FINAL EVALUATION REPORT

# 21st Century Community Learning Centers

*Pathways to Progress, Saint Paul Public Schools*

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**MARCH 2004**


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## EXECUTIVE SUMMARY

### REPORT OVERVIEW

Saint Paul Public Schools, like most large, urban districts, is faced with educating an increasingly diverse student population at a time when resources are dwindling. In order to confront these challenges, the district sought and received a three-year, federally-funded grant to establish community learning centers in Saint Paul Public Schools, known as *Pathways to Progress*.

This report is a summative evaluation of the *Pathways to Progress,* 21st Century Community Learning Centers grant, which operated at eight sites in Saint Paul Public Schools for three years between June 2000 and May 2003. It is intended to provide Saint Paul Public Schools with empirical data on student performance and program outcomes over the entire grant period so that district officials can better assess the value of expanded day programs.

Since the grant began in 2000, *Pathways* has involved over 3,000 students. As a voluntary program, one of every three children attending these eight schools chose to participate in the program, attesting to its popularity. Regular participants in *Pathways* (children attending at least 30 days of programming each academic year) made up more than half of all participants. The most encouraging findings are associated with the comparisons between regular participants and non-participants, which demonstrate that significant differences exist between these two groups. These findings are discussed in detail in this report.

### PROGRAM OVERVIEW

*Pathways to Progress* established community learning centers at eight schools in Saint Paul Public Schools. These centers provided coordinated expanded day and expanded year learning opportunities for students, families, and community members in Saint Paul. The grant period ran from June 2000 through May 2003.

*Pathways* provided two hours of after-school programming in these eight sites up to four times each week. Programming provided at least one hour of academic enrichment, a healthy snack, and a second hour of high interest activities such as, sports, the arts, or cultural enrichment. The sites consisted of five

elementary and three middle/junior high schools. The eight schools were clustered into three groups[1] that were spread throughout the Saint Paul Public School system. These particular schools were selected to provide additional support to youth who experience low academic achievement and who face risk factors in their environment such as violence, poverty, and drug use.

The primary goals of the grant were

- To increase student academic achievement;
- To reduce drug use and violence; and
- To increase parental capacity to support their children's education.

Area Superintendent Dr. Terilyn Turner served as project director and provided oversight for the grant and program. Other key staffing positions included a project coordinator, a part-time clerical assistant, two cluster coordinators (individuals responsible for multiple sites), three site coordinators (individuals responsible for one site), and numerous part-time instructors/activity leaders who were community members (including high school and college youth), non-profit agency staff, university staff, and Saint Paul Public Schools teachers and support staff. Many volunteers also helped to augment and support the work of paid staff.

## SUMMARY OF KEY FINDINGS AND CONCLUSIONS

### *Pathways* offered a wide variety of classes and attracted many student and adult participants to all sites.

- *Pathways* offered a wide array of courses and activities over the entire program period.
- *Pathways* was an integrated program that provided a seamless connection between after school programming and the regular school day. It was not viewed by the school staff as a separate, isolated program, but rather was incorporated into the school landscape.

### *Pathways* successfully met program goals.

#### REACHING TARGETED STUDENT POPULATIONS

- *Pathways* has reached and changed the lives of students. The eight *Pathways* schools had larger percentages of students with greater financial needs and greater numbers of risk factors than other schools in the district.
- Since the grant began in 2000, *Pathways* involved over 3,000 students and more than 11,000 parents and families. On average, one of every three children attending the eight schools chose to participate in the program and regular participants made up more than half of all participants.

[1] A cluster is a geographical grouping (Pathway) of elementary and secondary schools. Cluster 1 included: Jackson Elementary, Galtier Elementary, and Wilson Middle. Cluster 2 included: Phalen Lake Elementary and Cleveland Middle. Cluster 3 included: Roosevelt Elementary, Cherokee Heights Elementary, and Humboldt Junior High.

**ACHIEVEMENT HIGHLIGHTS**

The research method used to compare students over the entire programming period demonstrates that *Pathways* participants achieved notable gains in scores on standardized tests, grades in English and math, daily attendance, and student behaviors and work habits. The most powerful findings are highlighted below.

**STANDARDIZED TESTS**

- In reading and math, more *Pathways* participants scored above the national norm on the SAT10 and fewer students scored in the lowest quartile.
- Data gathered on both two-year and three-year regular participants indicate the groups experienced continuous progress in their standardized test scores for both reading and math. Although the data in 2003 is complicated by the administration of a new test, we remain encouraged by the trend in the performance of these students. For example, in reading and math, *Pathways* students received higher scores than their matched pairs in the last two years of testing. Regular participants frequently began with lower scores in the years prior to *Pathways* involvement and still completed 2003 with higher scores on the standardized tests[2] in both subject areas.
- Math scores showed the largest differences between participants and non-participants, with three-year participants scoring more than ten NCE points higher than the non-participant control group.
- Middle school participants in the two-year group showed the largest gains in achievement scores over time, especially in math.

**SCHOOL ATTENDANCE**

- *Pathways* students experienced dramatically better school attendance, with participants attending 18.44 more school days and missing 9.57 fewer school days than their non-participant counterparts. Middle school participants missed 16.99 fewer days of school than non-participants. All of these findings were statistically significant.

**GRADES**

- Middle school students in *Pathways* generally received better marks in English and math and more of the grades received by these students were satisfactory ones – a grade of C minus or better.

**PERCEPTIONS OF TEACHERS, PARENTS, AND SCHOOL PRINCIPALS**

- English and math teachers completed surveys on over 1,100 *Pathways* students in their classrooms. These teachers reported that four of every five *Pathways* students showed improved habits and skills that are consistently associated with better academic performance, classroom behavior, and improved academic work.
- Individual interviews of parents and school principals indicated high levels of satisfaction with the *Pathways* program

**DISCIPLINE**

- There were no measurable differences between participants and non-participants with regard to discipline.

[2] The 2002-2003 school year was the first time Saint Paul Public Schools administered the SAT10 to its students. The district's decision to use a different standardized test, switching from the MAT7 to the SAT10, makes it more difficult to compare student scores over time. The research team believes that these tests provide comparable assessments of student achievement.

## Primary conclusions

- While more extensive longitudinal data need to be analyzed to confirm these findings, it seems clear that *Pathways* did have the desired effects with regard to student achievement and school-community involvement and collaboration.
- Many of the greatest successes occurred in the middle schools and junior high school. Researchers believe the evaluation findings especially encouraging for students in young adolescence because it is a critical and formative period for these students.
- Gains made in student achievement, behavior, and attendance suggest that programs such as *Pathways* should be continued. Some findings suggest that these gains may also be attributable to deeper relationships between teachers and students.
- Leadership at the site level, meaning strong principal support and strong on-site program coordination was of prime importance to program success in the schools and those sites with a full-time coordinator were more likely to have a successful program.
- The program was also deemed a success by most school administrators, teachers, *Pathways* staff, and most importantly, the families.
- A new federal grant award will allow for the partial continuation of the work in two *Pathways* schools and two new schools. This is taken to be a positive sign for after school programming in Saint Paul Public Schools.

## Areas for further research

- The causes of consistently low student performance in reading are not well understood. Instruction that targets gaps in literacy and language arts should be stressed and Saint Paul Public Schools is encouraged to continue to allocate resources in those areas.
- Currently the district has no good measure of drug use and chemical and mental health, which makes investigations into these areas difficult at the present time.
- It is still unclear why some schools showed marked improvements when comparing student participants to non-participants, while in other schools, participants faired worse than non-participants. What factors contribute most to the differences among school sites?
- Mobility also remains an obstacle to student involvement and a rich connection to the school. Saint Paul Public Schools should continue to explore ways in which students from highly mobile families can continue to be involved in both in-school and afterschool programming.
- Additional research concerning after school programming should be conducted to extend the knowledge gained thus far.

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# 21st Century Community Learning Centers

*Pathways to Progress, Saint Paul Public Schools*

## REPORT OVERVIEW

This report is a summative evaluation of the *Pathways to Progress,* 21st Century Community Learning Centers grant, which operated at eight sites in Saint Paul Public Schools for three years between June 2000 and May 2003. It is intended to provide Saint Paul Public Schools with empirical data on student performance and program outcomes over the entire grant period so that district officials can better assess the value of expanded day programs.

Since the grant began in 2000, *Pathways* has involved over 3,000 students. As a voluntary program, one of every three children attending these eight schools chose to participate in the program, attesting to its popularity. Regular participants in *Pathways* (children attending at least 30 days of programming each academic year) made up more than half of all participants. The most encouraging findings are associated with the comparisons between regular participants and non-participants, which demonstrate that significant differences exist between these two groups. These findings are discussed in detail in this report.

This report is organized into four main sections. The first section provides a brief overview of the program and its structure. The second section is an assessment of the degree to which the program has met program objectives in its three years of programming. The third section presents key findings and conclusions; and the fourth provides supporting information with additional data tables and background information on the Center for Applied Research and Educational Improvement (CAREI) and the project research team.

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**SECTION I** **PROGRAM OVERVIEW**

**SECTION II** **PROGRAM OUTCOMES: OBJECTIVES AND PERFORMANCE INDICATORS**

**SECTION III** **SUMMARY OF KEY FINDINGS, DISCUSSION AND CONCLUSIONS**

**SECTION IV** **SUPPLEMENTAL INFORMATION**

## SECTION I PROGRAM OVERVIEW

*Pathways to Progress* was a three-year, federally-funded grant that established community learning centers at eight schools within the Saint Paul Public School district. These community learning centers provided coordinated expanded day and expanded year learning opportunities for students, families, and community members in Saint Paul, Minnesota. The grant period ran from June 2000 through May 2003.

*Pathways* offered multiple activities and programming in the eight school sites. The sites consisted of five elementary and three middle/junior high schools. The eight schools were clustered into three groups[3] spread throughout the Saint Paul system. These particular schools were selected to provide additional support to youth who experience low academic achievement and who face risk factors in their environment such as violence, poverty, and drug use.

The primary goals of the grant were:

- To increase student academic achievement;
- To reduce drug use and violence; and
- To increase parental capacity to support their children's education.

The table below provides summary descriptive data for the eight *Pathways* schools.

**TABLE 1.0 SITE SUMMARIES 2002-2003**

| School Site | School Population | Grades | Students served by *PATHWAYS (count)* | Number of *PATHWAYS* activities offered at site |
|---|---|---|---|---|
| Cherokee Heights | 586 | 4–6 | 50% *(N=295)* | 10 |
| Cleveland | 539 | 6–8 | 43% *(N=232)* | 23 |
| Galtier | 273 | K–6 | 51% *(N=134)* | 24 |
| Humboldt | 461 | 7–8 | 34% *(N=158)* | 50 |
| Jackson | 394 | K–6 | 67% *(N=265)* | 21 |
| Phalen Lake | 526 | K–6 | 49% *(N=260)* | 24 |
| Roosevelt | 273 | K–3 | 62% *(N=168)* | 10 |
| Wilson | 398 | 6–8 | 42% *(N=166)* | 20 |

Source: Saint Paul Public Schools Data Center, 2003.

Area Superintendent Dr. Terilyn Turner served as project director and provided oversight for the grant and program. Other key staffing positions included a project coordinator, a part-time clerical assistant, two cluster coordinators (individuals responsible for multiple sites), three site coordinators (individuals responsible for one site), and, numerous part-time instructors/activity leaders who were community members (including high school and college youth), non-profit agency staff, university staff, and Saint Paul Public Schools teachers and support staff. Many volunteers also helped to augment and support the work of paid staff.

[3] A cluster is a geographical grouping (Pathway) of elementary and secondary schools. Cluster 1 included: Jackson Elementary, Galtier Elementary, and Wilson Middle. Cluster 2 included: Phalen Lake Elementary and Cleveland Middle. Cluster 3 included: Roosevelt Elementary, Cherokee Heights Elementary, and Humboldt Junior High.

## SECTION II PROGRAM OUTCOMES: OBJECTIVES AND PERFORMANCE INDICATORS

This section assesses the degree to which *Pathways* met program objectives based on data collected during the three years of programming. The six grant objectives and specific performance indicators for each objective are listed here in their original form.

**Objective 1.** **Participants in the program will demonstrate educational and social benefits and exhibit positive behavioral changes.**

a. *Students who regularly participate in Pathways will show continuous improvement in achievement as indicated by improvements in test scores and grades.*
b. *Students participating in the program will show improvements on measures such as school attendance, classroom performance, and decreased disciplinary referrals.*

**Objective 2.** **21st Century Community Learning Centers will offer a range of high quality educational, developmental, and recreational services.**

a. *All Pathways to Progress Community Learning Center sites will offer high quality services in core academic areas, such as, reading and literacy, mathematics, and science.*
b. *All sites will offer enrichment and support activities programming in nutrition and health, art, music, technology, and recreation.*

**Objective 3.** **All *Pathways* to Progress sites will establish and maintain partnerships within the community.**

**Objective 4.** **All of the *Pathways* to Progress sites will offer services to parents, senior citizens, and/or other adult community members.**

**Objective 5.** **All *Pathways* to Progress sites will offer services at least 15 hours a week on average and provide services when schools are not in session, such as during summers and holidays.**

**Objective 6.** **21st Century Community Learning Centers will serve children and community members with the greatest needs for expanded learning opportunities.**

## EXPLANATORY NOTE ABOUT RESEARCH METHODS

### OVERALL RESEARCH DESIGN

A post hoc matched pair technique was used to approximate an experimental design, as participation in the program was voluntary. The researchers' intent was to evaluate the effects that *Pathways* participation had on several dependent measures. Participants who attended 30 or more days each year served as the experimental group, while matched non-participants served as the control group.

### MATCHED PAIR SAMPLING PROCEDURE

Three years of programming produced a large pool of participants, making it possible for the researchers to create sets of matched pairs of students. In the strictest matching, two students were matched exactly on seven status variables tracked by Saint Paul Public Schools. These variables included: **SCHOOL, GRADE, SPECIAL EDUCATION STATUS, FREE AND REDUCED LUNCH STATUS, ENGLISH LANGUAGE LEARNER STATUS, ETHNICITY, AND GENDER.**

The three-year participants were a smaller group, so analyses were conducted on all matched pairs (N= 42). Still, 70.5% of the pairs matched on seven variables. For the two-year group, analyses were performed only on students who matched on all seven variables (N=148).

### WEIGHTED SAMPLES

A weighted method was used to ensure that dependent measures, such as school, were considered equally in statistical procedures. After the cases were weighted, every school was mathematically equivalent to the others in the numbers of participants, regardless of the number of participants that each school originally served. The weighting procedure eliminated the effect of a school with a large number of participants from having undue influence upon the study's results, the point being that the program was intrinsic to the school site. For example, if School A has 200 participants and School B has 100 participants the weighting would balance these cases by producing 150 participants at both schools.

### STATISTICAL SIGNIFICANCE

In this report, the term statistical significance is used to indicate a high level of relationship between two events. When the term is used, it indicates that there is a 95-plus percent chance (near certainty) that the given finding is not attributable to random chance.

### CAUSE-AND-EFFECT RELATIONSHIPS

Finally, it is important for readers to recognize that while this report and previous reports continue to provide numerous encouraging findings, it is not possible to state unequivocally that *Pathways* participation is the *cause* of positive changes in attendance, achievement, or behavior. However, the findings *do* suggest that participation in the program may well be a significant contributing factor. Ultimately, it is the value that students, parents, teachers, and staff attribute to the program – not just the numbers–that must determine the success of the program.

[4] An explanation of the rules used to choose the pairs can be found in Appendix, Figure S1.0, page 26.

Performance indicators (*in italics*) are listed with their corresponding objective. Each objective is followed by an evaluation question, the methods of evaluation, and the key findings.

**Objective 1. Participants in the program will demonstrate educational and social benefits and exhibit positive behavioral changes**

*a. Students who regularly participate in Pathways will show continuous improvement in achievement as indicated by improvements in test scores and grades.*

## *EVALUATION QUESTION 1.1* – CHANGES IN DISTRIBUTION

*Is there a relationship between Pathways participation and the distribution of student scores across the quartiles for the SAT10 test taken in 2003?*

**METHOD**

Using the two groups of matched pairs, the research team analyzed Stanford Achievement Test, tenth edition (SAT 10) scores of students in first through eighth grades, grouping them by participation status[5] and determining where their SAT10 scores fell in relationship to the national norms for reading and math.

**FINDINGS**

**THREE-YEAR PARTICIPANTS (matched pairs, weighted)**

- More than half of all participants scored in the top two quartiles on the SAT10 reading test as compared with 36.4 percent of non-participants.
- In math, half of all participants scored in the third quartile (51-75 percent) and no students achieved the top quartile for this subject, while 36.4 percent of the non-participants, scored in the top two quartiles.
- In both reading and math, fewer participants scored in the lowest quartile when compared with the control group.

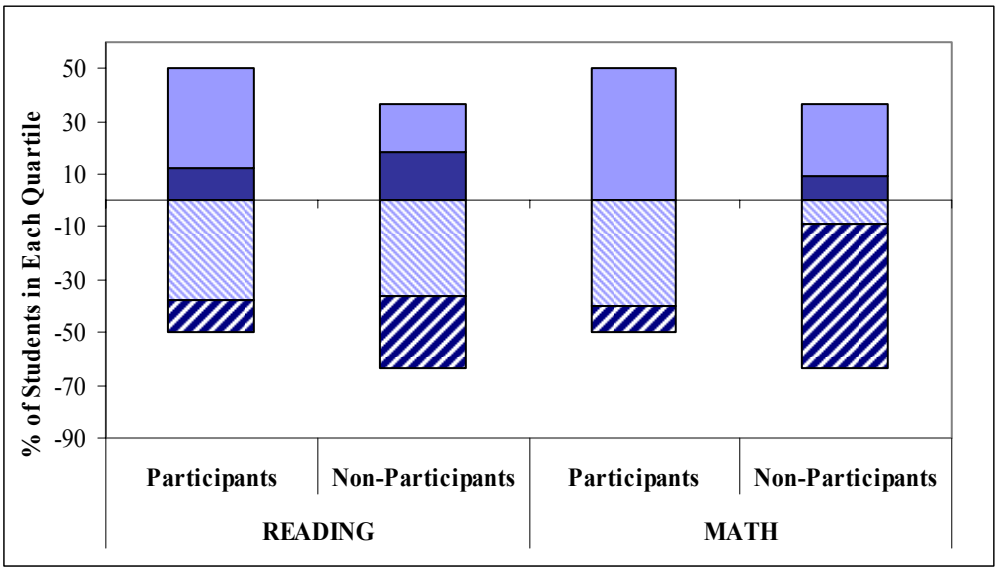
**TWO-YEAR PARTICIPANTS (matched pairs, weighted)**

- Thirty-six percent of all participants scored in the top two quartiles on the SAT10 reading test as compared with just 18.5 percent of non-participants.
- In math, a higher percentage of the participant groups ranked above the national norm (36.4 percent as compared to 31.2 percent of non-participants).
- As with the three-year group, fewer participants scored in the lowest quartile in both reading and math as compared with the control group.

In Figures 1.1A and 1.1B below, SAT10 scores are presented in a way that displays distributions by quartile and by subject between participants and non-participants for the three-year paired sample and the two-year paired sample.

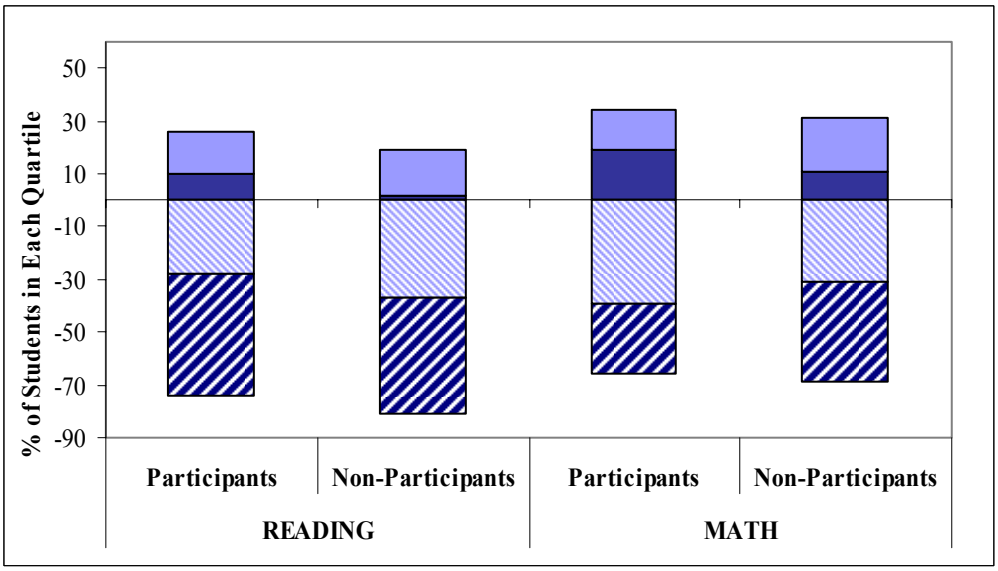
[5] Regular *Pathways* participants are students who meet the federal definition of regular attendance (30 or more days of program participation for years 2 and 3, or years 1, 2, and 3. Non-participants have never participated in the *Pathways* program).

**FIGURES 1.1A– 2003 SAT10 SCORES IN READING AND MATH FOR THREE-YEAR MATCHED PAIRS SAMPLE**




Source: Saint Paul Public Schools Data Center, 2003.

**FIGURES 1.1A– 2003 SAT10 SCORES IN READING AND MATH FOR TWO-YEAR MATCHED PAIRS SAMPLE**




Source: Saint Paul Public Schools Data Center, 2003.

## *EVALUATION QUESTION 1.2* – CHANGES IN TEST SCORES OVER TIME

*Did the standardized test scores of children who regularly participated in Pathways change favorably over time compared to tests scores of similar students who never participated in Pathways? (Is continuous improvement in student achievement evident between groups?)*

**METHOD**

The research team followed student progress by tracking Normal Curve Equivalent (NCE) scores on the MAT7 and SAT10 tests in reading and math for a period of five years (two years prior and three years during *Pathways* programming) for students in first through eighth grades. Half of the

students had been regular *Pathways* participants for two or three consecutive years while the other half were students who *never* participated in the program at any time.

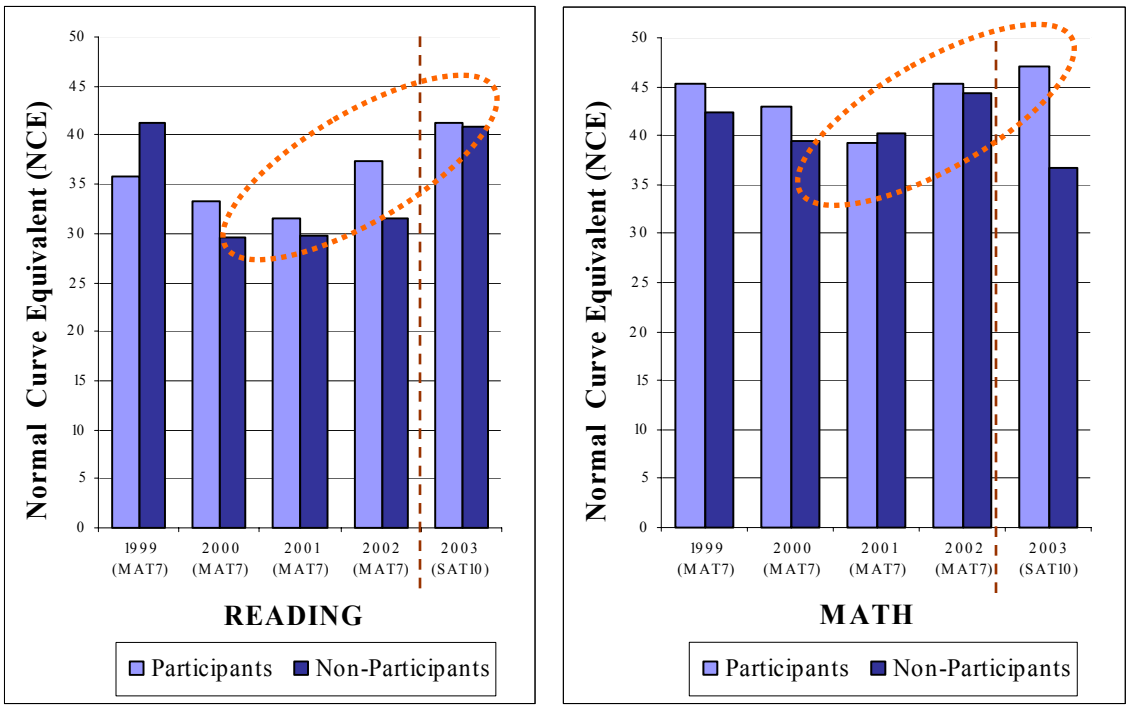
**FINDINGS**

Data gathered on both two-year and three-year regular participants indicate the groups experienced continuous progress in their standardized test scores for both reading and math. Although the data in 2003 is complicated by the administration of a new test, we remain encouraged by the trend in the performance of these students. For example, in reading and math, *Pathways* students received higher scores than their matched pairs in the last two years of testing. Regular participants frequently began with lower scores in the years prior to *Pathways* involvement and still completed 2003 with higher scores on the standardized tests[6] in both subject areas.

**THREE-YEAR PARTICIPANTS (matched pairs, weighted)**

- In reading, participants performed only slightly better than their non-participant counterparts in 2003. However, during the *Pathways* grant, these students showed dramatic and continuous improvement in their reading scores.
- In math, participants performed substantially better than the control group, scoring 10.48 points higher than their non-participant counterparts in 2003. Participants demonstrated continuous improvement across the years in this area, while their control group showed uneven or falling scores.

**FIGURES 1.2A AND 1.2B – FIVE YEARS OF STANDARDIZED TESTS SCORES FOR THREE-YEAR MATCHED PAIRS IN READING (LEFT) AND MATH (RIGHT)**



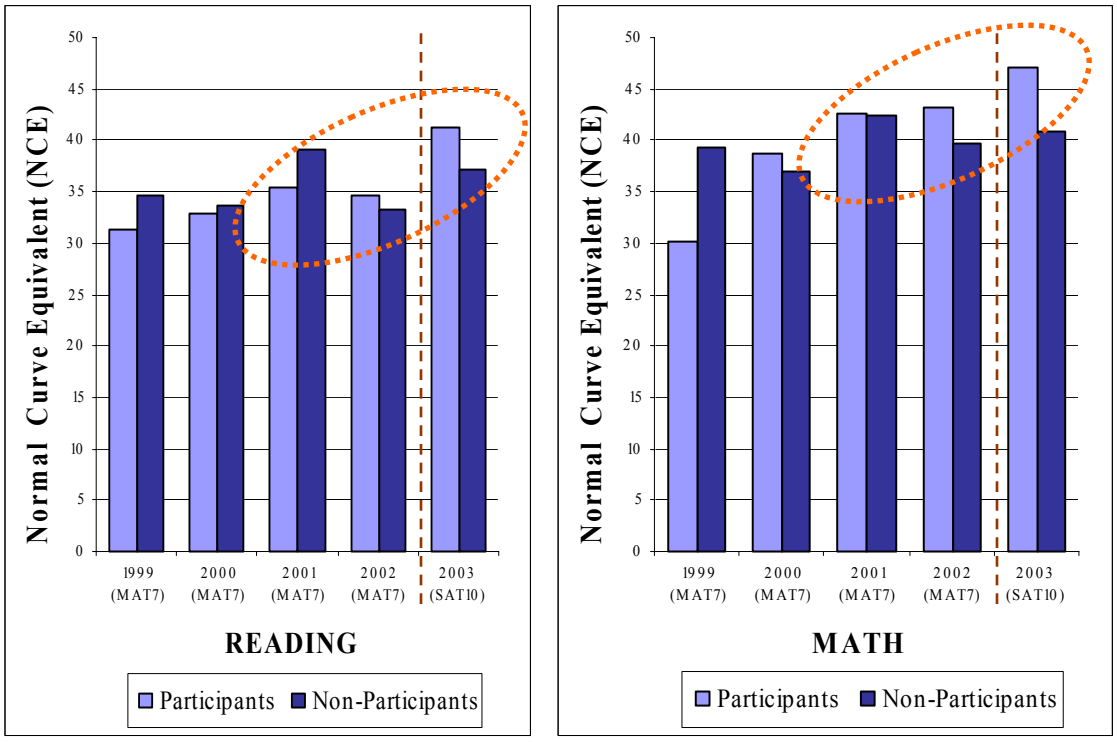

Source: Saint Paul Public Schools Data Center, 2003.

[6] The 2002-2003 school year was the first time Saint Paul Public Schools administered the SAT10 to its students. The district's decision to use a different standardized test, switching from the MAT7 to the SAT10, makes it more difficult to compare student scores over time. The research team believes that these tests provide comparable assessments of student achievement.

**TWO-YEAR PARTICIPANTS (matched pairs, weighted)**

- In reading, two-year participants again showed only modest improvements in comparison to their non-participant counterparts, scoring 4.05 points higher in 2003. Middle school participants scored even higher in the reading portion of the test, averaging 5.83 NCE points higher than the control group.
- In math, participants scored an average of 6.32 points more than the non-participants, which is statistically significant. Middle school participants showed significant advances over their non-participant counterparts, expanding the scoring difference by 10.90 points on the math portion of the SAT10.
- Two-year participants again showed improvement in each subsequent year they took the test. While participants did not score dramatically higher than the control group, they did demonstrate continued improvement after *Pathways* began – with middle school participants showing the biggest gains. This is very encouraging news for reaching all children and improving their academic performance. (See figures 1.2C and D)

**FIGURES 1.2C AND 1.2D – FIVE YEARS OF STANDARDIZED TESTS SCORES FOR TWO-YEAR MATCHED PAIRS IN READING (TABLE 1.2C) AND MATH (TABLE 1.2D)**




Source: Saint Paul Public Schools Data Center, 2003.

## *EVALUATION QUESTION 1.3* –GRADE COMPARISONS AMONG GROUPS

*Over the course of the year, do sixth, seventh, and eighth grade participants earn the same, better, or worse grades when compared with non-participants.*[7]

[7] For this report, grade evaluation is performed only for middle and junior high school students. Elementary schools do not use a standard measure for assessing student performance (grades) and thus they cannot be validly compared.

**METHOD**

An analysis of school grades was conducted on both two-year and three-year matched pairs. Grade comparisons were made between participants and non-participants for semesters one and two in English and math.

**FINDINGS**

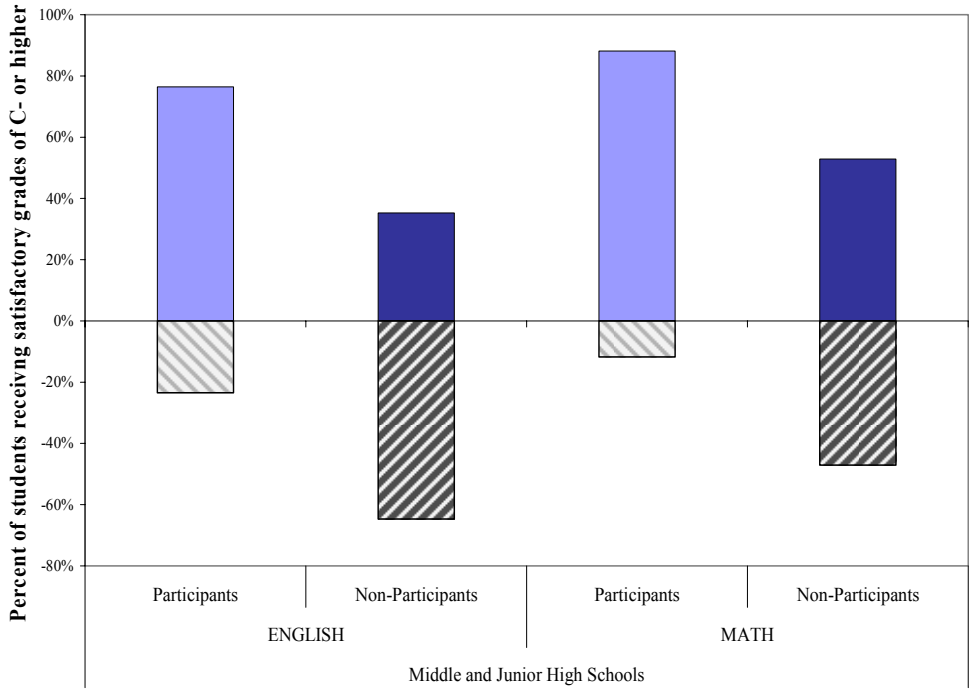
**THREE-YEAR PARTICIPANTS (matched pairs, weighted)**

- Three-year participants received slightly better grades for English and math, although grades remained low.
- *Pathways* students received more satisfactory grades (defined as a grade of C- or better) in the first semester of 2003. During the second semester however, the number of satisfactory grades was the same for both groups in both subjects.

**TWO-YEAR PARTICIPANTS (matched pairs, weighted)**

- Two-year participants received higher grades for both semesters in English and math. These grades were found to be statistically significant improvements over non-participants in all instances.
- More two-year participants received satisfactory grades (defined as a grade of C- or better) for both semesters in English and math. For instance, during the second semester in math, almost twice as many participants as non-participants received grades ranging from C- to A (15 of 18 participants as compared with 9 of 18 non-participants). These findings show statistically significant improvements in math for the entire year and in English for semester two.

**FIGURES 1.3 – COMPARISON OF 2003 SECOND SEMESTER GRADES IN ENGLISH AND MATH FOR PARTICIPANTS AND NON-PARTICIPANTS**




Source: Saint Paul Public Schools, 2003.

## *EVALUATION QUESTION 1.4* – CHANGES IN GRADES FOR INDIVIDUALS

*Do sixth, seventh, and eighth grade participants exhibit similar patterns of improvement when compared with non-participants? That is, do individual students' English and math grades improve, worsen, or remain unchanged?*[8]

**METHOD**

Researchers compared each individual's first and second semester grades to determine whether those grades improved, worsened, or remained unchanged.

**FINDINGS**

**THREE-YEAR PARTICIPANTS (matched pairs, weighted)**

- In English, more students participating in the program maintained their first semester grades and fewer students lost ground. Three students in the participant group received English grades of A minus, while a fourth student received a C grade. By comparison, six of the seven non-participants did not maintain their first semester grades in English.
- In math, more students participating in the program improved their math grade. In fact, six of the seven regular participants improved their math grade in the second semester. By comparison, three of the seven students in the control group lost ground on their grades, receiving worse grades in math.
- Unfortunately, no statistical significance can be attached to this finding, given the small size of the group.

**TWO-YEAR PARTICIPANTS (matched pairs, weighted)**

- In English, participants exhibited nearly identical patterns of improvement[9].
- In math, more participants improved or maintained their first semester grades than the control group. The participant group also had fewer numbers whose grades had declined.

**Objective 1. Participants in the program will demonstrate educational and social benefits and exhibit positive behavioral changes.**

*b. Students participating in the program will show improvements on measures such as school attendance, classroom performance, and decreased disciplinary referrals.*

## *EVALUATION QUESTION 1.5* – CHANGES IN ATTENDANCE PATTERNS

*Is student participation in Pathways associated with improved attendance in schools during the regular school day? That is, do students who attend Pathways display different attendance patterns in school than students who do not attend Pathways?*

[8] For this report, grade evaluation is performed only for middle and junior high school students. Elementary schools do not use a standard measure for assessing student performance (grades) and thus they cannot be validly compared.

[9] Ten of 19 participants lost ground (that is, received lower grades during the second semester, three of 19 maintained their first semester grade and five students showed improvement.) By comparison, Ten of 19 non-participants lost ground (that is, received lower grades during the second semester, two of 19 maintained their first semester grade and six non-participants showed improvement.)

**METHOD**
The research team analyzed the district's attendance data for students in the two groups of matched pairs in order to determine if there were significant differences in the attendance patterns of regular participants in the *Pathways* program and their non-participant controls.

**FINDINGS**
**THREE-YEAR PARTICIPANTS (matched pairs, weighted)**

- Three-year participants had a slightly higher average of school attendance, adding 2.84 additional days to their school year over non-participants.
- Three-year participants' percentage of attendance (a measure which reduces the effects of mobility) had a 96.88 percent attendance rate, while non-participants had a 93.65 percent attendance rate.
- On average, three-year participants missed 5.54 fewer days of school than their non-participant counterparts.

**TWO-YEAR PARTICIPANTS (matched pairs, weighted)**

- Two-year participants attended school an average of 18.44 more days than the non-participants. This difference is statistically significant and unlikely to have occurred by chance. Participant students received nearly one month of additional school instruction compared to their non-participant counterparts.
- Two-year participants' percentage of attendance, a measure which reduces the effects of mobility, had positive gains of 6.59 percent in the attendance rate overall and 9.92 percent for middle school participants. This difference is statistically significant and unlikely to have occurred by chance.
- Two-year participants missed on average, 9.57 fewer days of school than their non-participant counterparts. For middle school students the difference is even more significant, with 16.99 fewer days of school missed.

## *EVALUATION QUESTION 1.6* – CHANGES IN CLASSROOM PERFORMANCE

*Do classroom teachers of Pathways students see improvements in student behavior and performance?*

**METHOD**
Near the end of the 2002-2003 school year, classroom teachers were asked to complete a survey to determine if the behavior of *Pathways* students had improved during the year. *Whenever possible,* English, reading, and math teachers complete the survey on the students.

The findings measure teachers' perceptions of improvement by their *Pathways* students. Classroom teachers' perceptions of their students may be a better measure of the influence of *Pathways* on students because teachers are able to observe student performance and behavior on a daily basis (as opposed to the incremental changes that occur in the test scores for example). As the table below shows, the percent of students who improved in each of these ten areas is promising. These ten areas were selected because they are observable behaviors related to the improvement of academic performance. The table is based upon the teachers' responses to these questions about 450 students, all of whom participated in *Pathways* during the 2002-2003 school year.

**TABLE 1.6 - IMPROVEMENT IN STUDENT BEHAVIOR AS SEEN BY CLASSROOM TEACHER**

| RANK | | *Pathways* Participants | |
|---|---|---|---|
| | **Areas of Student Improvement** | % Agree | % Disagree |
| | 1. Turning in homework on time (n=450 ) | 85 | 15 |
| **3rd** | 2. Completing homework to my satisfaction (n=450) | 89 | 11 |
| | 3. Quality of daily work (n=439) | 87 | 13 |
| | 4. Participating in class (n=448) | 88 | 12 |
| | 5. Volunteering (n=441) | 78 | 22 |
| **1st** | 6. Attending class regularly (n=432) | 93 | 7 |
| | 7. Being attentive in class (n=445) | 86 | 14 |
| | 8. Behaving well in class (n=448) | 86 | 14 |
| **3rd** | 9. Coming to school ready and prepared to learn (n=445) | 89 | 11 |
| **2nd** | 10. Getting along well with other students (n=449) | 92 | 8 |

Source: Saint Paul Public Schools Data Center, 2003.

**FINDINGS**

- Classroom teachers reported that students in *Pathways* showed improved habits and skills that are consistently associated with better academic performance.
- Classroom teachers perceived that students' classroom behavior and academic work improved for four out of five students.
- The highest levels of teacher agreement regarding student behavior were classroom attendance, getting along with other students, and a tie between satisfactory completion of homework and preparation for learning (ranked 1st, 2nd, and 3rd).

## *EVALUATION QUESTION 1.7* – CHANGES IN DISCIPLINARY ACTIONS

*Are regular participants less likely to be referred for disciplinary reasons? What are the referral rates among regular participants and non-regular participants?*

**METHOD**

Researchers analyzed all 1,338 discipline reported incidents that occurred in the 2002-2003 school year in the eight schools to determine whether the number of regular *Pathways* students that were involved in incidents was comparable to the non-participant control group.

**FINDINGS**

- Both two-year and three-year participants had comparable rates of disciplinary incidents as the control groups.

## *EVALUATION QUESTION 1.8* – THEMES FROM SITE VISITS

*What similarities and differences exist at the eight school sites which may be visible to the outside observer?*

**METHOD**

The purpose of the site visits was to observe the classes, on-site program environment, and structure and describe the experiences of program participants.

**SUMMARY OF SITE VISITS**

- Site level support – The reported level of support for *Pathways* (school and classroom level) from staff and administration varied across schools. At some sites, it was reported that administrators actively supported program efforts through teacher recruitment, financial management assistance/oversight, and substituting for staff; while in other sites administrators played an essentially passive leadership role.
- Site coordination – Researchers perceived that programming was more effective and schools gained an increased sense of community when one person was in charge of coordinating at a site. In-house coordinators worked everyday and understood all aspects of the program. For practical purposes, the in-house coordinator served as the "principal" during the after-school program.
- Instructor capacity and characteristics – *Pathways* instructional staff was made up of teachers or aides from Saint Paul Public Schools, members of the community, and high school/college students. During the third year of programming, the majority of the staff consisted of teachers from that particular school. Confidence and experience appeared to be important characteristics for these instructors. The most effective instructors were familiar with the school's facilities, maintained authority with students, upheld consistent behavioral expectations, and anticipated and prevented problems.
- Links to other agencies and programs – *Pathways* often collaborated with programs/events already in place, providing additional resources to enhance what was already present. Every site connected with groups in the community and established partnerships that benefited the program participants (Hmong Youth Pride, Lauj Youth, 4-H/Cloverbuds, Leap Forward for Children Youth Collaborative, the Red Cross, St. Paul Conservatory of Music, Community Education, the Minnesota Children's Museum, and the Science Museum of Minnesota).

## *EVALUATION QUESTION 1.9* – PRINCIPAL PERCEPTIONS OF PROGRAM

*What are the overall perceptions of principals regarding Pathways programming at their site?*

**METHOD**

During the final evaluation meeting, principals had an opportunity to provide feedback to *Pathways* staff regarding their opinions and perceptions of the program overall. The following is a brief summary of the main ideas and issues discussed on previous occasions and for an extended period at the final meeting.

Listed below, are some of the benefits mentioned by principals that directly affected the schools that *Pathways* served.

- Principals indicated that *Pathways* was a valuable program at their school.

- One principal championed the program, highlighting the low cost per pupil to implement it. (The figure given was about $250 per student per year, which included transportation, instructor pay, materials, and provisions.)
- Notable increases in test scores and student achievement were noted as key successes by principals.
- Principals perceived that students liked the program and made an effort to attend. Student attitudes about *Pathways* appeared to positively affect families, teachers, and the community as a whole.
- A specific, positive impact on English language learners families and students was described by two principals. Principals heard from families that they felt more integrated into the school community, felt more trustful of the schools, and that their children had more opportunities to make friends.

Challenges associated with *Pathways* that were cited by principals included:

- Dealing with logistical issues that arose as a direct result of *Pathways* programming, such as paying custodians for additional time and finding classroom space for programming continued to be mentioned as challenges.
- Providing classes that would attract students and their families to the program was an ongoing challenge over the course of the grant.

Principals' overall impressions included:

- Principals had a desire to keep *Pathways* at their schools and were frustrated that continued federal funding would not be available to continue its implementation.
- Principals unanimously agreed that *Pathways* provided a safe and supervised place for kids.
- Principals recognized that *Pathways* positively affected the entire school day. This was illustrated by a positive atmosphere in the school, which included improved student outcomes and positive relationships among school staff, students, and families.
- Principals noted the shift toward the institutionalization of *Pathways* in their schools.
- Principals recognized the important role the on-site coordinator plays and believed that the coordinator should be a full-time position.
- Principals insisted that resources must be found to continue to provide opportunities for after school programming in the future.

## *EVALUATION QUESTION 1.10* – PARENT IMPRESSIONS OF *PATHWAYS*

*What are parents' impressions of the program?*

**METHOD**

Parent interviews were not conducted in 2003. However, there were many occasions when parents communicated their positive attitudes about *Pathways* to program and school staff and the research team would expect that parent perceptions in the final year were consistent with comments provided in previous years.

- Researchers observed high levels of parental satisfaction.

- Families stated that the program helped their children achieve in specific subjects and in homework in general.
- Families and children commented that the program was fun.
- Families remarked that *Pathways* filled the critical need of filling the time between when children are released from school and when parents return home from work.

**Objective 2. 21st Century Community Learning Centers will offer a range of high quality educational, developmental, and recreational services.**

a. *All Pathways to Progress Community Learning Center sites will offer high quality services in core academic areas such as reading and literacy, mathematics, and science.*

## *EVALUATION QUESTION 2.1* – OFFERINGS IN CORE ACADEMIC AREAS

*What is the extent of classes and activities being offered in the school sites?*

**METHOD**

An inventory of courses and programming offered during the third year of operation indicated that several new classes and courses were offered, even during 2003 at *Pathways* sites.

**FINDINGS**

In 2003, the following classes and activities were added (bolded) in each core academic area over the previous year. The programs vary widely across sites and reflect the diversity of the schools and communities served.

Many classes were offered which specifically targeted literacy, math, and science. Literacy classes included:

- *Family Reading Nights*
- *Accelerated readers*
- *Balanced literacy*
- *Raising Readers/Success for All*
- *America READS!*
- *Junior Great Books*
- *Area Learning Center*
- *Homework Help*
- *English and Reading Skills Class*
- ***Kindercoach***
- ***Take a Journey Across the Earth***
- ***Explorers***
- ***Expressions***
- ***Creative Writing for Teens***
- ***Spanish Reading and Writing for Hispanic Children***
- ***Hmong Reading and Writing for Hmong Speaking Children***
- ***Tell Me a Poem***
- ***Family Literacy Program***

Math classes included:
- *Math Skills Class*
- *Area Learning Center*
- *Up, Up & Away*
- ***Brain Teasers***

Science classes included:
- *Science Olympiad*
- *Classes led by Science Museum of Minnesota staff*
- *Magic Science (teaching science through magic)*
- *Children's Museum Classes*
- *Up, Up, & Away*
- ***Exhibit Design Group***
- ***Family Science Fun***
- ***Animal Encounters***
- ***Science Fun for Preschoolers***

Additionally, many offerings supported academic areas through the provision of homework time, fieldtrips and adult support. These included:
- *Hoops and Homework (Tutoring, mentoring and games)*
- *Homework Headquarters (Tutoring and mentoring)*
- *Evening tutoring classes*
- *ACES (Athletes Committed to Educating Students)*

**Objective 2.** **21st Century Community Learning Centers will offer a range of high quality educational, developmental, and recreational services.**

*b. All sites will offer enrichment and support activities programming in nutrition and health, art, music, technology, and recreation.*

## *EVALUATION QUESTION 2.2* – ENRICHMENT AND SUPPORT OFFERINGS

*To what extent do sites offer programming in nutrition and health, art, music, technology, and recreation?*

**METHOD**

An inventory was made of the classes offered during 2003 at *Pathways* sites.

**FINDINGS**

Many class offerings provided extensive support and enrichment activities in all areas of interest. In its final year, *Pathways* continued to offer, on average, one hour of support and enrichment programming for every two hours of programming offered throughout the year. A substantial increase in the number of classes offered occurred during the third year (additions in 2003 listed in ***bold***). The abbreviated list below provides a general sense of the programs offered in year 3.

In youth asset building classes included:
- *Adventure Club*
- *Brothers (Boys self-esteem, drug, gang, alcohol and violence prevention)*
- *Community Connection field trips*
- *Unique Girls Club (self esteem for African-American girls in early adolescence)*

- *Discovery Club (accredited school-age care)*
- *Friday Fieldtrips*
- *Girls Scouts of America*
- *All Stars (Drug and Violence Prevention Program)*
- ***Okay Kids Club***
- ***Wilson Wildcat Word***
- ***Around the World***
- ***Cooperative Games***

In nutrition and health classes included:

- *Clover Buds (4-H for kindergarten through third grade)*
- *Breakfast Club*
- *Cultural Cooking*
- *Jump Into Fitness*
- *Snack Program*
- ***Continental Cooking***
- ***Hmong Cooking***
- ***Kids in the Kitchen***
- ***6 Great Mexican Dishes***
- ***Shape Fitness Camp***

In the arts classes included:

- *After school band*
- *Around the World*
- *Theater Groups*
- *Eastside Arts Council*
- *Destination Imagination*
- *Center for Hmong Arts and Talent Classes*
- *Cultural Arts*
- *Cherokee Dancers*
- *Swing Dance*
- *Salsa Dance*
- ***Choir***
- ***Instrumental Music Lessons ( Saint Paul Conservatory of Music)***
- ***Hip Hop Dance***
- ***Hmong Tapestry***
- ***Asian Culture***
- ***Sewing***
- ***Beading***
- ***What is Art***
- ***Boards and Crafts***
- ***Preschool Crafts***
- ***Knitting***
- ***Scrapbooking***
- ***Growing With Music***

In sports and recreation classes included:

- *Jump Into Fitness*
- *Volleyball*
- *Basketball*
- *Tennis*
- *Whiffleball*
- *Floor hockey*
- *Indoor baseball*
- *Swimming Lessons*
- *Sports & Fitness*
- *Cardio kickboxing*
- *Tae Kwon Do*
- *Hip Hop Dance*
- ***Martial Arts***
- ***Boys Sports***
- ***Fitness Jam***
- ***SHAPE Fitness Camp***
- ***Gym Games***
- ***Yoga***
- ***Weight Lifting***
- ***Tumbling***
- ***Juggling***

Technology classes included:

- *Computers*
- *Photography*
- *Underwater Photography*
- *Video Classes*
- ***Magazine***
- ***Technology of the Future***
- ***Video Technology***

Special programming included:

- ***Spanish***
- ***Sign language***
- ***Excel*****
- ***Language Academy*****

(**frequently all-inclusive to other programming, but there are 2 specific classes)

**Objective 3.** **All *Pathways* to Progress sites will establish and maintain partnerships within the community.**

## *EVALUATION QUESTION 3.1* – COMMUNITY INVOLVEMENT

*To what extent have all Pathways to Progress sites established and maintained partnerships within the community? To what degree have these activities increased levels of community collaboration in planning, implementing, and sustaining programs?*

**METHOD**

An inventory was made of the programming offered in cooperation with community agencies.

**FINDINGS**

Community agencies played a major role in the classes and programs offered throughout the grant. The diverse nature of these community groups is important to note. The majority of the relationships established early on in the grant were sustained for the entire three years. (Additions in 2003 listed in ***bold***.)

Community organizations,

- *Hmong-American Partnership*
- *CLUES*
- *Eastside Arts Council*
- *Saint Paul Parks and Recreation*
- *Saint Paul Police Department*
- *West Side Youth Collaborative*
- *East Side Youth Collaborative*
- *North End Youth Collaborative*
- *Lauj Youth*
- *Center for Hmong Arts and Talent*
- *ACES*
- *Grove Nuts Crew (GNC)*
- *Guadalupe Area Programs*
- *Leap Forward for Children Youth Collaborative*
- *Neighborhood House*
- *Ronald Hubbs Center for Lifelong Learning (Adult Education, ESL, Citizenship Classes, Life/Work Skills Training)*
- ***Saint Paul Conservatory of Music***

Statewide educational organizations included:

- *Department of Children, Families, and Learning*
- *University of Minnesota*
- *College students from metropolitan colleges and universities*
- *Science Museum of MN*
- *Children's Museum of MN*
- *Saint Paul Public Schools Title I*
- *Saint Paul Public Schools Area Learning Center*
- *Saint Paul Public Schools Community Education*

And local branches of national organizations included:

- *USDA/Ramsey County 4H*
- *Girl Scouts of America*
- *YMCA*
- *Boys and Girls Club*
- *AmeriCorps*
- *Federal Nutrition Program*
- *Red Cross*

In the broader community, support was apparent even near the end of the grant. For example, the Planning/Management Team brought together by the project coordinator, continued to attend meetings and participate in planning throughout the grant period. It appears that strong relationships will continue between *Pathways* and several community organizations through a new 21st Century Community Learning Center grant that has been awarded to the district.

**Objective 4. All of the *Pathways* to Progress sites will offer services to parents, senior citizens, and other adult community members.**

## *EVALUATION QUESTION 4.1* – SERVICE TO PARENTS AND COMMUNITY

*Do all of the Pathways to Progress sites offer services to parents, senior citizens and other adult community members?*

**METHOD**

An inventory was made of the programs offered in 2003 at all *Pathways* sites.

**FINDINGS**

The program continued to offer and even expand the classes and activities for parents, families, and adults of the broader community (additions in 2003 listed in ***bold***).

Academic classes offered in the third year included:

- *Computer classes*
- *ESL classes*
- *GED classes*
- *Adult literacy classes*
- *Technology nights*
- *Career Education*
- ***Citizenship Classes***

Classes that provide parenting/cultural support included:

- *Positive Parenting Curriculum*
- *Parenting Activities with Title I*
- *Hmong Parent Association meetings*
- *Latino Parent Association meetings*
- *African American Support Group*
- *Somali Parent Support Group*
- *Family classes and events*
- *Monday Night Live*
- *Family Fun days*
- *Saturday library hours*

- *Parent/child activities and fieldtrips*
- *Super Saturdays*
- ***EBD Level 5 PASS Program Parent Support Group***
- ***Life Skills***
- ***Twins and More***
- ***ECFE***
- ***Family Literacy Program***

**Objective 5.** **All *Pathways* to Progress sites will offer services at least 15 hours a week on average and provide services when school is not in session, such as during summers and holidays.**

## *EVALUATION QUESTION 5.1* – EXPANDED HOURS

*How many additional hours do the school sites offer as a direct result of Pathways programming?*

**METHOD**

The average expanded hours were calculated for the final year of the program. These expanded hours are listed by site in the table below.

**TABLE 5.1 – EXPANDED HOURS AT SITES**

| **CLUSTER # -** Site | **2002 -2003 Academic Year:** Expanded hours per week | **Summer 2002** Expanded hours per week |
|---|---|---|
| **1** – Jackson | 8 | 30 |
| **1 –** Galtier | 10 (57.5)* | 15 |
| **1** – Wilson Middle School | 18 | 30 |
| **2** – Phalen Lake | 14 | 19 |
| **2** – Cleveland Quality Middle School | 8 | 18 |
| **3** – Roosevelt | 5 | 15 |
| **3** – Cherokee Heights | 10 | 22.5 |
| **3** – Humboldt Junior | 13 | 17.5 |
| **AVERAGE EXPANDED HOURS PER WEEK** | **10.75 (16.68)*** | **20.8** |

Source: Annual Performance Report, 2003.
*Including Discovery Club.

**FINDINGS**

The average number of hours across all eight schools dropped in 2003. This change was caused by the need to taper-off in the final year of programming as funds began to run low. Discovery Club continued to keep the expanded hours of operation at Galtier high. Evening programming for parents and families continued to be offered.

## Objective 6. 21st Century Community Learning Centers will serve children and community members with the greatest needs for expanded learning opportunities.

### *EVALUATION QUESTION 6.1* – IN THE SERVICE OF GREATEST NEED

*How do the schools where Pathways programming is offered compare in socio-economic indicators to other schools in the district?*

**METHOD**

Data from the Minnesota Department of Education were analyzed to compare *Pathways* schools to all other Saint Paul Schools.

**TABLE 6.1 - COMPARISON OF *PATHWAYS* SCHOOLS TO ALL SAINT PAUL SCHOOLS ON FIVE DEMOGRAPHIC VARIABLES**

| Demographic Variable | Regular (30 day) *Pathways* Participants (%) *(N=698 )* | All *Pathways* Participants (%) *(N=1,678)* | *Pathways* Schools (%) *(N=3,450)* | All Saint Paul Schools (%) *(N=43,655)* |
|---|---|---|---|---|
| 1. Eligible for Free or Reduced Lunch | 86 | 83 | 84 | 65 |
| 2. ELL | 42 | 40 | 40 | 34 |
| 3. Special Education | 16 | 16 | 17 | 16 |
| 4. Ethnic Group | | | | |
| ▪ American Indian | 1 | 1 | 2 | 2 |
| ▪ African American | 34 | 33 | 32 | 27 |
| ▪ Asian Pacific | 32 | 29 | 31 | 30 |
| ▪ Caucasian | 14 | 14 | 16 | 31 |
| ▪ Hispanic | 16 | 17 | 17 | 11 |

Sources: Saint Paul Public Schools Data Center, 2003.

**FINDINGS**

All of the *Pathways to Progress* sites are located in high poverty communities. The program focused on keeping students safe and smart in socially and economically challenged environments. Table 6.1 above shows that the eight *Pathways* schools had larger percentages of students with greater need and that regular *Pathways* participants in those schools were

- More likely to be eligible for free or reduced lunch;
- More likely to have ELL status; and
- More likely to be Asian Pacific or African American students.

## SUMMARY OF KEY FINDINGS AND CONCLUSIONS

### *Pathways* offered a wide variety of classes and attracted many student and adult participants to all sites.

- *Pathways* offered a wide array of courses and activities over the entire program period.
- *Pathways* was an integrated program that provided a seamless connection between after school programming and the regular school day. It was not viewed by the school staff as a separate, isolated program, but rather was incorporated into the school landscape.

### *Pathways* successfully met program goals.

#### REACHING TARGETED STUDENT POPULATIONS

- *Pathways* has reached and changed the lives of students. The eight *Pathways* schools had larger percentages of students with greater financial needs and greater numbers of risk factors than other schools in the district.
- Since the grant began in 2000, *Pathways* involved over 3,000 students and more than 11,000 parents and families. On average, one of every three children attending the eight schools chose to participate in the program and regular participants made up more than half of all participants.

#### ACHIEVEMENT HIGHLIGHTS

The research method used to compare students over the entire programming period demonstrates that *Pathways* participants achieved notable gains in scores on standardized tests, grades in English and math, daily attendance, and student behaviors and work habits. The most powerful findings are highlighted below.

#### STANDARDIZED TESTS

- In reading and math, more *Pathways* participants scored above the national norm on the SAT10 and fewer students scored in the lowest quartile.
- Data gathered on both two-year and three-year regular participants indicate the groups experienced continuous progress in their standardized test scores for both reading and math. Although the data in 2003 is complicated by the administration of a new test, we remain encouraged by the trend in the performance of these students. For example, in reading and math, *Pathways* students received higher scores than their matched pairs in the last two years of testing. Regular participants frequently began with lower scores in the years prior to *Pathways* involvement and still completed 2003 with higher scores on the standardized tests[10] in both subject areas.
- Math scores showed the largest differences between participants and non-participants, with three-year participants scoring more than ten NCE points higher than the non-participant control group.

[10] The 2002-2003 school year was the first time Saint Paul Public Schools administered the SAT10 to its students. The district's decision to use a different standardized test, switching from the MAT7 to the SAT10, makes it more difficult to compare student scores over time. The research team believes that these tests provide comparable assessments of student achievement.

- Middle school participants in the two-year group showed the largest gains in achievement scores over time, especially in math.

**SCHOOL ATTENDANCE**

- *Pathways* students experienced dramatically better school attendance, with participants attending 18.44 more school days and missing 9.57 fewer school days than their non-participant counterparts. Middle school participants missed 16.99 fewer days of school than non-participants. All of these findings were statistically significant.

**GRADES**

- Middle school students in *Pathways* generally received better marks in English and math and more of the grades received by these students were satisfactory ones – a grade of C minus or better.

**PERCEPTIONS OF TEACHERS, PARENTS, AND SCHOOL PRINCIPALS**

- English and math teachers completed surveys on over 1,100 *Pathways* students in their classrooms. These teachers reported that four of every five *Pathways* students showed improved habits and skills that are consistently associated with better academic performance, classroom behavior, and improved academic work.
- Individual interviews of parents and school principals indicated high levels of satisfaction with the *Pathways* program

**DISCIPLINE**

- There were no measurable differences between participants and non-participants with regard to discipline.

### Primary conclusions

- While more extensive longitudinal data need to be analyzed to confirm these findings, it seems clear that *Pathways* did have the desired effects with regard to student achievement and school-community involvement and collaboration.
- Many of the greatest successes occurred in the middle schools and junior high school. Researchers believe the evaluation findings especially encouraging for students in young adolescence because it is a critical and formative period for these students.
- Gains made in student achievement, behavior, and attendance suggest that programs such as *Pathways* should be continued. Some findings suggest that these gains may also be attributable to deeper relationships between teachers and students.
- Leadership at the site level, meaning strong principal support and strong on-site program coordination was of prime importance to program success in the schools and those sites with a full-time coordinator were more likely to have a successful program.
- The program was also deemed a success by most school administrators, teachers, *Pathways* staff, and most importantly, the families.
- A new federal grant award will allow for the partial continuation of the work in two *Pathways* schools and two new schools. This is taken to be a positive sign for after school programming in Saint Paul Public Schools.

### Areas for further research

- The causes of consistently low student performance in reading are not well understood. Instruction that targets gaps in literacy and language arts should be stressed and Saint Paul Public Schools is encouraged to continue to allocate resources in those areas.
- Currently the district has no good measure of drug use and chemical and mental health, which makes investigations into these areas difficult at the present time.
- It is still unclear why some schools showed marked improvements when comparing student participants to non-participants, while in other schools, participants faired worse than non-participants. What factors contribute most to the differences among school sites?
- Mobility also remains an obstacle to student involvement and a rich connection to the school. Saint Paul Public Schools should continue to explore ways in which students from highly mobile families can continue to be involved in both in-school and afterschool programming.
- Additional research concerning after school programming should be conducted to extend the knowledge gained thus far.

# APPENDIX OF SUPPLEMENTAL INFORMATION

## SECTION IV SUPPLEMENTAL INFORMATION

### DATA SOURCES

- Saint Paul Public Schools
- Teacher survey developed for and administered by the project
- Data collected from the program's Annual Progress Report (APR)[11]. (Data was self-reported by program staff including the project coordinator and the site/cluster coordinators)

IMPORTANT NOTE: Because the number of students who attained the status of two-year, Regular participant at CHEROKEE HEIGHTS Elementary school is low, we have eliminated cherokee heights ELEMENTARY school from the analyses.

Figure S1.0 is a draft of the procedure used to select matched pairs for the analyses.

**FIGURE S1.0 Protocol for Selecting Matched Pairs from Student Database**

1) Choose individual to be matched by random sample.
2) FIRST CUT select entire profile.

```
temporary.
select if (stand03=0 and stand02=0 and stand01=0) and
sch0203 = <school> and
sped03= <sped03 status> and
grade03 = <grade03> and
frlun03= <frlun03 status> and
ell03= <ell03 status> and
ethnic03 = <ethnic03 status> and
gender = <gender status> and
list variables= id sch0203 sped03 grade03 frlun03 ell03 gender ethnic03.
```

3) SECOND CUT expand grade03 to band. (1 and 2, 3 and 4, 5 and 6, OR 7 and 8)
4) THIRD CUT drop gender.
5) FOURTH CUT drop ethnic03.
6) FIFTH CUT drop ell03.
7) SIXTH CUT drop frlun03.
8) Create a variable that indicates the exact number of matched variables.

[11] Annual Progress Report (APR), the official report back to the U.S. Department of Education, the 21st Century Community Learning Centers grant funder.

Table S1.1A lists the sample size of three-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 2003 in reading and math.

**TABLE S1.1A**

| **SAT10 Normal Curve Equivalent (NCE) Scores in READING and MATH for Three-Year Pairs** | | |
|---|---|---|
| | **READING** | **MATH** |
| **Regular Participants** | 41.22<br>(N=19) | 47.16<br>(N=20) |
| **Non-Participants** | 40.23<br>(N=19) | 36.68<br>(N=21) |
| **Difference** | 0.99 | 10.68 |

**Statistical difference between groups (p=.05).

Table S1.1B lists the sample size of two-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 2003 in reading.

**TABLE S1.1B**

| **SAT10 Normal Curve Equivalent (NCE) Scores in READING for Two-Year Matched Pairs** | | | |
|---|---|---|---|
| | **All Schools**[+] | **Middle Schools** | **Elementary Schools**[+] |
| **Regular Participants** | 41.23<br>*(N=50)* | 43.04<br>*(N=11)* | 40.21<br>*(N=41)* |
| **Non- Participants** | 37.18<br>*(N=62)* | 37.21<br>*(N=15)* | 37.17<br>*(N=47)* |
| **Difference** | 4.05 | 5.83 | 3.04 |

[+]Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.1C lists the sample size of two-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 2003 in math.

**TABLE S1.1C**

| **SAT10 Normal Curve Equivalent (NCE) Scores in MATH for Two-Year Matched Pairs** | | | |
|---|---|---|---|
| | **All Schools**[+] | **Middle Schools** | **Elementary Schools**[+] |
| **Regular Participants** | 47.17<br>*(N=52)* | 46.79<br>*(N=12)* | 47.39<br>*(N=41)* |
| **Non- Participants** | 40.85<br>*(N=61)* | 35.89<br>*(N=15)* | 44.05<br>*(N=47)* |
| **Difference** | 6.32** | 10.90 | 3.34 |

[+]Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.2A lists the sample size of three-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 1999-2002 in both reading and math.

**TABLE S1.2A**

| MAT7 Normal Curve Equivalent (NCE) Scores in READING and MATH for Three-Year Pairs | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | READING | | | | MATH | | | |
| | 1999 | 2000 | 2001 | 2002 | 1999 | 2000 | 2001 | 2002 |
| **Regular Participants** | 35.87 *(N=18)* | 33.32 *(N=16)* | 31.59 *(N=19)* | 37.32 *(N=18)* | 45.29 *(N=18)* | 43.04 *(N=16)* | 39.25 *(N=19)* | 45.34 *(N=18)* |
| **Non-Participants** | 41.28 *(N=8)* | 29.61 *(N=8)* | 29.85 *(N=10)* | 31.58 *(N=15)* | 42.33 *(N=8)* | 39.53 *(N=8)* | 40.32 *(N=10)* | 44.35 *(N=15)* |
| **Difference** | -5.41 | 3.71 | 1.74 | 5.74 | 2.96 | 3.51 | -1.07 | 0.99 |

**Statistical difference between groups (p=.05).

Table S1.2B lists the sample size of two-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 1999-2002 in reading.

**TABLE S1.2B**

| MAT7 Normal Curve Equivalent (NCE) Scores in READING for Two-Year Pairs | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All Schools+ | | | | Middle Schools | | | | Elementary Schools+ | | | |
| | 1999 | 2000 | 2001 | 2002 | 1999 | 2000 | 2001 | 2002 | 1999 | 2000 | 2001 | 2002 |
| **Participants** | 31.40 *(N=11)* | 32.82 *(N=25)* | 35.41 *(N=37)* | 34.67 *(N=63)* | 15.83 *(N=3)* | 17.16 *(N=3)* | 19.52 *(N=4)* | 30.66 *(N=16)* | 43.01 *(N=8)* | 36.65 *(N=25)* | 38.60 *(N=39)* | 37.65 *(N=45)* |
| **Non-Participants** | 34.55 *(N=10)* | 33.62 *(N=17)* | 39.07 *(N=29)* | 33.27 *(N=46)* | 36.21 *(N=4)* | 62.90 *(N=1)* | 36.79 *(N=5)* | 30.44 *(N=13)* | 31.97 *(N=5)* | 31.46 *(N=20)* | 39.99 *(N=26)* | 35.84 *(N=31)* |
| **Difference** | -3.15 | -0.8 | -3.66 | 1.4 | -20.38 | -45.74 | -17.27 ** | 0.22 | 11.04 | 5.19 | -1.39 | 1.81 |

+Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.2C lists the sample size of two-year participants and non-participants and their average Normal Curve Equivalent (NCE) scores for 1999-2002 in math.

**TABLE S1.2C**

| **MAT7 Normal Curve Equivalent (NCE) Scores in MATH for Two-Year Pairs** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **All Schools+** | | | | **Middle Schools** | | | | **Elementary Schools+** | | | |
| | **1999** | **2000** | **2001** | **2002** | **1999** | **2000** | **2001** | **2002** | **1999** | **2000** | **2001** | **2002** |
| **Participants** | 30.15 *(N=11)* | 38.62 *(N=25)* | 42.54 *(N=37)* | 43.18 *(N=63)* | 25.18 *(N=3)* | NA | 33.43 *(N=4)* | 33.13 *(N=16)* | 33.86 *(N=8)* | 37.06 *(N=21)* | 44.38 *(N=39)* | 50.66 *(N=45)* |
| **Non-Participants** | 39.24 *(N=10)* | 37.06 *(N=17)* | 42.50 *(N=29)* | 39.69 *(N=46)* | 44.60 *(N=4)* | NA | 34.67 *(N=5)* | 29.19 *(N=13)* | 30.84 *(N=5)* | 35.47 *(N=20)* | 45.64 *(N=26)* | 49.20 *(N=31)* |
| **Difference** | -9.09 | 1.56 | 0.04 | 3.49 | -19.42 | NA | -1.24 | 3.94 | 3.02 | 1.59 | -1.26 | 1.46 |

+Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.5A lists the sample size of three-year participants and non-participants and their total school days attended, percentage of attendance, and days absent from school for 2002-2003.

**TABLE S1.5A**

| **Total Days of School Attendance for Three-Year Matched Pairs** | | | |
|---|---|---|---|
| | **Total Days** | **% of Attended Days** | **Days Absent** |
| **Regular Participants** (N=21) | 162.19 | 96.88 | 4.95 |
| **Non- Participants** (N=21) | 159.35 | 93.65 | 10.49 |
| **Difference** | 2.84 | 3.23** | -5.54** |

**Statistical difference between groups (p=.05).

Table S1.5B lists the sample size of two-year participants and non-participants and their total days in attendance at school for 2002-2003.

**TABLE S1.5B**

| **Total Days of School Attendance for Two-Year Matched Pairs** | | | |
|---|---|---|---|
| | **All Schools[+] *(N=130)*** | **Middle Schools *(N=34)*** | **Elementary Schools[+] *(N=94)*** |
| **Regular Participants** | 160.75 | 160.04 | 161.30 |
| **Non- Participants** | 142.31 | 143.17 | 141.70 |
| **Difference** | 18.44** | 16.87 | 19.6** |

[+]Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.5C lists the sample size of two-year participants and non-participants and their percentage of days attended in school for 2002-2003.

**TABLE S1.5C**

| **Percent of School Attendance for Two-Year Matched Pairs** | | | |
|---|---|---|---|
| | **All Schools[+] *(N=130)*** | **Middle Schools *(N=34)*** | **Elementary Schools[+] *(N=94)*** |
| **Regular Participants** | 95.87 | 93.07 | 97.98 |
| **Non- Participants** | 89.28 | 83.15 | 93.88 |
| **Difference** | 6.59** | 9.92** | 4.1** |

[+]Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.5D lists the sample size of two-year participants and non-participants and their days absent from school for 2002-2003.

**TABLE S1.5D**

| **Days Absent from School for Two-Year Matched Pairs** | | | |
|---|---|---|---|
| | **All Schools[+] *(N=130)*** | **Middle Schools *(N=34)*** | **Elementary Schools[+] *(N=94)*** |
| **Regular Participants** | 6.59 | 11.10 | 3.22 |
| **Non- Participants** | 16.16 | 28.09 | 7.21 |
| **Difference** | -9.57** | -16.99** | -3.99** |

[+]Cherokee not included.
**Statistical difference between groups (p=.05).

Table S1.7A lists the frequencies and types of discipline incidents in *Pathways* schools for 2002-2003.

**TABLE S1.7A**

| **Frequency and Type of Discipline Incidents within *Pathways* Schools** | | |
|---|---|---|
| **Type of Discipline Incident** | **Total Number of Incidents** | **Percent** |
| Attendance | 8 | .6 |
| Disorderly Conduct | 637 | 47.6 |
| Drugs (other than Alcohol) | 9 | .7 |
| Physical Assault or Fighting | 433 | 32.4 |
| Threat or Intimidation or Verbal Assault | 98 | 7.3 |
| Sexual Offenses | 1 | .1 |
| Vandalism or Property Related | 11 | .8 |
| Weapons | 23 | 1.7 |
| Other Major Offenses | 118 | 8.8 |
| **Total** | 1,338 | 100.0 |

Table S1.7B lists the sample size of participants and non-participants and number of discipline incidents and participation status for three year and two-year matched pairs for 2002-2003.

**TABLE S1.7B**

| **Number of Discipline Incidents and Participation Status: Combined Three-Year and Two-Year Matched Pairs** | | |
|---|---|---|
| | **Participants (%)** | **Non Participants (%)** |
| **0 Incidents** | 87 *(N=145)* | 88 *(N=146)* |
| **1 Incidents** | 7 *(N=11)* | 8 *(N=13)* |
| **2 Incidents** | 2 *(N=4)* | 1 *(N=2)* |
| **3 Incidents** | 2 *(N=3)* | .5 (N=1) |
| **4 Incidents** | 1 *(N=1)* | 0 *(N=0)* |
| **5 Incidents** | 1 *(N=2)* | 2 *(N=3)* |
| **6 Incidents** | 0 *(N=0)* | 0 *(N=0)* |
| **7 Incidents** | 0 *(N=0)* | 0 *(N=0)* |
| **8 Incidents** | 0 *(N=0)* | 0 *(N=0)* |
| **9 Incidents** | 0 *(N=0)* | 0 *(N=0)* |
| **10 Incidents** | 0 *(N=0)* | 0 *(N=0)* |
| **11 Incidents** | 0 *(N=0)* | .5 (N=1) |
| **Total Incidents** | 166 | 166 |

## BACKGROUND ON THE EVALUATION TEAM

### CENTER FOR APPLIED RESEARCH AND EDUCATIONAL IMPROVEMENT AT THE UNIVERSITY OF MINNESOTA

The Center for Applied Research and Educational Improvement (CAREI) is a collaborative organization that brings the resources of the College of Education and Human Development and the University of Minnesota to bear on educational issues in Minnesota and across the nation. The work of CAREI focuses on:

(1) Linking Minnesota school districts and the College of Education and Human Development at the University of Minnesota;

(2) Conducting applied research and evaluation studies for local, state, and federal agencies; and

(3) Providing technical assistance and serving as a clearinghouse of information on innovative programs across the United States.

Some 30 Minnesota school districts currently are members of CAREI, to support targeted research efforts, grants for collaborative research projects involving schools and the college, topical seminars, and an annual symposium. In addition, CAREI publishes and disseminates to all school districts in Minnesota a newsletter, Research*Practice*, which shares the most recent information and research on a given educational issue. A policy board composed equally of public school superintendents (two from urban districts, two from rural districts and two "at large"), faculty/staff from each of the six departments within the College, the Dean of the College, and an *ex-officio* representative of the Minnesota Department of Education sets direction for these aspects of CAREI's work.

### REASEARCH TEAM MEMBERS

- Kyla Wahlstrom, Principal investigator,
- Timothy D. Sheldon, Project manager
- Ashley Lewis, Research Assistant