	51%
		Social Studies Proficient	26	5%	247	55%
		Arts Proficient	279	55%	279	74%
		Physically Proficient	407	81%	407	91%
Limited English speaking	**No**	Personal & Social Proficient	90	15%	422	78%
		Language Proficient	79	13%	407	75%
		Math Proficient	43	7%	372	68%
		Science Proficient	50	9%	294	54%
		Social Studies Proficient	34	6%	310	57%
		Arts Proficient	326	55%	326	71%
		Physically Proficient	475	81%	475	89%
	Yes	Personal & Social Proficient	10	7%	84	67%
		Language Proficient	7	5%	68	54%
		Math Proficient	1	1%	73	58%
		Science Proficient	1	1%	36	29%
		Social Studies Proficient	1	1%	53	42%
		Arts Proficient	75	52%	75	70%
		Physically Proficient	113	79%	113	88%
No. of At-Risk Factors	**1**	Personal & Social Proficient	49	17%	219	80%
		Language Proficient	43	15%	212	78%
		Math Proficient	24	8%	200	73%
		Science Proficient	24	8%	158	58%
		Social Studies Proficient	21	7%	166	61%
		Arts Proficient	171	59%	171	72%
		Physically Proficient	242	84%	242	90%
	2	Personal & Social Proficient	43	18%	154	72%
		Language Proficient	36	15%	151	71%
		Math Proficient	17	7%	145	68%
		Science Proficient	23	10%	99	47%
		Social Studies Proficient	14	6%	119	56%
		Arts Proficient	129	55%	129	71%
		Physically Proficient	184	79%	184	87%
	3	Personal & Social Proficient	8	6%	102	79%
		Language Proficient	6	4%	82	64%
		Math Proficient	1	1%	74	57%
		Science Proficient	2	1%	50	39%
		Social Studies Proficient			58	45%
		Arts Proficient	73	50%	73	69%
		Physically Proficient	114	78%	114	89%
	4 or 5	Personal & Social Proficient			31	57%
		Language Proficient	1	2%	30	56%
		Math Proficient	2	3%	26	48%
		Science Proficient	2	3%	23	43%
		Social Studies Proficient			20	37%
		Arts Proficient	28	43%	28	69%
		Physically Proficient	48	74%	48	87%

Proficient means child received a score of at least 2.5 on the 3-point scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A2: Percent of Four-Year-Olds Who Are Proficient in Each Domain, Disaggregated (Cont)

			Fall		Spring	
			Count	%	Count	%
Gender	**Male**	Personal & Social Proficient	44	12%	250	72%
		Language Proficient	30	8%	228	65%
		Math Proficient	16	4%	220	63%
		Science Proficient	27	7%	168	48%
		Social Studies Proficient	18	5%	173	50%
		Arts Proficient	180	48%	220	64%
		Physically Proficient	290	77%	295	85%
	Female	Personal & Social Proficient	56	16%	260	80%
		Language Proficient	56	16%	250	77%
		Math Proficient	28	8%	228	70%
		Science Proficient	24	7%	164	50%
		Social Studies Proficient	17	5%	192	59%
		Arts Proficient	224	62%	255	78%
		Physically Proficient	302	84%	299	92%

Total Group	Fall	Spring
Personal & Social Proficient	14%	76%
Language Proficient	12%	71%
Math Proficient	6%	66%
Science Proficient	7%	49%
Social Studies Proficient	5%	54%
Arts Proficient	55%	71%
Physically Proficient	80%	89%

Proficient means child received a score of at least 2.5 on the 3-point scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A3: Disaggregated Means for First Grade Group

Kindergarten Fall Domain Means by Preschool Experience							First Grade Fall Domain Means by Preschool Experience					
	Preschool Experience						Preschool Experience					
	Yes			No			Yes			No		
Domain	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**
Personal & Social Development	389	2.26	0.5	135	2.11	0.5	389	2.21	0.5	135	2.19	0.5
Language and Literacy	389	2.16	0.5	135	1.98	0.5	389	1.96	0.5	135	1.98	0.4
Mathematical Thinking	389	1.99	0.5	135	1.82	0.5	389	1.87	0.4	135	1.88	0.4
Scientific Thinking	389	1.87	0.5	135	1.76	0.5	389	1.66	0.4	135	1.66	0.5
Social Studies	389	1.94	0.4	135	1.85	0.4	389	1.80	0.4	135	1.85	0.4
The Arts	389	2.19	0.5	135	2.10	0.6	389	1.88	0.5	135	1.93	0.4
Physical Development	389	2.37	0.4	135	2.23	0.5	389	2.40	0.5	135	2.31	0.4
Kindergarten Spring Domain Means by Preschool Experience							**First Grade Spring Domain Means by Preschool Experience**					
	Preschool Experience						Preschool Experience					
	Yes			No			Yes			No		
Domain	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**
Personal & Social	389	2.72	0.33	135	2.69	0.34	389	2.61	0.4	135	2.62	0.4
Language and Literacy	389	2.70	0.4	135	2.67	0.4	389	2.53	0.4	135	2.52	0.4
Mathematical Thinking	389	2.62	0.4	135	2.55	0.4	389	2.53	0.4	135	2.49	0.4
Scientific Thinking	389	2.45	0.5	135	2.36	0.5	389	2.27	0.5	135	2.25	0.5
Social Studies	389	2.52	0.4	135	2.47	0.4	389	2.39	0.4	135	2.41	0.4
The Arts	389	2.64	0.4	135	2.64	0.4	389	2.34	0.5	135	2.32	0.4
Physical Development	389	2.80	0.3	135	2.75	0.3	389	2.73	0.4	135	2.67	0.4

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A3: Disaggregated Means for First Grade Group Continued

First Grade Fall Domain Means by No. of At-Risk Factors									
	No. At-Risk Factors								
	1			2			3 or more		
Domain	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**
Personal & Social Development	341	2.20	0.5	129	2.26	0.5	58	2.03	0.4
Language and Literacy	341	1.96	0.5	129	2.01	0.5	58	1.83	0.3
Mathematical Thinking	341	1.87	0.4	129	1.94	0.4	58	1.7	0.3
Scientific Thinking	341	1.66	0.4	129	1.71	0.4	58	1.58	0.5
Social Studies	341	1.79	0.4	129	1.91	0.4	58	1.7	0.4
The Arts	341	1.88	0.5	129	1.92	0.4	58	1.83	0.4
Physical Development	341	2.39	0.5	129	2.42	0.4	58	2.15	0.4
First Grade Spring Domain Means by No. of At-Risk Factors									
	No. At-Risk Factors								
	1			2			3 or more		
Domain	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**	**N**	**Mean**	**Std Dev.**
Personal & Social Development	341	2.61	0.4	129	2.63	0.4	58	2.58	0.4
Language and Literacy	341	2.55	0.4	129	2.51	0.4	58	2.4	0.4
Mathematical Thinking	341	2.54	0.4	129	2.55	0.4	58	2.31	0.3
Scientific Thinking	341	2.27	0.5	129	2.28	0.5	58	2.11	0.4
Social Studies	341	2.39	0.4	129	2.44	0.4	58	2.29	0.4
The Arts	341	2.34	0.5	129	2.37	0.5	58	2.16	0.4
Physical Development	341	2.72	0.4	129	2.75	0.4	58	2.55	0.4

Scale: 1=Not Yet; 2=In Progress; 3=Proficient

Table A4: Percent of First Graders Who Are Proficient in Each Domain, Disaggregated

			Fall		Spring	
			Count	%	Count	%
Lower SES	**No**	Personal & Social Proficient	56	32%	124	73%
		Language Proficient	22	13%	104	61%
		Math Proficient	10	6%	105	62%
		Science Proficient	7	4%	63	37%
		Social Studies Proficient	12	7%	81	47%
		Arts Proficient	13	7%	72	42%
		Physically Proficient	81	47%	132	77%
	Yes	Personal & Social Proficient	61	29%	130	62%
		Language Proficient	21	10%	114	54%
		Math Proficient	12	6%	102	49%
		Science Proficient	6	3%	48	23%
		Social Studies Proficient	9	4%	71	34%
		Arts Proficient	11	5%	53	25%
		Physically Proficient	93	44%	155	73%
Is limited English speaking	**No**	Personal & Social Proficient	106	30%	234	66%
		Language Proficient	39	11%	207	58%
		Math Proficient	20	6%	193	55%
		Science Proficient	12	3%	100	29%
		Social Studies Proficient	19	5%	138	39%
		Arts Proficient	21	6%	114	32%
		Physically Proficient	160	45%	263	74%
	Yes	Personal & Social Proficient	11	39%	20	71%
		Language Proficient	4	14%	11	39%
		Math Proficient	2	7%	14	50%
		Science Proficient	1	4%	11	41%
		Social Studies Proficient	2	7%	14	50%
		Arts Proficient	3	11%	11	39%
		Physically Proficient	14	50%	24	86%
Gender	**Male**	Personal & Social Proficient	49	22%	127	59%
		Language Proficient	20	9%	112	52%
		Math Proficient	12	5%	112	52%
		Science Proficient	6	3%	56	26%
		Social Studies Proficient	10	5%	76	35%
		Arts Proficient	9	4%	54	25%
		Physically Proficient	84	39%	148	69%
	Female	Personal & Social Proficient	74	39%	138	75%
		Language Proficient	24	13%	112	61%
		Math Proficient	12	6%	104	57%
		Science Proficient	8	5%	59	33%
		Social Studies Proficient	11	6%	80	43%
		Arts Proficient	16	9%	76	41%
		Physically Proficient	97	52%	154	83%

Percent of children who received a rating of 2.5 or higher on 3-point scale: ***1=Not Yet; 2=In Progress; 3=Proficient***

Table A4: Percent of First Graders Who Are Proficient in Each Domain, Disaggregated (Cont)

			Fall		Spring	
			Count	%	Count	%
Preschool Experience	**Yes**	Personal & Social Proficient	94	32%	193	66%
		Language Proficient	35	12%	169	57%
		Math Proficient	19	6%	168	58%
		Science Proficient	10	3%	88	31%
		Social Studies Proficient	15	5%	118	40%
		Arts Proficient	19	6%	99	34%
		Physically Proficient	144	48%	226	77%
	No	Personal & Social Proficient	22	26%	59	69%
		Language Proficient	8	9%	47	55%
		Math Proficient	3	4%	38	45%
		Science Proficient	3	4%	23	27%
		Social Studies Proficient	6	7%	34	40%
		Arts Proficient	5	6%	26	31%
		Physically Proficient	29	35%	59	70%
No. At-Risk Factors	**1**	Personal & Social Proficient	80	31%	170	66%
		Language Proficient	29	11%	156	61%
		Math Proficient	16	6%	147	58%
		Science Proficient	8	3%	76	30%
		Social Studies Proficient	12	5%	100	39%
		Arts Proficient	17	7%	84	33%
		Physically Proficient	124	48%	194	75%
	2	Personal & Social Proficient	33	35%	64	69%
		Language Proficient	13	14%	50	54%
		Math Proficient	6	6%	55	60%
		Science Proficient	4	5%	32	36%
		Social Studies Proficient	9	10%	43	46%
		Arts Proficient	6	6%	37	40%
		Physically Proficient	45	49%	73	78%
	3 or more	Personal & Social Proficient	4	12%	20	61%
		Language Proficient	1	3%	12	36%
		Math Proficient			5	15%
		Science Proficient	1	3%	3	9%
		Social Studies Proficient			9	27%
		Arts Proficient	1	3%	4	13%
		Physically Proficient	5	15%	20	63%
			Fall		Spring	
		Total Group	Count	%	Count	%
		Personal & Social Proficient	123	30%	265	66%
		Language Proficient	44	11%	224	56%
		Math Proficient	24	6%	216	54%
		Science Proficient	14	4%	115	29%
		Social Studies Proficient	21	5%	156	39%
		Arts Proficient	25	6%	130	33%
		Physically Proficient	181	45%	302	76%