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School of Education and Human Development ▪ University of Colorado at Denver and Health Sciences

A REPORT OF EVALUATION STUDIES

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Learn and Serve Colorado contracted with the Evaluation Center, in the School of Education and Human Development, at the University of Colorado at Denver and Health Sciences Center, to provide external evaluation services beginning Fall 2006. The evaluation study encompassed the period from November 2006 to August 2007. The evaluation process was guided by three goals:

1. To develop a rubric of indicators of high quality service-learning in schools
2. To pilot and refine the rubric through the process of identifying "Banner Schools" – schools with exemplary service-learning programs
3. To examine the impact of service learning at Banner Schools

Results are summarized below and are organized by goal.

Goal One: Develop a rubric of indicators of high quality service-learning in schools

Initially, evaluators developed a questionnaire based on current literature to assess the status of service learning at Learn and Serve Colorado schools. Staff at 23 schools completed the questionnaire. The responses to the questionnaire were used for two purposes: 1) to develop a preliminary rubric of high-quality service-learning program indicators, and 2) to identify schools with evidence of strong service-learning programs for site visits.

Goal Two: Pilot and refine the rubric through the process of identifying "Banner Schools" – schools with exemplary service-learning programs

A team of evaluators visited seven schools identified as having strong service-learning programs to gain greater insight regarding what constitutes quality with respect to service learning and to evaluate the current status of service learning at each school. Evaluators completed observations, reviewed artifacts, and conducted key informant interviews at each school and then rated the schools using the preliminary rubric. Three schools emerged with the highest total ratings (above the mean total for this select group of schools). These schools were designated "Banner Schools", indicating they were exemplary in terms of their implementation of service learning. Once schools were identified, the rubric was further refined based on what was learned during field experiences.

Goal Three: Examine the impact of service learning at Banner Schools

From the results of surveys administered at Banner Schools, students as a group were found to have high academic efficacy beliefs – attitudes that have been shown to correlate with school achievement. From surveys of parents and community members affiliated with Banner Schools, results indicated that respondents held positive opinions regarding

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the impact of service learning, not only on the positive development of students but also on the community overall.

During key informant interviews, educators cited a number of examples of specific ways that service learning at their school has supported the development of competencies outlined in academic standards. Specifically, educators noted the value of service learning as a strategy to provide opportunities to hone research, reading, writing, math, and oral presentation skills.

To further examine the impact of service learning on student achievement, Colorado Student Assessment Program (CSAP) results were analyzed. On statewide assessments, the three-year trend of achievement in Banner Schools was improving for two of the three selected schools in both reading and math. Achievement dipped slightly at the third Banner School. Comparisons of actual achievement levels on the 2007 CSAP at Banner Schools to their predicted level of achievement (based on the percentage of students eligible for free/reduced lunch) were inconclusive. Likewise, when CSAP achievement levels at Banner School were compared to levels at similar schools that were not participating with Learn and Serve Colorado, comparisons were inconclusive.

Conclusion

Previous studies raised questions about the quality of the service learning occurring at sampled schools. In order to make connections between student outcomes and service learning, a measure of the quality of the service learning experience is necessary. The rubric of indicators of high-quality service learning that resulted from this study is envisioned as a tool to support Learn and Serve Colorado schools assess their programs in order to inform ongoing quality improvement. The instrument may also be used, as it was in the present study, to identify additional Banner Schools in order to support the continued recognition and celebration of the dedicated educators who are engaged in service learning in Colorado. It is anticipated that the rubric will make an important contribution to the field of service learning.

While the present study addressed the issue of measuring quality, it may not have sufficiently addressed the issue of measuring the dose of quality service learning received by students whose CSAP scores were examined. Future studies should continue to examine the effect of service learning on student academic achievement through longitudinal analyses, with particular attention paid to measuring the quality and dose of service learning. A variety of achievement indicators should also be considered.

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Initially, a logic model was developed to depict the theory of change that describes the work and intended outcomes of Learn and Serve Colorado (please see Appendix A). Prior evaluation efforts were also reviewed. Results from one such study found that younger students who participated in service learning reported positive outcomes (e.g., increased civic knowledge, civic disposition) more often than a comparison group; surveys of older students (both participants in service learning and comparison students) showed a decline in positive outcomes during the school year.

These findings raised questions that shaped the current evaluation study. Specifically:

- At what level was quality service learning being implemented in sample schools?
- Were students sufficiently engaged in high-quality service-learning to promote the anticipated positive attitudes and increase academic achievement?

To address these questions and to establish user-friendly methods for ongoing assessment of service-learning programs in Colorado, evaluation goals were developed collaboratively with Learn and Serve Colorado staff and representatives from the participating Local Education Agencies. These evaluation goals are presented in Exhibit 1, below, along with an overview of the steps taken to achieve each goal. The report that follows describes the methods and results associated with each step of the study, organized sequentially by evaluation goal.

Limitations

Limitations of the current study include a small sample size (N= 3 Banner Schools); lack of information regarding the quality of service learning and level of implementation during each of the three years that CSAP scores were examined; and absence of a subset of students to follow longitudinally who participated in service learning all three years and, therefore, would have had the largest dose of the intervention – in this case, service learning (not all of the students represented in the CSAP data necessarily participated in service learning all three years). In summary, while the present study addressed the issue of measuring quality, it may not have sufficiently addressed the dose of quality service learning received by students whose CSAP scores were examined.

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Exhibit 1: Overview of the Evaluation Study

Goals	Steps to Achieve Goals
1. Develop a rubric of indicators of high quality service-learning in schools	1.1 Develop a questionnaire to determine the status of service-learning programs 1.2 Administer the questionnaire in Learn and Serve Colorado schools 1.3 Select schools for site visits based on questionnaire responses 1.4 Construct a rubric of indicators of high quality service-learning schools
2. Pilot and refine the rubric through the process of identifying "Banner Schools" – schools with exemplary service-learning programs	2.1 Visit schools and assess service-learning implementation using the rubric 2.2 Select Banner Schools based on rubric ratings 2.3 Refine the rubric based on field experiences

3. Examine the impact of service learning at identified Banner Schools	3.1 Survey students at Banner Schools
	3.2 Survey parents and community members at Banner Schools
	3.3 Review student achievement data at Banner Schools
	    3.3a Examine educator views on academic standards and service learning
	    3.3b Examine three-year trends of CSAP achievement
	    3.3c Compare predicted and actual CSAP performance
	    3.3d Compare CSAP performance to that of similar schools

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GOAL ONE: RUBRIC DEVELOPMENT————————————————————————

Develop a rubric of indicators of high quality service-learning in schools

1.1   Develop a questionnaire to determine the status of service-learning programs

From a review of relevant literature, evaluators compiled a list of characteristics of high quality service learning (please see references in Appendix B). From this master list, evaluators selected items to be included in the preliminary questionnaire and noted other characteristics that would be better assessed through direct observation during school visits or explored in personal interviews.

From the items determined to be appropriate for a questionnaire, a draft instrument was developed. Learn and Serve Colorado staff and representatives from the six Local Education Agencies reviewed the draft and submitted suggestions for improvement. Based on this feedback, a two-part questionnaire was created (included in Appendix C). In Part One, items requested information concerning the level of involvement of students, teachers, the school district, and the community in service learning. Respondents were also asked to provide examples to give a clearer picture of the service-learning program. In Part Two, four multiple-choice questions explored the quality of the service-learning program in critical areas: the connection to academic standards, the relevance of service-learning activities to the community, the role of students in project initiation, and the opportunities students had to reflect on their service-learning participation. Respondents were also given the opportunity to provide additional information, if they desired.

1.2   Administer the questionnaire in Learn and Serve Colorado schools

Each of the representatives from the six Learn and Serve Colorado Local Education Agencies agreed to distribute the questionnaire to participating schools within their supervision area.[1] Questionnaires were administered electronically and, in collaboration with staff at participating schools, a five-week window was determined as the timeframe for completion. The self-assessment process had two purposes: 1) to provide a complete picture of the degree to which service learning was being implemented in Learn and Serve Colorado schools, and 2) to provide an opportunity for school communities to reflect on the current status their service-learning programs. While the goal was to involve all participating schools in the self-assessment phase, some Local Education Agencies indicated they submitted questionnaires only for selected schools.

1.3   Select schools for site visits based on questionnaire responses

Completed questionnaires were received from 23 Learn and Serve Colorado schools. The schools were divided into four groups: 1) elementary schools, 2) middle schools, 3) high schools, and 4) multi-grade schools. A team of evaluators was assigned to each group; evaluators ranked the schools within each group based on evidence of high-quality service learning using current literature as a guideline.

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[1] The total number of participating schools was unclear.

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From the ranking of questionnaire responses, evaluators selected seven schools that showed the strongest evidence of high-quality service-learning. A predetermined number of schools for selection had not been established *a priori*; however, efforts were made to assure that at least one school was selected from each group in order to represent the K-12 spectrum. The seven selected schools included 2 elementary schools, 1 middle school, 1 high school, and 3 multi-grade schools.

1.4 Construct a rubric of indicators of high-quality service-learning schools

Using current literature on service learning and the examples of existing practices collected from the questionnaire responses, evaluators constructed a preliminary rubric. Evaluation team members refined the rubric until a working version was established. This draft was used during the site visit process, which is described in detail below. Evaluators kept notes to record any difficulties in applying the rubric throughout the field experience process.

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GOAL TWO: BANNER SCHOOL IDENTIFICATION

Pilot and refine the rubric through the process of identifying "Banner Schools" -- schools with exemplary service-learning programs

2.1 Visit schools and assess service-learning implementation using the rubric

In March and April 2007, evaluators working in pairs visited each of the seven identified site schools. At each school, key informants were interviewed; typically, informants included the service-learning coordinator, teacher participants, and administrators. (The key informant interview protocol is presented in Appendix D.) Interviews were digitally recorded with the consent of informants to support subsequent qualitative analysis. Site visits also included opportunities to observe directly evidence of student participation in service learning from artifacts and, frequently, from watching students engaged in service-learning activities.

At the conclusion of the site visit, each evaluator independently rated the school's status on all the indicators of the service-learning rubric. Evaluation teams then discussed any items where there were discrepancies and arrived at a consensus score. A total score for each school was then calculated. Evaluators also compiled a list of the areas of strength in the implementation of service learning as feedback to the participating schools.

2.2 Select Banner Schools based on rubric ratings

All of the seven schools visited showed many areas of strength, and all were rated above the midpoint total on the rubric. Three schools emerged with the highest total ratings (above the mean total for this select group of schools). These schools were designated "Banner Schools" indicating they were exemplary in their implementation of service learning. Banner Schools consisted of one elementary school, one middle school, and one multi-grade school, although this distribution was not pre-determined.

Evaluators reported each school's strengths to Learn and Serve Colorado staff who, in turn, shared the findings with the Local Education Agency representatives. The three Banner Schools were also recognized by the staff of Learn and Serve Colorado for their success in the delivery of high-quality service learning.

2.3 Refine the rubric based on field experiences

Once Banner Schools were identified, evaluators re-visited the rubric instrument for further refinement based on the experiences during the school visit and interview process. The goal was to produce a rubric that was a thorough and user-friendly instrument for potential use as a method of self-assessment by service-learning school staff and Local Education Agency representatives in the future. To achieve this goal, field notes were used to identify ambiguous language or unrealistic descriptions of the indicators based on the observations of actual programs. Where necessary,

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indicators were adjusted or more carefully worded to reflect what had been observed in the site schools. The resulting refined rubric is presented in Appendix E.

The revised rubric consists of 14 categories describing dimensions of service learning. The categories are:

- Embodied in school policies
- Service-learning leadership team
- Administrative support
- Professional development
- Amount of teacher involvement
- Strength of teacher involvement
- Curriculum integration
- Visual evidence
- Amount of student involvement
- Strength of student involvement
- Involvement of disadvantaged/at-risk students
- Service learning addresses a community need
- Community support
- Celebration of success

For each category, a description is provided for levels 0, 1, 2, and 3. A 0 rating indicated that no evidence of the desired attribute was present. A rating of 1 indicated minimal evidence; 2 indicated "partially implemented". A rating of 3 indicated that full implementation in a particular category was found. Total potential scores ranged from 0 – a school with no evidence of high-quality service learning in any category – to a maximum score of 42, which indicated full implementation in all 14 categories.

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GOAL THREE: EXAMINE IMPACT OF SERVICE LEARNING

Examine the impact of service learning at the identified schools

In order to examine the impact of service learning at the Banner Schools where there was evidence of high-quality program implementation, three areas were explored: 1) student academic efficacy beliefs, 2) perceptions of parents and community members concerning the effects of service learning, and 3) the connection between service learning and academic achievement. Each of these investigations is described, below.

3.1 Survey students at Banner Schools

To assess the impact of participation in high-quality service learning on student academic efficacy beliefs, students at the three Banner Schools were invited to complete a brief survey developed to assess these attitudes. Research supports the link between a student's belief in their abilities and success in school.[2] Therefore, surveys of students provided one way to measure attitudes that contribute to achievement.

The Morgan-Jinks Student Efficacy Scale was selected as the survey instrument because it had been field tested with elementary students with acceptable reliability and had been shown to correlate with reports of academic performance.[3] (The survey is presented in Appendix F.) At the Banner Schools, a total of 123 students completed the scale. Respondents reported high levels of agreement with positive statements (mean = 78.7%), which indicated that students as a group had high efficacy beliefs. Students also reported low levels of agreement with negative statements (mean = 25.2%), which served as a way to check the accuracy of results. Exhibit 2, below, shows the percent of students agreeing with each survey item; percentages are sorted from high to low.

While it is not possible to say that participation in service learning caused these students to have strong beliefs in their academic efficacy, it is accurate to state that students as a group at the three Banner Schools where quality service learning is implemented were found to have high academic efficacy beliefs.

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[2] Alderman, M. K. (1999). *Motivation for achievement: Possibilities for teaching and learning*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

[3] Jinks, J., & Morgan, V. (1999). Children's perceived academic self-efficacy: an inventory scale *The Clearing House, 72*, 224-230.

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Exhibit 2: Student Efficacy Survey Results at Banner Schools

Positive Items	Percent in Agreement
When I am old enough, I will go to college.	93.5
I always get good grades when I try hard.	93.5
I work hard in school.	91.8
It is important to go to high school	91.1
I could get the best grades in class if I tried enough.	90.2
I will graduate from high school.	87.8
Adults who have good jobs probably were good students when they were kids.	87.0
I go to a good school.	82.9
I am smart.	82.9
I am a good math student.	82.0
I usually understand my homework assignments.	81.3
My teacher thinks I am smart.	79.7
I am a good social studies student	78.1
I am a good reading student.	77.3
It is not hard for me to get good grades in school.	75.6
I am a good science student.	73.1
Sometimes, I think an assignment is easy when the other kids in class think it is hard.	70.7
Teachers like kids even if they do not always make good grades	69.9
When the teacher asks a question I usually know the answer even if the other kids don't.	61.8
I am one of the best students in my class.	58.5
Most of my classmates like to do math because it is easy.	44.7
Negative Items	
My classmates usually get better grades than I do.	51.2
Most of my classmates work harder on their homework than I do.	37.4
Kids who get better grades than I do get more help from the teacher than I do	25.2
I would get better grades if my teacher liked me better.	24.6
No one cares if I do well in school.	22.0
What I learn in school is not important.	19.5
I usually do not get good grades in math because it is too hard.	19.5
I will quit school as soon as I can.	17.9
It does not matter if I do well in school.	9.8

3.2 Survey parents and community members at Banner Schools

Parents and community members affiliated with Banner Schools were invited by Local Education Agency representatives to complete a brief survey to assess their perceptions regarding the impact of service learning. (The survey is included in Appendix G.) A total of 43 respondents returned the surveys; 24 indicated they were parents, 16 were community members, and 3 did not indicate their affiliation. Survey results indicated that respondents felt service learning has important impacts on students and their communities. Exhibit 3 presents these data.

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Exhibit 3: Parent/Community Member Survey Results at Banner Schools

Survey Item	Percent in agreement
Participating in service learning helps students… …prepare to be good citizens.	100
…do better in school.	97.7
…develop skills to work well with others.	97.7
…be more motivated to learn.	97.7
…be more aware of community needs.	95.3
…by contributing to a student's feeling of self-worth.	95.3
The volunteer projects that students participate in help to meet real needs in the community.	92.8
School-sponsored volunteer projects contribute to a positive relationship between the school and the community.	95.2

3.3   Review student achievement data at Banner Schools

Student achievement at Banner Schools was examined from several perspectives. In key informant interviews during the Banner School selection process, educators noted their views on how service learning supports a school's progress toward achieving academic standards. Representative comments were selected and are presented in section 3.3a, below.

In addition to educator perspectives, student achievement at Banner Schools was examined using data from the Colorado Student Assessment Program (CSAP). Each year, the Colorado Department of Education posts results of statewide assessments by school, including the number and percentage of schools performing at each of four proficiency levels (unsatisfactory, partially proficient, proficient, and advanced). For this analysis, the percentage of students at the proficient and advanced levels on the 2007 CSAP reading and math assessments was calculated for the Banner Schools from the publicly released data.[4] The resulting scores were then analyzed in three ways:

1) Three-year trends (2005 – 2007) in CSAP achievement were examined;
2) Actual achievement levels on 2007 CSAP tests were compared to students' predicted levels of performance based on the school's rate of free and reduced lunch (a widely used indicator of socioeconomic status); and,
3) Achievement results on 2007 CSAP tests at Banner Schools were compared to results at similar Colorado schools that have not participated in service learning through Learn and Serve Colorado programs.

These statistical analyses and the results are presented in sections 3.3b through 3.3d, which follow.

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[4] Score reports were retrieved in August 2007 from the CDE website at http://www.cde.state.co.us

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3.3a Examine Educator Views on Academic Standards and Service Learning

As part of the interviews conducted during school site visits, the connection between service learning and academic achievement was explored. Participants were asked, "How does service learning support your school's progress in addressing educational standards?" Educators were able to cite many examples of ways in which they used service learning to address academic standards. Specifically, educators noted the value of service learning as a strategy to provide opportunities to develop skills in the areas of research, reading, writing, math, and oral presentation. Representative quotes are presented in Exhibit 4.

Exhibit 4: Educator Examples of Service Learning Connection to Academic Standards

- "[Service learning] definitely ties in [to the academic standards] – kids have to do research, read and write, do presentations."

- "All the projects involve some sort of reflection, whether it's writing a poem, giving a speech or a Power Point presentation, or making a poster."

- "I use service learning to teach the standards of civics. Primarily, we [learn about] the levels of government …and then how to be an effective participant."

- "Our service learning projects often come from the headlines. After the tsunami, our kids wanted to help, so we did research – did they need coats in Thailand? It was a great geography opportunity."

- "The [6th graders taught the 1st graders] how to question when you read… [Teaching others] improved their own reading... We de-briefed after each session: what worked, what didn't work. They learned a lot about teaching and learning skills."

- "[The students] wanted to learn about global warming…, so we watched movies and read the newspaper articles, and then they used that to develop [service-learning] projects. The projects are a way for me to see what they have learned, so I can assess their understanding of the human/environment interaction."

- "After I taught a unit on immigration, a language arts teacher decided that, as part of expository writing, he could have [students] record oral histories …Those stories are a tool for him to teach how to write an essay."

- "We visited sites around the community. [During the] field trips, our math teacher created 'find these shapes' out in the natural world; find them in things that people have built, and so it's been a really nice way for us to connect math."

- "Each [student] had a problem that they thought needed to be solved, and they did lots of research about the problem. Then they came up with [a solution]. Several groups actually went to the school board and presented… [Service learning] supports being able to speak in public and being able to advocate for yourself."

- "When they were doing their [service-learning] projects, the language arts teacher helped [students] to do the research and the writing. The math teacher helped them do their graphing."

- "[First grade students] learned writing, persuasive speaking, telling time, graphing. We went to the other classrooms, showed them our graphs, and explained the whole thing …We went to the school board and [the students] all had a part to present…[A year later, my students] were able to tell [a visitor] all about it … They remembered the results of the graph. They really retained it."

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3.3b   Examine Three-Year Trends in CSAP Achievement

To obtain a picture of achievement levels at the Banner Schools, the percentage of students in proficient/advanced categories for CSAP reading and math were examined for three years: 2005, 2006, and 2007 – the same years the schools were engaged in service-learning activities. Results were mixed, with School A showing a clear trend toward improvement in both reading and math; at School B, the percentage of students in the proficient/advanced categories was relatively low, but the three-year trend indicates improvement. School C experienced slight decreases over the three years. These data are presented in Exhibits 5 and 6.

Student achievement is affected by many complex and interconnected variables and, therefore, attributing changes in achievement levels to any one variable is difficult. This analysis is best viewed as an examination of trends in achievement at Banner Schools without any implication of cause/effect of participation in service learning.

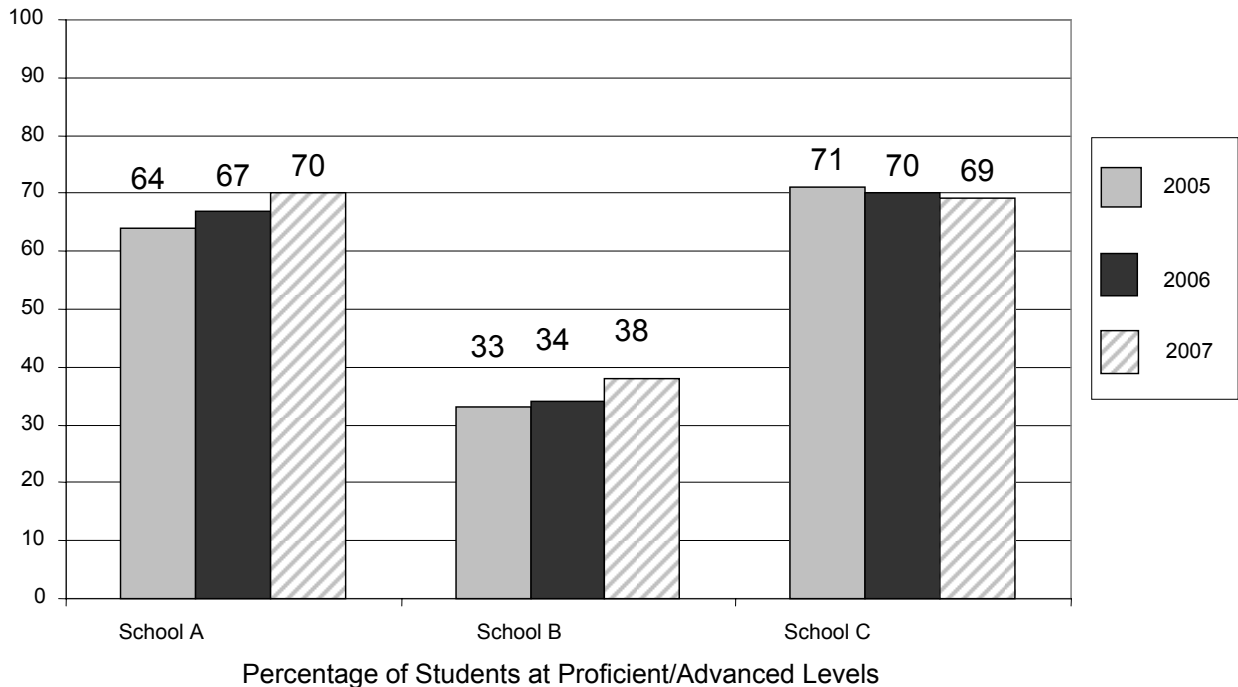**Exhibit 5: Three-Year Trend in CSAP Reading at Banner Schools**

Percentage of Students at Proficient/Advanced Levels

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Exhibit 6: Three-Year Trend in CSAP Math at Banner Schools

Percentage of Students at Proficient/Advanced Levels
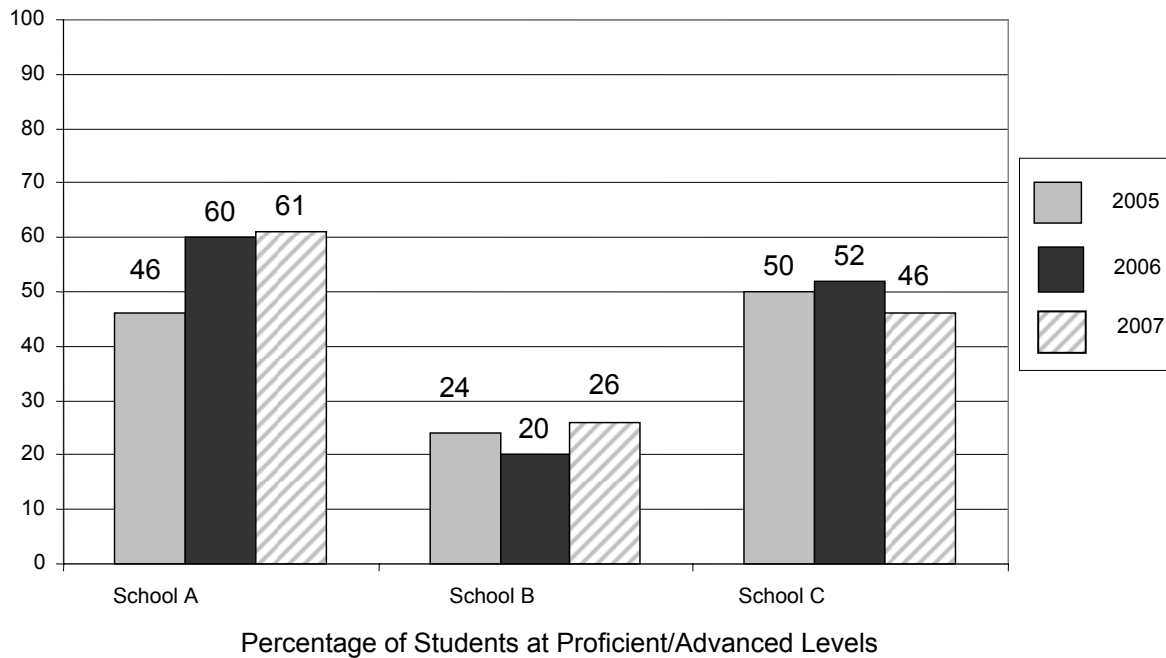
3.3c Compare Predicted and Actual CSAP Performance

In this analysis, the percentage of students who performed in the proficient and advanced categories on the CSAP reading and math tests was calculated for each Banner School, and then compared to the percentage of students predicted to achieve at those levels based on the rate of students eligible for free/reduced lunch at the school. This variable was selected to calculate predicted levels of achievement because Banner Schools were found to have high rates of free/reduced lunch (ranging from 47 to 68%), and other studies have linked the free/reduced lunch rate to achievement levels. While free/reduced lunch rate was not a selection criterion, this factor may be of particular interest to Learn and Serve Colorado because of the emphasis on engaging students from disadvantaged circumstances in service learning.

The predicted percentage was calculated by developing a formula from a comparison of the results for the 2007 statewide CSAP assessment and free/reduced lunch rates using a linear regression analysis. For CSAP reading scores, regression results indicated that the free/reduced lunch rate predicted 53% of the variation, $F (1, 4743) = 5384.87$, $p < .001$. The constant score was 86.90 and the slope was -.53, indicating that the percentage of students at a particular school who score in the proficient/advanced categories is predicted to decrease by nearly half a percentage point for every percent increase in the school's rate of free/reduced lunch. For CSAP math scores, the regression analysis showed that the free/reduced lunch rate explained 24% of the variation, $F (1, 4742) = 1526.70$, $p < .001$. The constant was 73.95 and the slope was -.44, indicating again that the percentage of students achieving at proficient/advanced levels is predicted to decrease by slightly less that a half a percentage point for every one percent increase in the free/reduced lunch rate.

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Exhibit 7, below, compares the achievement of students at Banner Schools compared to what was predicted. At School A, more students were achieving at proficient or advanced levels than predicted based on the school's free/reduced lunch rate. At School B, fewer students performed at those levels than would be anticipated. Students in School C (as a group) were above predicted levels in reading but below in math. Because results are mixed, this analysis was inconclusive.

Exhibit 7: CSAP Reading and Math: Comparison of Predicted and Actual Performance

Banner Schools	Predicted % Proficient/ Advanced Students	Actual % Proficient/ Advanced Students	Difference between Predicted & Actual %	Summary + or - <5 points
School A				
Reading	61.24	70.00	+8.76	above
Math	52.81	60.67	+7.86	above
School B				
Reading	50.88	38.5	- 12.38	below
Math	44.27	26.25	- 18.02	below
School C				
Reading	62.17	68.63	+6.46	above
Math	53.58	46.00	- 7.58	below

3.3d Compare CSAP Performance to Similar Schools

A third statistical analysis was conducted to further explore student achievement at Banner Schools by selecting other Colorado schools with similar characteristics (locale, free/reduced lunch rate, size) that had not participated in programs with Learn and Serve Colorado. In this case, results were also mixed and inconclusive: at School A, more students were in the proficient/advanced range in reading and math than at a similar school. At School B, the comparison school had the higher percentage of proficient and advanced students in both reading and math. School C did better than the comparison school in reading, but the comparison school had a higher percentage of proficient/advanced students in math. Exhibit 8, below, presents these findings.

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Exhibit 8: CSAP Reading and Math Results at Banner and Comparison Schools

CSAP Reading % of Students Proficient/Advanced		CSAP Math % of Students Proficient/Advanced		Summary
Banner Schools	**Comparison Schools**	**Banner Schools**	**Comparison Schools**	
School A 70.00	50.33	School A 60.67	58.33	Banner school: higher % of pro/adv students in reading and math
School B 38.5	64.00	School B 26.25	40.33	Comparison school: higher % of pro/adv students in reading and math
School C 68.63	61.50	School C 46.00	47.88	Banner school: higher % of pro/adv students in reading; comparison school: higher % of pro/adv in math

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CONCLUSION

This study was initially shaped by analyses of other evaluation efforts that examined student outcomes in relation to service learning. Previous studies raised questions about the quality of the service learning occurring at sampled schools. In order to make connections between student outcomes and service learning, a measure of the quality of the service-learning experience is foundational. To address this need, a user-friendly rubric, comprised of indicators of high-quality service learning, was developed. The resulting rubric is appropriate as a self-assessment tool for Learn and Serve Colorado schools 1) to serve as a catalyst for professional conversations and reflection on their programs and 2) to provide a yardstick for ongoing quality improvement. The instrument may also be used, as it was in the present study, to identify additional Banner Schools in order to support the continued recognition and celebration of the dedicated educators who are engaged in service learning in Colorado. It is anticipated that the rubric will make an important contribution to the field of service learning.

In terms of assessing the impact of service learning, findings indicated that, as a group, students at schools where quality service-learning programs are in place have high academic efficacy beliefs, and that parents/community members at these schools hold positive opinions about the effect of participating in service learning. Likewise, educators at the Banner Schools report confidence that engaging in service learning promotes the achievement of academic goals. However, a direct, causal relationship between service learning and achievement was not conclusively supported by the analyses of CSAP reading and math scores. Therefore, it remains a challenge to map the impact of service learning on student achievement as measured by statewide assessments, even at schools where high quality programs are known to exist.

Future studies should continue to examine the effect of service learning on student academic achievement through longitudinal analyses, with particular attention paid to measuring the quality and dose of service learning. A variety of achievement indicators should also be considered.

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Appendix A: Logic Model for Learn and Serve Colorado

Goal: Through participation in high-quality service learning, youth will develop the resources necessary to improve their communities while increasing their academic achievement.

Inputs

Learn and Serve Colorado
Grant funding from the Corporation for National and Community Service – Learn and Serve America
Sub-grantee Local Education Agencies 2006-2009
1. Campo School District
2. Lake County School District
3. Colorado Springs #11 School District
4. Denver Public Schools
5. Boulder Valley Schools
6. Northeast Consortium

Partnerships with national, state and community agencies
Adult volunteers
↓

Activities→	Initial Outcomes→	Intermediate Outcomes→	Intended Results
• State level: statewide conference, state director's meeting • District level: local training resources and workshops • Continuous training and coaching of students through AmeriCorps*VISTA youth councils • Networking of sub-grantees via phone conferencing, meetings, and a service learning library of best practices with the Institute on the Common Good at Regis University • Collaboration with other local agencies to strengthen the capacity of schools to provide high quality service learning experiences and sustain such programs	Local Education Agencies provide structures and opportunities for students to engage in high quality service learning projects. 60% of the student participants are from disadvantaged situations.	Students participate in service learning where they are able to • use their own experiences, • receive instruction that highlights meaning and understanding, • direct their own learning, engage in complex thinking, • work together on planning; • be involved with families and community members • receive instruction coordinated with regular classroom programs	Students (especially those from disadvantaged situations) learn skills and attitudes that contribute to their school and civic engagement and academic achievement.

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Appendix B: Literature Review References

"Standards of Quality for School-Based and Community-Based Service Learning" from the Alliance for Service Learning in Education Reform (1995)

"Creating High Performing Schools Through Service Learning" from Education Commission of the States et al. (2004)

"Developing a Plan for Service-Learning Institutionalization" from Learn and Serve Colorado (2006)

"Rubric for Assessing the Use of Maryland's Seven Best Practices of Service Learning" from Maryland State Department of Education (2002)

"Site Level Best Practices for Service Learning" from Vermont Community Works (1999)

"Principles of Good Practice in Combining Service and Learning" by Honnet and Poulson (1989)

"Rubric for Assessing Quality of the Service-Learning Experience" from the Wisconsin Department of Public Instruction (2006)

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Appendix C: Service-Learning Questionnaire

School Name	*School District*
School Contact Person	
Phone	*Email*

Part One: Institutionalization Indicators

Student Participation

1. How many students are in your school?

Number

[   ]

Of the total, how many students will be involved in a service-learning project during the 06-07 school year?

[   ]

2. For students participating in service-learning, approximately how many hours per semester are they engaged in service learning activities?

[   ]

3. What percentage of your students qualify for the free/reduced lunch program?

[   ]

4. Do all students participate in service-learning at some time during their experience at your school?   □ yes   □ no

5. Do students assume leadership duties related to service-learning in your school?   □ yes   □ no
   (For example, do students contact community partners for information or assistance with a project or take individual responsibility for certain tasks?)
   If so, please describe or give an example of student leadership related to service learning.

   [   ]

6. Please describe how disadvantaged students are involved in service-learning at your school. For example, are any special supports provided to disadvantaged students participating in service-learning? Or, is service-learning used specifically to engage disadvantaged students?

   [   ]

Teacher Participation

7. How many teachers work in your school?

Number

[   ]

Of those teachers, how many will use service- learning as a strategy in their classroom during the 06-07 school year?

[   ]

8. What grade levels and/or subject areas incorporate service-learning projects?

   [   ]

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District/School Support

9. Does your school or district have a written policy on service learning or community service? □ yes □ no
   If so, please briefly describe the policy:

10. Is service-learning addressed in the current school improvement plan? □ yes □ no
    If so, how is service-learning incorporated into the school improvement plan?

11. Does your school or district provide professional development for teachers on service learning?
    □ yes □ no
    If so, please describe the professional development opportunities and who participates:

12. Does your school routinely recognize student success in service-learning projects? □ yes □ no
    If so, how are student success recognized/ publicized?

13. Does your school have a service-learning coordinator? □ yes □ no
    Does this person receive a stipend or salary specific to the position?
    □ yes □ no
    If so, who is the service-learning coordinator? (name, title)

14. Does your school have an active service-learning leadership team? □ yes □ no
    If so, please check which groups are represented on the leadership team?
    □ Community members □ Teachers
    □ Students □ School principal (or other administrator)
    □ Family members

    If you have a service-learning leadership team, how often does it meet?

Community Involvement

15. In the past year (since January 2006), have you worked with any outside organizations (other than Learn and Serve Colorado and your school district) to implement your service-learning initiatives? □ yes □ no

    If so, please list those organizations below and briefly describe the interaction:

Organization	What has been the contribution of this organization to service-learning at your school?

16. Please list any funds you have received from outside organizations (other than Learn and Serve Colorado) in the last year specifically to support service-learning. Please include fundraising efforts and sources, whether they were successful or not.

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Please indicate which statement **best** describes the status of service-learning at your school.

17. Is service-learning integrated into the curriculum for the purpose of addressing standards?
    _____There are no connections between the curriculum and service-learning projects
    _____ We incorporate service-learning into classroom units
    _____ We use service-learning as a strategy to address at least one specific standard in the curriculum
    _____ We address many standards in different disciplines using service-learning as a strategy throughout the
         year
    Please provide an example of how service-learning is used to address standards.

18. Are students meeting a real need in the community with service-learning?
    _____ Service-learning projects are not initiated by community needs
    _____ We begin with a community need, but its relevance to the community is not explored by students
    _____ A community need is identified, and students have opportunities to examine the relevance to the
         community.
    _____ A community need is identified through a research process, and students have ongoing opportunities
         to examine the relevance to the community

    Please provide an example that illustrates how real community needs are identified/ addressed through
    service-learning

19. Are service-learning projects developed by students?
    _____ Projects are determined and managed by teachers.
    _____ We establish choices for students in how they implement the teacher-planned service-learning
    _____ We share the responsibility with students for service-learning development and implementation
    _____ We facilitate student responsibility for development and implementation in collaboration with
         community members.

    Please provide an example of how students are involved in service-learning project development.

20. Do students have opportunities to think, write, speak, and reflect on their service-learning?
    _____ Students are not asked to reflect on their learning
    _____ At the end of the experience, students are asked to reflect on their learning
    _____ At the end of the experience, students are asked to reflect on their learning and receive feedback
    _____ Throughout the process, students reflect on their learning experience and receive feedback

    Please provide an example of how students have opportunities to reflect on their service-learning.

21. Please use this opportunity to add any additional information that illustrates the status of service-learning at
    this school, if needed.

    Persons completing this questionnaire:

    _____   _____
    Name   Title

    _____   _____
    Name   Title

    _____   _____
    Name   Title

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Appendix D: Key Informant Interview Protocol

1. Please describe your role and level of participation in service learning at your school.

2. From your perspective, what has been the history of the development of service learning at your school?

   Prompts as needed:
   - What factors have supported/challenged the implementation of service learning?
   - Who have been key personnel in the implementation of service learning?

3. How does service learning support your school's progress in addressing educational standards?

   Prompts as needed:
   - What grade levels/ content areas are most like to be participating in service learning?
   - What curriculum standards are most likely addressed through service-learning projects?
   - What examples can you provide that illustrate the integration of service learning and standards?

4. How are specific service-learning projects developed and evaluated?

   Prompts as needed:
   - How are teachers provided with professional development in service learning?
   - How are decisions made concerning service-learning projects?
   - How are community needs assessed?
   - How are results of service learning assessed for students? For the community?

5. What support exists for service learning at your school?

   Prompts as needed:
   - Funding
   - Community participation
   - Professional development opportunities for teachers
   - Administrative/district support

6. What plans are in place to continue service learning at your school?

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Appendix E: Service-Learning Program Assessment Rubric

Service Learning Indicator	No sign of Indicator 0	Signs that indicator is being discussed/ small signs of effort 1	Indicator is partially implemented 2	Indicator is fully implemented 3
Embodied in School Policies	There is no school policy on service learning, it is not any school planning document (i.e. school improvement plan or accreditation report), and it is not a part of hiring decisions	Service learning is present is ONE of the following: - school policy - school planning document (i.e. school improvement plan or accreditation report) – a factor in hiring decisions	Service learning is present is TWO of the following: - school policy - school planning document (i.e. school improvement plan or accreditation report) – a factor in hiring decisions	Service learning is present is ALL of the following: - school policy - school planning document (i.e. school improvement plan or accreditation report) – a factor in hiring decisions
Service- Learning Leadership Team	There is no service-learning leadership team at the school.	The service-learning "team" at the school is an informal group.	A formal service-learning leadership team is in place and has members that may include students, teachers, community members, and administrators.	A formal service-learning leadership meets regularly and has representative members from all of the following groups: students, teachers, community members, and administrations.
Administrative Support	Any service learning at the school exists independent from district and school-level administrative support and/ or input.	Administrators have superficial input in service- learning projects- give approval, sign, letters, forms etc.	Administrators offer support and guidance related to the service-learning project.	Administrators provide vision and leadership for the service- learning projects and facilitate communication with the larger community.
Professional Development	Service learning is never addressed in school- level professional development.	There are future plans to address service learning in school- level professional development, but it is not a part of the professional development at this time.	There are isolated professional development sessions throughout the year that pertain to service learning.	All teachers at the school have the opportunity to participate in service- learning professional development at least once during the school year.
Amount of Teacher Involvement	Teachers only comply with service learning guidelines if it is mandated by the administration.	Some of the teachers in the school are involved in service learning.	Most teachers at the school are involved in service learning.	All teachers in the school are involved in service learning.
Strength of Teacher involvement	Teachers participate in service learning only because it is an expectation but demonstrate no interest or commitment to continuing the projects.	Teachers involved in service learning demonstrate interest in some aspects of projects.	Teachers involved in service learning demonstrate excitement and commitment to the continuation of specific projects.	Teachers involved in service learning demonstrate excitement and commitment to projects and report that the strategy is integral to their method of teaching.
Curriculum Integration	Teachers make no mention of the connection between academic standards and service- learning projects.	Teachers report that they see a general connection between service-learning projects and school success.	Participating teachers report service-learning is used as a strategy to address specific academic standards, and it is evident in at least one classroom project/ unit during the school year	Service learning is connected to academic standards across the curriculum throughout the school, and it is evident in classroom practice throughout the school year

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Visual Evidence	Walls/ displays show no evidence of service learning projects.	There are only one or two places where there is any visual evidence of service learning projects (e.g. a sign, student work, or a display)	In several places throughout the school there is student work and displays of service- learning projects.	Throughout almost all of the school, there are displays, student work and signs that show service learning is embodied in the culture
Amount of Student involvement	Very few students are involved in service learning in the school.	Some students (less than half) in the school are given the opportunity to be involved in service learning.	Most students (more than half, but less than all) in the school are involved in service learning.	All students in the school are involved in service learning.
Strength of Student involvement	Students' involvement in service learning is limited to mandated teacher- driven class activities.	The students involved in service learning have some voice in the development and direction of the project.	Students have considerable voice in the development and direction of service learning and opportunities to reflect and make meaning from their experiences.	Students have considerable voice in the development and direction of service learning, opportunities to reflect and make meaning from their experiences, and participate voluntarily on their own time.
Involvement of Disadvantaged/At-Risk Students	No connection is evident between service learning and the needs of disadvantaged/at-risk students.	The impact of participation in service learning on disadvantaged/at-risk students is not planned for, but sometimes recognized after the fact.	School leaders and teachers view service learning as a strategy for involving disadvantaged/at-risk students but only informal methods are used to encourage their participation.	School leaders and teachers view service learning as an effective strategy for involving disadvantaged/at-risk students and procedures/ structures are in place to encourage the active involvement from these students.
Service- learning addresses a community need	There is no evidence that service learning is tied real community needs.	There is some anecdotal evidence that the service- learning projects match community needs, but it is not documented.	There is documented evidence of community research into determining the need for the specific service-learning projects; it is less clear how effective the project was in actually meeting the community's need.	There is documented evidence of the reason the service-learning project was chosen based on research of community need; there is also documented evidence of evaluation of the effectiveness of the project in meeting the community need.
Community Support	The community is uninvolved in any aspect of the service learning.	Community members have superficial involvement in service learning (allow students access, grant permission, etc).	Community members are actively involved in some stages of the service-learning projects along with students.	Community members are involved in the development, implementation, and evaluation/ celebration of service-learning projects along with students.
Celebration of Success	There is no recognition of student or school success related to service-learning projects	There is some classroom recognition of student success related to service learning.	Student success in service learning is celebrated school-wide.	Student success in service learning is celebrated school-wide and in the community at large (newspaper stories, official recognition, etc.)

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Appendix F: Student Efficacy Survey

You have been chosen to take this survey because you take part in service learning activities at your school. Do not put your name on this paper – it's not for a grade. The questions below will help us to learn about how service learning affects students.

Circle the number that **BEST** describes how you feel about each statement.

Morgan-Jinks Student Efficacy Scale (MJSES)

	Really agree	Kind of agree	Kind of disagree	Really disagree
1. I work hard in school.	4	3	2	1
2. I could get the best grades in class if I tried enough.	4	3	2	1
3. Most of my classmates like to do math because it is easy.	4	3	2	1
4. I would get better grades if my teacher liked me better.	4	3	2	1
5. Most of my classmates work harder on their homework than I do.	4	3	2	1
6. I am a good science student.	4	3	2	1
7. I will graduate from high school.	4	3	2	1
8. I go to a good school.	4	3	2	1
9. I always get good grades when I try hard.	4	3	2	1
10. Sometimes I think an assignment is easy when the other kids in class think it is hard.	4	3	2	1
11. I am a good social studies student.	4	3	2	1
12. Adults who have good jobs probably were good students when they were kids.	4	3	2	1
13. When I am old enough, I will go to college.	4	3	2	1
14. I am one of the best students in my class.	4	3	2	1
15. No one cares if I do well in school.	4	3	2	1
16. My teacher thinks I am smart.	4	3	2	1
17. It is important to go to high school.	4	3	2	1
18. I am a good math student.	4	3	2	1
19. My classmates usually get better grades than I do.	4	3	2	1
20. What I learn in school is not important.	4	3	2	1

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	Really agree	Kind of agree	Kind of disagree	Really disagree
21. I usually understand my homework assignments.	4	3	2	1
22. I usually do not get good grades in math because it is too hard.	4	3	2	1
23. It does not matter if I do well in school.	4	3	2	1
24. Kids who get better grades than I do get more help from the teacher than I do.	4	3	2	1
25. I am a good reading student.	4	3	2	1
26. It is not hard for me to get good grades in school.	4	3	2	1
27. I am smart.	4	3	2	1
28. I will quit school as soon as I can.	4	3	2	1
29. Teachers like kids even if they do not always make good grades.	4	3	2	1
30. When the teacher asks a question I usually know the answer even if the other kids don't.	4	3	2	1

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Appendix G: Service-Learning Parent/Community Survey

Your school has been selected as a banner school for an outstanding service-learning program! The Evaluation Center at the University of Colorado at Denver is investigating the opinions of parent and community members at schools that have exemplary service-learning programs. Because of your involvement with the service-learning projects at this school, we hope you will take 5 minutes to complete the survey below. Your responses are confidential – do not put your name on this survey.

1. What statement best describes your connection to service learning? (check all that apply)
   - ☐ I am a parent/guardian of a student who participates in volunteer projects through his/her school.
   - ☐ I am a parent/guardian of a student who participates in volunteer projects in the community (church groups, clubs, etc.).
   - ☐ I am a community member that collaborates with school-sponsored service learning projects.

2. How do you believe that participation in service learning projects affects students?

   Participating in service learning projects helps students….

…to prepare to be good citizens.	strongly disagree	disagree	agree	strongly agree
…to do better in school.	strongly disagree	disagree	agree	strongly agree
…to develop skills to work well with others.	strongly disagree	disagree	agree	strongly agree
…to be more motivated to learn	strongly disagree	disagree	agree	strongly agree
…to be more aware of community needs	strongly disagree	disagree	agree	strongly agree
…by contributing to a student's feeling of self-worth	strongly disagree	disagree	agree	strongly agree

3. The volunteer projects that students participate in help to meet real needs in the community.

          strongly disagree   disagree   agree   strongly agree

4. School-sponsored volunteer projects contribute to a positive relationship between the school and the community.

          strongly disagree   disagree   agree   strongly agree

Please return this survey to _____

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