THE MISSING LINK
CONNECTING TEACHER RESEARCH, PRACTICE & POLICY TO IMPROVE STUDENT LEARNING

By METLIFE FELLOWS in the TEACHERS NETWORK LEADERSHIP INSTITUTE
The purpose of this book is to provide a sampling from over 120 action research studies conducted by teacher leaders nationwide. **MetLife Fellows**—full-time classroom teachers—in the **Teachers Network Leadership Institute** (TNLI) conduct these studies in their classrooms and schools to better understand the connections among practice, research, policy, and student achievement. Fellows then use their findings for two purposes: first, to improve their own practice or to support change in their schools; second, to generate specific policy recommendations—in order to ensure that policy is more in sync with the reality of classroom practice. The fellows’ recommendations are influencing policy at all levels—school, district, state, and federal. When policy is informed by teacher research and teacher voice, then our nation’s schools can provide our students with the best possible education.

You can find all TNLI action research studies to date at [www.teachersnetwork.org/tnli](http://www.teachersnetwork.org/tnli). We also invite you to join us in this work. For more information, contact us at [info@teachersnetwork.org](mailto:info@teachersnetwork.org).

**EDITED BY**
Ellen Meyers, Director, Teachers Network Leadership Institute  
Frances Rust, Dean of Faculty, Erickson Institute  
Peter Paul, National Coordinator, Teachers Network Leadership Institute

**DESIGNED BY**
Heidi Fener

**PHOTOGRAPHY BY**
Kristine Larsen  
TNLI Fellows featured in the photos:  
Jennifer Lindauer-Thompson  
Christopher Peyser  
Shahzia Pirani-Mellstrom  
Sara Ridge  
Carmen Robles

Made possible by a grant from the **Spencer Foundation**.
CONTENTS

INTRODUCTION
Teacher Research, Narrative Knowing, Classroom Practice, and Education Policy
by J. Amos Hatch
University of Tennessee | Professor, Department of Theory and Practice in Teacher Education

What Happens Next? Mott Haven Village Preparatory High School’s Class of 2006 in Their First Year after High School
by Dan Abramoski
Mott Haven Village Preparatory High School | MetLife Fellow, TNLI New York City

The Art of Reading: A Look at Student Motivation, Self-Esteem, and Self-Perception When the Arts Are Integrated with Reading Curriculum
by Meg Burns
Gallistel Language Academy | MetLife Fellow, TNLI Chicago

Teacher Collaboration and the Science Rotation
by Peter Hippard
Clarendon Elementary School | MetLife Fellow, TNLI San Francisco

Impact of Student Motivation, Achievement, and Success in a Self-contained Special Education Classroom
by Christine Lancaster
Ray School | MetLife Fellow, TNLI Chicago

The Power of Word Knowledge: The Impact of Explicit Vocabulary Instruction on Reading Comprehension
by Anokhi Saraiya
PS 8M The Luis Belliard School | MetLife Fellow, TNLI New York City

A High School Inclusion Program: A Deeper Look
by Cara Shuckett
School of the Future | MetLife Fellow, TNLI New York City
I am honored to contribute some introductory thoughts to this important collection of teacher research projects. I am a long-time proponent of teacher research and a big fan of the Teachers Network Leadership Institute’s (TNLI) efforts to encourage, support, and publish high-quality action research conducted by teachers. The efforts of the Teachers Network provide an example of what can happen when committed, smart people who live the complexities of working in schools band together to support one another and take action on behalf of their profession and the children it serves. The action research projects highlighted in this collection, and the many others completed by TNLI Fellows, demonstrate that it’s possible for teachers to generate knowledge that informs their own practice, influences the thinking of other professionals, and shapes education policy.

In this short introduction, I explore the potential of teacher research to contribute to the knowledge base in education. I discuss four generalizations that lead to the conclusion that teacher research, like the kind reported in this collection, has an important place in decision making at the classroom level and beyond. The four generalizations that form the premises of my argument are:

✱ Narrative knowledge is essential to professional practice in any field
✱ Scientifically-based knowledge is not inherently useful knowledge
✱ Teacher research is its own reward
✱ Teacher research can inform education policy, and increasing teacher autonomy is the most important policy implication.
Narrative knowledge is essential to professional practice in any field

Jerome Bruner (1986) makes a powerful distinction between what he calls paradigmatic and narrative ways of knowing. The production of paradigmatic knowledge is based on the “rational” methods of the Western scientific tradition: advancing hypotheses, reporting evidence, and inferring conclusions. “True” knowledge is held to be the exclusive province of this logical and verifiable discourse. In contrast, Bruner argues that narrative ways of knowing produce storied understandings that cannot be captured via paradigmatic thought. Even though it has been treated as inferior in the Western world, narrative knowledge in the form of stories is specifically suited to making sense of human action. In Polkinghorne’s (1995) words,

While paradigmatic knowledge is maintained in individual words that name a concept, narrative knowledge is maintained in emplotted stories. Narrative cognition gives us explanatory knowledge of why a person acted as he or she did; it makes another’s action, as well as our own, understandable. (p. 11)

Bruner reminds us that stories of experience represent valid and important sources of knowledge. I argue that teachers’ stories of action research are valid and important ways to generate and share knowledge of professional practice.

Teacher research is still research. For me, that means that it does not ignore the “paradigmatic” dimensions of systematic inquiry. At their best, teacher researchers tell stories of how they deal with real problems in real classrooms. Their stories bring to life the complexities of working in those real-world settings. But teacher research as a form of action research is always “systematic, data-based inquiry that teachers use to improve their professional practice” (Hatch, 2006, p.1). The systematic, data-based part means that it’s not just a random set of stories—the teacher researcher has carefully planned ways to address a classroom or school issue, and he or she has carefully documented exactly what happened during the “action” and “research” parts of the study. The teacher researcher’s narratives of practice are stories that include evidence supporting the conclusions of the inquiry.

Although stories are treated as inferior knowledge forms in traditional Western thought, and teacher research is treated as an inferior form of research by those who are currently in a position to decide what constitutes knowledge in our field, narrative knowledge has a vital place in all human endeavors, including professional practices in all arenas. Individuals who are trained to be physicians, engineers, and even scientists learn what constitutes professional practices in their fields from stories. Physicians, engineers, and scientists, like teachers, continue to develop professional expertise over the course of their careers because they accumulate storied knowledge of their own and the practices of others. Like teachers, they process paradigmatic information generated
from within and without their professions; but they can only make sense of paradigmatic knowledge in terms of individual applications in complex, real-life settings (i.e., through storied understandings).

So, narrative ways of knowing are important in all human activity, even in professions that are held up as “scientifically-based.” Action research provides a vehicle for generating narrative understanding that has a legitimate place in the knowledge base of any profession, and teacher research is a powerful tool for producing storied knowledge that informs education practice and policy.

### Scientifically-based knowledge is not inherently useful knowledge

At this writing, the United States government has mandated that only educational programs utilizing practices and materials that it classifies as “scientifically-based” can receive federal dollars. Building it into No Child Left Behind (NCLB) legislation, the government has stipulated what scientifically-based means and has used that definition to exert a profound influence on classroom practice across the nation. For NCLB proponents, scientifically-based practices are based on knowledge generated using traditional, quantitative research designs like those used in medicine (large numbers, control groups, and double-blind experimental procedures). While this definition and the consequences of applying it have been roundly criticized by a wide variety of education scholars (e.g., Allington, 2002; Erickson, 2005), approaches to generating knowledge that do not match the prescribed scientifically-based model have effectively been pushed to the side of the road.

In this political context, teacher research is definitely not scientifically-based. By definition, teacher research involves small groups of participants (usually a teacher and his or her classroom), control groups are difficult or impossible (what would a teacher do with the children not in the “treatment” group?), and double-blind objectivity is not an option (how could the teacher not know what his or her own “treatment” is?). Applying the so-called scientifically-based standard to the design of teacher research is not just difficult, it’s absurd. Classroom research of any type is inherently messy; action research in schools is especially so. So, since teacher research is not “scientifically-based,” is it worth doing?

It should be clear that teacher research is worth doing—that’s what this essay is about. For me, it’s fair to turn the question on its head and ask if studies that lay claim to scientifically-based status are worth doing. I have studied this question (Hatch, 2007), and I conclude that the answer is “not necessarily.” Just because a piece of research passes the scientifically-based litmus test does not mean that it provides inherently useful knowledge. If fact, the “rigor” required may so restrict the
human dimensions of the study, that findings never fit an actual classroom setting. I don’t want to dismiss knowledge generated using scientifically-based protocols as useless, but I do want to question its assumed applicability to the unique contexts that make up any classroom, in any school, in any community.

I like the notion that scientifically-based knowledge ought to be available to teachers to use as they see fit. This works within the teacher research model because teachers are trying to improve their practice through their action research efforts, and they should be tapping into all the knowledge available as they examine their own practices and seek to make improvements. To me, this is a much better approach to educational reform than legislating what kind of science is officially sanctioned, packaging the outcomes of that narrowly defined science, and forcing teachers to implement the prescribed packages in a mindless, scripted fashion.

**Teacher research is its own reward**

Part of my job as a teacher education professor is to guide pre-service teachers through the processes of designing, implementing, and writing an action research project. They do this project as part of a full-year’s internship that takes place at the master’s level, after the completion of a bachelor’s degree in an arts and sciences major. For many students, action research is among the biggest challenges of getting through our teacher preparation program. Because doing action research while they are learning everything else associated with being a first-year teacher is so intense and time-consuming, few would claim that teacher research is its own reward. But when they finish their projects, write their conclusions and implications, and present their work to peers, professors, and school professionals at an annual intern conference, most recognize the value of the action research process to their development as reflective, thoughtful, problem-solvers in the classroom.

Again, for me, it’s not teacher research at all unless it is focused on improving the teacher’s professional practice. No matter the outcomes of the inquiry or the writing expertise of the author, the credibility of teacher research as a distinct form of inquiry is based on the assumption that it was undertaken to improve professional practice. I see action research projects that generate exciting, positive outcomes, and I see projects that can claim no improvement in the problem areas being targeted. I see final action research papers that are close to doctoral dissertations in quality, and I see final reports that are not well written, even after three or four edits. What I hope my students come to understand is that teacher research is a tool for improving professional practice, that learning the processes of systematically addressing classroom issues is the goal, and that writing it is a way to help internalize the processes and share insights with others.
Based on institutional student evaluations and personal contact with former interns, many see themselves applying the action research construct in their teaching, even though none that I know of has undertaken a full-scale teacher research project after earning teacher licensure. I would love to see all new teachers connect with support groups like the Teachers Network Leadership Institute so that the skills and dispositions being developed in teacher education programs such as the one in which I work could be nurtured and validated. It’s easy to see from the TNLI teacher research published here and previously that practicing teachers believe that, engagement in action research positively affects their teaching. They describe themselves as “becoming more reflective, more critical and more aware, regardless of how many years they have been teaching” (Rust & Meyers, 2006, p.81). They claim that the research helped them become stronger teachers and enabled them to assume a voice in policy-making in their schools, communities, and beyond (Rust, 2007, pp. 105-106).

If teacher research is not its own reward, it comes close because of the benefits it provides to those who undertake it.

**Teacher research can inform education policy (and increasing teacher autonomy is the most important policy implication)**

I support unconditionally the Teachers Network goal of bringing the voices of teachers into decisions about education policy. I believe teacher research provides credibility and on-the-ground information that improves the likelihood that those voices will be heard and respected. A look at the recent history of educational reform reveals that far too little teacher input has been solicited and even less has been taken seriously as policy has been made. Except in isolated, local cases, the overall trend is for policy to be made in rooms and corridors far removed from settings where teaching and learning actually happen. The efforts of the Teachers Network are a shining example of what’s possible and desirable.

The teacher research dimension exemplified in the TNLI program adds potential clout to teachers’ impact on the education policy arena. Smart, dedicated, well-prepared teachers who systematically study their own practice provide a powerful model for educational reform in general. The standards-based accountability model in place now is not working. The NCLB mode is to assume teachers are incompetent to make decisions about sound classroom practice, to prescribe curricula and practices that are essentially “teacher proof,” and to threaten sanctions when test scores do not rise. When teachers join forces, demonstrate that they can effect genuine change in classrooms, and lay claim to professional expertise and commitment, their chances of being heard are greatly enhanced.
Congratulations to the authors and editors of *The Missing Link*. This important collection shows policymakers and others what is possible when teachers are supported in the exercise of their professionalism. The studies included take readers inside real schools and tell real stories of teaching and learning. They demonstrate the power of narrative ways of knowing to illuminate the complexities of contemporary teaching. They make plain the limitations of relying on so-called “scientically-based” knowledge to address the many issues that face teachers and students in today’s schools. They make the case that teacher research provides opportunities for renewing a sense of professional efficacy that is sometimes hard to find given the socio-political climate at present. And the studies in this volume compel readers to take seriously the notion that increasing teacher autonomy is the best way to accomplish educational reform.

**REFERENCES**


QUESTION
How can we better prepare our students for college and support them during college?

RATIONALE
Mott Haven Village Preparatory High School (MHVP) is a small public high school located on the South Bronx High School Campus. MHVP opened in the fall of 2002 as a partnership among the school, East Side House Settlement, and New Visions. The three main goals of MHVP are to prepare students for success in college, to form close personal relationships with the students, and to help students become active participants in their communities. Last year, we graduated our first class of seniors. Of the 61 graduates, 58 (95%) were admitted to college. While this represents a tremendous success, what truly matters is how many of our former students finish college. Many studies show that students have a high dropout rate during their first two years of college (Swail, 2003). As a senior teacher and advisor, I assisted students in the college preparation process and wanted to know if we were successful. With this in mind, I set out to discover what we could do to better prepare future students for the transition from high school to college, and what kind of support our students need to successfully complete their first year of college.

CONTEXT
The student body at MHVP is typical of a public school in the South Bronx. Out of a total school population of approximately 325 students, 65% of our students are Latino, 33% are African-American, and 2% percent are Asian. The majority of the students come from the surrounding neighborhood but students also come from neighborhoods throughout the Bronx, Harlem, and Washington Heights. Ninety-five percent of our students qualify for free or reduced price lunch. Eighty-two percent of our students test at level one or level two on the 8th grade English Language Arts test when they enter our school, the equivalent to a 3rd through 6th grade reading level. In addition, 35% of
the students who responded to my survey acquired a language before they learned English and 26% were the first in their immediate family to graduate from high school.

**ACADEMIC STATISTICS**

Last year, MHVP graduated its first class of seniors. In this class, 58 out of 65 students graduated in June with another three students graduating in August. Of the 61 graduates, 58 were admitted to post-secondary institutions. These schools range from two-year colleges like Bronx Community College and Kingsborough Community College, to four-year public schools like Hunter College and SUNY Binghamton, and include some four-year private colleges like Marist College and Farleigh Dickinson University as well as proprietary schools like Monroe College and Berkeley College.

In the class of 2006, the average grade point average (GPA) was 76.2. The top 20 students had GPAs from 93-79, while the middle 20 students had GPAs from 78-74, and the bottom 21 students had GPAs from 73-63 (See Table 1). The average SAT score (Critical Reading/Math Combined) was 695. The top 14 students had SAT scores from 1000-800, while the middle 20 students had SAT scores from 790-670, and the bottom 21 students had SAT scores from 660-400 (See Table 2). The average student score on the five Regents exams that are graduation requirements was 62.7. The top 20 students had averages between 81.8-71, while the middle 20 students had average scores between 70.8-63, and the bottom 21 students had average scores between 62.8-34.2 (See Table 3).

<table>
<thead>
<tr>
<th>Table 1 GPA (n=61)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
</tr>
<tr>
<td>Top 20 GPAs</td>
</tr>
<tr>
<td>Middle 20 GPAs</td>
</tr>
<tr>
<td>Bottom 21 GPAs</td>
</tr>
<tr>
<td>Class Average</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2 SAT Scores (n=55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT (Reading and Math)</td>
</tr>
<tr>
<td>Top 14 Scores</td>
</tr>
<tr>
<td>Middle 20 Scores</td>
</tr>
<tr>
<td>Bottom 21 Scores</td>
</tr>
<tr>
<td>Class Average</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3 Regents Averages (n=61)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of 5 Regents</td>
</tr>
<tr>
<td>Top 20 Averages</td>
</tr>
<tr>
<td>Middle 20 Averages</td>
</tr>
<tr>
<td>Bottom 21 Averages</td>
</tr>
<tr>
<td>Class Average</td>
</tr>
</tbody>
</table>
However, these numbers do not paint a full picture of Mott Haven Village Preparatory High School. To truly understand the school, you need to look beyond the numbers and see the personalized learning environment, the traditions, and the focus on college preparation that make MHVP a unique school. At Mott Haven, teachers, staff, and administrators are dedicated to understanding the students as individuals. Through advisories, after school programs, extracurricular activities, and a genuine desire to understand the students, teachers and staff develop deep and meaningful relationships with the students. In addition, MHVP is a school that is trying to change the history of low graduation rates that has long been associated with urban public education. MHVP builds community by having many traditions and events that set it apart. Students and staff look forward to eating and socializing at our annual cultural feast, competing in the student versus staff basketball game, and dressing up for our annual spirit week. These events, and others, create school spirit and build a sense of community at MHVP. Finally, the college focus of MHVP is unique. At Mott Haven, 9th graders go on college trips, advisors and college counselors stay late to work on college applications, staff stress college from the day students enter the school, the senior class has a college advisor, and our community partner awards over $50,000 in scholarships to our students.

**COLLEGE PREPARATION PROCESS**

To achieve the goal of college preparation, MHVP emphasizes college readiness throughout the curriculum. Thanks to college trips, SAT prep classes, and the College Preparation and Leadership Program (CPLP), the vast majority of the students think of college as the obvious step after high school. During the students’ senior year, college preparation is done through the advisory program, CPLP, and in English class. In addition, MHVP has a guidance counselor who helps with all aspects of the college application process.

One of the major components of our college preparation program is advisory. Last year, advisory took place once a week for an hour. During this time, seniors met in groups of about twelve to fifteen students with their advisor. The advisors were subject area teachers, the guidance counselor, and the social worker. During advisory, students went through the college application process step by step. Advisors helped students begin the college application process by searching for schools that they would be interested in. Next, students developed a list of reach, target, and safety schools. Finally, advisors helped students fill out and submit college applications. Once the applications were in, advisors assisted students and their families with the financial aid application process.

CPLP plays an equally important role in the college application process. CPLP took students on college tours and to college fairs, organized a college fair in our building, and provided support throughout the college application process. In addition, CPLP
provided money for the application fees when fee waivers could not be obtained and gave out $50,000 in scholarships. As part of the CPLP, 20-25 students per class attended educational counseling class once a week for an hour. In educational counseling, students worked on SAT preparation and received help completing the college application and financial aid process. In addition, students could participate in optional events planned by CPLP such as college trips and additional SAT tutoring.

The final pieces of the college preparation program were English class and the guidance department. During the fall semester English class, the seniors wrote and revised their personal statements. Our school also has one full-time guidance counselor who is responsible for all 325 students in 9th-12th grades. The guidance counselor provided help to the students throughout the college preparation process. In addition to acting as an advisor, she helped students with college searches, facilitated the financial aid process, provided recommendations and fee waivers, and worked with students on finding scholarships.

**LITERATURE REVIEW**

Horace Mann popularized the idea that public education could function as the great equalizer and help prevent and end poverty (Mann, 1848). Needless to say, this dream has not been realized. There is still a large achievement gap between students of different races and income levels. Whether measured by graduation rates, test scores, or the number of students below grade level, the “factory model” of education has failed large numbers of low-income students of color (Kozol, 1991). Urban schools have been plagued by insufficient funding, inadequate facilities, under-qualified teachers, and high levels of teacher turnover (Kozol, 1991). In addition, schools in urban areas are affected by conditions that are beyond their control, for example, access to health care, a living wage, and affordable housing, all of which have a disproportionate effect on low-income communities. These issues must be addressed if urban schools are to close the achievement gap (Noguera, 2003).

The achievement gap exists not only in high schools, but also in post-secondary education as well. Conditions that contribute to unequal education at the high school level continue to affect students long after they graduate. Recently, the racial gap in college enrollment rates appears to have declined. As of 1999, 86% of Asians enrolled in college, 76% of Whites, 71% of African-Americans, and 71% of Latinos (Adelman, 1999 in Chajet, 2006). However, when the enrollment rates are compared by income level, the numbers are not as encouraging. While 85% of high school graduates from the highest income quartile have enrolled in college, only 58% from the lowest income quartile have (Mortenson, 2001 in Gladieux, 2004 in Chajet, 2006).

Furthermore, the achievement gap widens when college persistence and completion rates are examined. African-American and Latino students leave college at alarming rates.
One in six African-American and Latino low-income college students leave during their first year and a total of one in three leave by the end of their second year (Swail, 2003 in Chajet, 2006). Additionally, 77% of high-income students graduate college within six years compared to only 54% percent of low-income students. Finally, 67% of White students graduate in six years while only 47% of Latino students and 46% of African-American students do so (Berkner, HE, & Cataldi, 2002 in Carey, 2004 in Chajet 2006).

In New York City, the small schools movement grew in response to the failure of large comprehensive high schools. Small schools were created to offer low-income students of color the same educational opportunities that students in high-income schools and districts were receiving (Anyon, 1980). Small schools set out to try to close the high school achievement gap as well as gaps in college enrollment, persistence, and completion. Many small schools, including Mott Haven Village Preparatory High School, adopted the college-for-all model. This model involves giving all students access to college counseling resources and detracking classes so that all students have access to a high level, college preparatory curriculum. In addition to these policy changes, the college-for-all model requires a change in the attitudes and expectations of all staff and students. The school must create a culture in which all students believe that they can succeed in college. With this research in mind, I set out to discover if MHVP has succeeded in establishing a college-for-all model.

**DATA COLLECTION**

Beyond the academic statistics and other contextual data already presented, my data falls into two broad categories—from students who are in college and from students not in college. The data was collected through student surveys/phone interviews and in-depth interviews with 15 students. Initially, all of the students from the Class of 2006 were contacted to inform them about the research and to update their contact information. After making these phone calls, a survey was sent to each of the 61 graduates. As the surveys began to trickle in, I realized that one mailing would not produce the response I was looking for. At this point, I began to call students and complete the surveys with them over the phone. Through the mail and the phone calls, surveys were completed for 43 of the 61 graduates. I was able to speak with a relative or close friend of the remaining 18 graduates to determine whether they were in school but I did not get detailed information on these students.

Students were asked to provide basic demographic information like their race, first language, and country of birth. This was followed by questions about their high school preparation, their transition to college, and their first semester in college. In addition, there were questions about their family’s educational background. Finally, the survey included a section for students who were not in college that asked them for reasons why they were not enrolled.
After compiling the surveys and identifying themes and trends, I began a series of informal conversations with former students. These conversations took place in school when students returned to visit. In all, I talked with 15 students. These conversations provided valuable background information and personal stories that complement the surveys.

I contacted the students again in March to get updated information on their enrollment status for the second semester. During this round of data collection, I was able to speak with 50 students over the phone and with close friends or relatives of the other 11 students. Though more brief than the initial round of interviews, these conversations helped me identify changes that occurred during the students’ first semester in college.

**DATA**

In September of 2006, 46 out of 61 graduates (76%) enrolled in some form of post-secondary education (See Table 4). This is six points higher than the average for African-American and Latino students and 19 points higher than the average for the low-income students. Enrollment data also indicate that many of our students enrolled in CUNY schools (47%). In addition, a significant number of students attended proprietary or for-profit colleges (21%).

<table>
<thead>
<tr>
<th>MHVP Class of 2006 (n=61)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did Not Enroll In College</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>15</td>
</tr>
</tbody>
</table>

**Those Who Did Not Enroll in College**

Out of the 15 students who did not enroll in college, I received a survey from or spoke with eight. All of the graduates not in college whom I contacted stated that they planned to enroll within the next year. Furthermore, as of the end of the fall 2006 semester, only three students out of the 46 attending school had dropped out of school before completing the semester. However, all three students planned on re-enrolling within the next year. Of these 11 students (eight not enrolled, three who dropped out), eight mentioned financial aid as a reason they were not in college, three said that they were not ready for college and wanted a break, and one student graduated high school in August and did not have time to enroll. Three out of the seven foreign-born graduates did not start college in September.

Students who did not finish their first semester mentioned two additional themes in our conversations: 1) they wished they had spent more time exploring the colleges...
that accepted them; 2) They felt they should have visited college campuses and looked more closely at financial aid packages before making their decision.

In addition, students who did not enroll in college felt they should not have taken a break. Some students felt like they were falling behind their peers and others mentioned that being out of school was boring. Overall, they recommended students go directly to college without taking a break.

**Those Who Did Enroll in College**

Thirty-five out of the 46 students who did enroll in September 2006 participated in the study. Of these students, 14 (40%) were the first in their immediate family to attend college. When asked about the transition to college, 11 (55%) mentioned that the easiest thing about being in college was writing essays. This idea was supported when 15 (42%) mentioned essay writing as the most valuable thing they learned in high school. In addition, seven (20%) mentioned having difficulty with the freedom and/or responsibility they encountered in college and five students (14%) said making friends was difficult. Few students found cost to be an issue. One exception was mentioned by two students who attend CUNY schools and said paying for Metrocards was difficult. This suggests that the these students were prepared for the cost of tuition but were not aware of some of the hidden costs of college such as transportation and books. Regarding what was difficult in college, 12 (34%) mentioned the workload, 8 (22%) said the freedom and/or responsibility, and five (14%) said math. To get a better sense of what subjects might be difficult for them, I asked students if they were taking remedial classes, and if yes, which ones. Fifteen (42%) were not taking remedial classes, eight were taking only remedial math, two students were taking only remedial English, and seven were taking remedial math and English.

In March, I gathered enrollment information on all 61 students from the class of 2006. At this time, 43 were enrolled in college while 18 were not enrolled. Six out of the 15 who did not enroll in college for the first semester began school in January; nine who started school in September were no longer in school (see Table 5).

<table>
<thead>
<tr>
<th>Table 5 March 2007 Data on Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students Enrolled in College</td>
</tr>
<tr>
<td>43</td>
</tr>
</tbody>
</table>

**ANALYSIS**

According to Anyon, small schools were created to achieve the goal of providing students in urban areas with a high quality education that would include college preparation.
(Anyon, 1980). MHVP succeeded in making college a goal for all students and is well on its way to providing access to college for all students. But more has to be done after the acceptance letters are received to help ensure perseverance and success in college.

The data from this study suggest that persevering through two and/or four years of college will be difficult for MHVP graduates. While the rate of college entrance from MHVP is higher than the national averages for both low-income students and African-American and Latino students (Adelman, 1999 and Mortenson, 2001 in Chajet, 2006), more work must be done to ensure that students have the skills, knowledge, and support necessary to succeed in college.

My data suggest that securing financial aid was one of the major reasons that students did not enroll in college or did not complete the first semester. This is keeping with the research of Berkner and Cataldi (2002 as cited in Chajet 2006) that shows that college enrollment rates for low-income students are much lower than they are for high-income students. We need to make students more aware of both the obvious and hidden costs of college and help them to compare the costs of public and private colleges. Students need guidance about ways to pay for college. As my data shows, this is particularly important for students who were born outside of the U.S.

The fact that 58% of the students who responded to the survey reported taking remedial classes is particularly troubling in light of data from the National Council of Education Statistics (2004 in Conley, 2007), which shows that only 17% of students taking remedial reading earn a bachelor’s degree. MHVP must do a better job of preparing students for college level work by beginning in the 9th grade to make them more aware of the type and amount of work that will be expected of them in college.

My data suggest that our students may have become accustomed to teachers giving them a high level of support and that this aspect of the MHVP culture may have led to students struggling to adapt to a culture that values individual responsibility. Many students mentioned that it was hard for them to hand in assignments on time without teachers constantly reminding them of the due dates and encouraging them to do the work. While extra support and attention is one of the strengths of small schools, students must also be taught individual responsibility and the ability to advocate for themselves. Thus, we need to become more adept at nurturing their independence.

Finally, these students also stressed the need to spend more time picking the right school. Students said they wished they visited schools before making their decisions. Several students also mentioned they picked their school based on what major was available and they wished they had based their decision on other factors.
CONCLUSION

The data from the first graduating class of MHVP provides a glimpse into the lives of the students after they have left high school and shows that Mott Haven has had tremendous success in some areas and highlights other areas in need of attention and improvement. Mott Haven has succeeded in making college a reality for students and it has successfully prepared many students for the college application and enrollment process. In addition, many of the students who enrolled in college had the skills and dedication to complete their first semester. However, it appears that students will continue to face hurdles as they proceed through their college careers.

This research has helped to answer some questions but it has also raised questions that should be answered through further study. In particular, it will be important to look at what factors help students succeed in college by following the Class of 2006’s progress through college. Similar studies of each graduating class should be done to determine whether we are making progress improving our college preparation. Finally, this study shows that a large percentage of our students are attending for-profit, proprietary colleges. More research is needed to determine if our students are successful in these schools and if these schools provide our students with a solid education and prepare them for life after college.

POLICY RECOMMENDATIONS

Students are affected by policy decisions that are made in the local, state, and national government. In order to transform urban education, a full-scale attempt to end persistent and systematic poverty must be made through dealing with issues such as affordable housing, access to and affordability of health care, un- and under-employment, immigration reform, criminal justice reform, etc. However, policy recommendations in all of these areas are beyond the scope of this paper. Nonetheless, there are specific recommendations for education policy that can help.

At the National Level

1. **Expand public education to include a free public college education to ensure access to the middle class for all students.** For many years, the government has provided a free high school education and for most of this time, a high school education was sufficient preparation for a middle class salary. However, high school graduation no longer provides easy access to the middle class.

2. **Change financial aid formulas for needy students.** One of the biggest obstacles our students face when enrolling in college is obtaining sufficient financial aid. The cost of a college education continues to rise while state and federal grants remain stagnant or have decreased (Gladieux, 2004 in Chajet, 2006).
Furthermore, a greater percentage of financial aid is being tied to merit rather than need. Both of these trends place a college education out of reach for many students from Mott Haven. Particularly worrisome is the high percentage of students born outside of the U.S. who cannot afford college. These students, in many cases, did not choose to come to the U.S. but have worked hard to succeed in a new country. Cutting these students off from obtaining a college education will serve no positive goals and will only create a permanent underclass of undocumented students who are not able to fulfill their desire for a postsecondary education. There are many steps to be taken to make college more affordable for all low-income students.

At the State Level

1. Change funding formulas to provide equity of resources for low income schools. There is a tremendous gap in college enrollment and perseverance between students who come from families with low incomes and students who come from families with high incomes. Another tremendous gap exists between the funding for schools in low-income neighborhoods and high-income neighborhoods. Lower funding hinders schools in low-income neighborhoods. This fundamental inequality must be addressed so all students have the opportunity to receive a college preparatory high school education. The state government can begin to address this gap by providing all of the funding mandated by the decision in the lawsuit brought by the Campaign for Fiscal Equity.

2. Adjust financial aid opportunities.
   - The State of New York should seek to decrease, or maintain, the cost of tuition at SUNY and CUNY schools.
   - More money should be provided in the form of need-based grants, or money that is currently used for merit-based grants should be redirected to needs-based grants.
   - Federal Pell grants and New York State TAP grants should be increased.
   - Funding for Education Opportunity Programs (SEEK, HEOP, and EOP) that focus on helping low-income students succeed in college should be increased.
   - Financial aid must be made available to all students, regardless of immigration status.

At the College and University Level

Colleges and universities need to take more responsibility for supporting the students that they admit and enroll. High schools are consistently criticized for high dropout rates while post-secondary institutions receive little blame for having low retention rates. Rather than blaming students for not successfully completing college we must begin to hold colleges more accountable for the students they admit and enroll. Overall, colleges and universities should devote more time, energy, and resources to graduating their students. The following recommendations would increase the graduation rate of college students.
All students should receive more frequent mentoring through advisors and older peers.

Financial aid counselors should be readily available to all students.

Orientation programs should be expanded so all students receive a thorough introduction to college life regardless of whether they are resident or commuter students.

Education Opportunity Programs (EOP) have been successful in helping students graduate. The strategies that these programs employ, including intensive summer preparation, frequent mentoring, small group advisement, and team building, should be expanded to include more students (Swail et. al., 2003, in Chajet, 2006).

Colleges and universities should make retention and graduation rates readily available to the public. Furthermore, this information should be disaggregated based on race and income level. This material should also be highlighted in college search materials so that students and counselors can avoid schools with low retention and graduation rates.

At Mott Haven Village Preparatory High School

While the national and state government and post-secondary institutions play a role in increasing the college persistence rate of MHVP graduates, the school itself has the greatest ability to affect its students and is the institution most capable of quick and fundamental changes. MHVP has quickly built a successful college preparation program. However, as this study shows, it is our responsibility to do more to better prepare our students for success in college. Our responsibility as a high school does not end when the students graduate. We need to make sure that we are not only preparing students to graduate high school but also ensure that they are prepared for higher education.

MHVP should do more to prepare students for college level work. Each content area should look at what is expected of a college student in that area. Once these expectations are clarified, a 9th – 12th grade curriculum can be developed and implemented that focuses on scaffolding in the skills and knowledge students will need in college (Chajet, 2006). It is important that this work begin in the 9th grade and continue through the 12th grade so students are prepared for the scope of work they will be doing in college and have access to a rigorous high school curriculum.

Prepare students to advocate for themselves and live independently.

Students mentioned that they struggled with the freedom and responsibility that they encountered at college. One of the strengths of MHVP is the constant attention and support that we provide for our students. While we should not remove the support that we give to the students, we need to begin to shift the support as students progress through high school so that they are prepared for the independence and responsibility they will find in college (Chajet, 2006).
3. Spend more time teaching the students about the true cost of a college education and comparing the cost of various programs including SUNY, CUNY, and HEOP programs. Students need to be aware of the price of tuition and room and board but they should also be prepared for other hidden costs like transportation and books. While we do not want to give the impression that college is overly expensive, we cannot sugarcoat its cost.

4. Help students identify and apply for scholarships and grants.

5. Help students develop personal financial skills so they are fully prepared to navigate the financial world. Students need banking and money management skills before they go to college.

6. More time needs to be spent on post-acceptance counseling so that students pick the right school. MHVP should help students visit the schools they have been admitted to. Many of our students apply to the same schools and MHVP could organize trips to some campuses after students have been admitted. Furthermore, many of our students attend schools in New York City so it would not be expensive or difficult to visit these schools. Also, money should be made available to students who are admitted to schools that are further away so they can visit the campuses before deciding where they will go to school. Finally, parents should be invited on campus visits and college trips so they can help students make the decision about where to go to college.

7. Identify schools where our students succeed as well as those where they are less inclined to succeed. In the future, we can establish relationships with schools where students are successful and encourage students to apply to them. So far, Marist College seems to be a school where our students have been successful. Furthermore, schools where our students are not successful need be identified. Identifying “pipeline” schools where our students succeed and schools where our students are not successful will help us advise future graduating students (Cookson & Persell, 1985, in Chajet, 2006). This process will take many years but can begin with the class of 2006.

8. Do more to support students so that they can stay in college. Other schools have created a position that focuses solely on alumni support. This position involves staying in contact with students through visits to their college campuses, phone conversations, and email. Through this contact, the alumni support person is able to support students during challenging periods so that they are able to remain in school. This type of support has helped to increase college enrollment rates at other schools and should be duplicated at Mott Haven.
**EPILOGUE**

Based on the data of this study, MHVP hired a college counselor/alumni support person whose sole responsibility is to stay engaged with the school’s graduates, study their progress, and provide support to them and feedback to the MHVP faculty.

**REFERENCES**


Chajet, L. (2006). *But is what we give them enough? Exploring urban small school graduates’ journeys through college*. Forthcoming dissertation obtained through personal contact.


The Art of Reading:
A Look at Student Motivation, Self-Esteem, and Self-Perception
When the Arts Are Integrated with Reading Curriculum

By Meg Burns  MetLife Fellow, Teachers Network Leadership Institute

SCHOOL CONTEXT

My school is located in an isolated, low-income industrial area of Chicago. This urban neighborhood has always served as a traditional haven for hopeful immigrant families, although the countries of origin have changed over the years. The current population is 95% Latino, with a 94% poverty rate. Each grade level at my school accommodates the constant influx of new immigrant families with a full bilingual class. Although not essential, it is extremely helpful for teachers to be fluent in Spanish, as most of the parents are not native English speakers. Teachers here describe their students as “sweet” and “darling.” Even the most difficult behavioral challenges present little disturbance in the peaceful classroom environment.

The main building is one of the oldest in the city of Chicago, last annexed in 1911 to accommodate overcrowding. It houses 795, which makes us approximately 150% overcrowded with our 1,320 students. Overflow is accommodated in a series of temporary mobile units and rented space in two Catholic schools. Our fifth grade’s temporary arrangement has lodged us in the upper floor of a still-operational high school in six rented rooms.

The administration in our school is extremely supportive and allows for considerable latitude in instructional design. Best practices and adhering to the standards are encouraged as well as professional development and sharing. Admittedly, our teaching conditions at the high school are not optimal, but concerns are addressed with authentic interest and prompt action from our leadership.

The fifth grade classrooms at the high school extension are small and designed for about 20 stationary high school desks. Each room now houses at least 30 elementary desks and chairs, as well as the abundant accoutrements necessary for elementary curriculum. It’s a tight fit. I constantly remind my students of the importance of “loving each other” because from September until June is a long time to be packed in with people you choose to dislike.
Shelving and storage units line the walls with Learning Centers placed at various positions throughout the room. Most materials are mobile, since there is little room for the students to park at a “station” and explore an activity. There is a cozy interactive reading corner with pillows, party lights, a reading graffiti board, and hundreds of reading reflections taped to the wall. Because we lack bulletin boards, student work is suspended from twine strung across the room and also clipped to long strings hanging on the window shades. One visitor once informed me that my room looks like a learning “menagerie.” I like that comparison, and it is an apt description of my own visual-learning bias.

The students in 302 are active, chatty, and eager to please. They love exciting new learning opportunities, but lack the maturity and experience at times to contain their enthusiasm. Many of the concepts such as centers, cooperative group learning, and self-directed independent activities are newer to the school and, therefore, require some getting used to by the students. Most students have adjusted, and the classroom is transitioning nicely into a “student-centered” environment.

**RATIONALE**

Approaching the question of how to teach reading effectively to second language learners required that I confront who I am. I entered teaching from a professional arts background. After three years in the teaching field, I had to ask myself, “Why am I doing this?” To be true to myself as a professional teacher, I had to acknowledge my background as an artist’s daughter and my 18-plus years as a professional actor. Perhaps these were valuable and worthwhile tools that might hold the key to success in my classroom. How might I use my previous experience to my advantage?

Although most students are taught to comprehend text, it is difficult to fully understand anything written without making a personal connection, reflecting on an image associated with the words, or imagining what the scene or characters might look or act like. We have become a predominantly visual society. Outside of school, children are exposed to computers, video games, movies, television, and other visual stimuli on a daily basis. To ignore this influence on cognitive development would presume that children develop and learn in a vacuum.

The NCLB mandate has put many teachers and administrators in the precarious position of having to make difficult choices about curriculum. Many times, the “more is more” approach is used to increase deficiencies in math and reading. Many schools, including mine, have expanded reading blocks from one to two hours in hopes of an increase in standardized test scores. My research question evolves from my experience that “more” instruction devoted to a discipline does not necessarily mean that
mastery will occur. “More” instruction in reading will not make a child, who may require an alternative process, achieve success in reading. So I asked, if one couples standard instruction with meaningful engagement in the arts, will that child, who is otherwise unreachable by traditional means, make vital connections to literature?

**BACKGROUND**

When examining the role of the arts in education, it’s important to consider the broader context of the process of learning. Historically, education theory has supported the idea that individuals acquire, digest, and demonstrate knowledge through varying means. A widely accepted theory that accounts for the many variables in human development is Gardner’s (2006) “multiple intelligences” theory. Gardner’s research decryes homogeneous educational programs that appeal only to surface knowledge of facts. He proposes an educational environment that fosters the growth and development of an individuals' multiple intelligences that cannot function in isolation. These intelligences include Linguistic, Logical-mathematical, Musical, Bodily-kinesthetic, Interpersonal and Intrapersonal, Spatial, and Naturalist. According to Gardner, individuals embody either “laser” or “searchlight” intelligence profiles (p. 36). The former indicates a sharp spike in an individual’s profile that indicates strength in one or two intelligences and the latter suggests equivalent strengths in three or more spheres. Traditional education, which focuses on reading and math, presumes Linguistic and Logical-mathematical as the central modes of learning. This is what standard instruction and high-stakes testing, the primary components of NCLB, are based on.

Eisner (2002) asserts that art is critical in cultivating a full life experience. He promotes the idea of using art education to foster academic performance. He cites evidence of increased SAT, ACT, and other standardized test scores among students in schools that integrate arts into the curriculum.

If the arts do indeed appeal to various modes of learning, then is it possible for that learning to transfer to other disciplines? Yes, according to Bransford, Brown, and Cocking (2000). In a six-year longitudinal study of the Chicago Arts Partnerships in Education (CAPE), Catterall & Waldorf (1999) compared 26 CAPE schools with 26 control schools with similar demographics. There was a nearly 20% rise in reading scores among sixth grade students in the CAPE schools, compared to a less than 10% rise in the control schools. Similar increases were exhibited in math as well. On this basis, Catterall (2002) claims that the arts “unequivocally impact future learning experiences” (p. 152). He explains that the arts provide unique neurological patterning in the brain which creates adaptability in the individual when it comes to proficiency in “core” subjects such as reading and math.
Why are the arts important to mainstream education? Fiske (1999) holds that there is compelling evidence of the benefits of a learning environment that is blended with exemplary academics and high quality arts instruction:

✱ The arts reach students not otherwise being reached.
✱ The arts connect students to themselves and each other.
✱ The arts transform the environment for learning.
✱ The arts provide learning opportunities for the adults in the lives of young people.
✱ The arts provide new challenges for those students already considered successful.

The primary casualty of NCLB is the arts. Arts programs, staff, and resources have been shoved aside in underperforming schools in favor of enhancing test performance in reading and math.

RESEARCH QUESTION:
What happens to student motivation, self-esteem, and self-perception when visual art and dramatic arts are integrated with reading curriculum?

Sub Questions:
✱ How do students connect literature to their personal experiences when the arts are integrated into reading?
✱ How does arts integration affect classroom behavior?
✱ How do students manifest their self-esteem through participation in integrated art activities and literature study?
✱ What do student insights reveal about their own self-perception through integrated art activities and literature study?
✱ What happens to reading standardized test scores when art is integrated into reading curriculum?
✱ What are the surprises for the teacher?

UNIT OUTLINE
The unit revolved around the novel *Searching for David’s Heart*, a story about a 12 year-old girl, Darcy, whose brother is tragically killed when hit by a car. The girl believes that her brother’s death is her fault because she harbored a deep resentment and jealousy over her brother’s relationship with his new girlfriend. When he dies, his organs are donated, and Darcy and her best friend, Sam, run away from home to find the recipient of David’s transplanted heart.

I felt strongly that this emotional story would provide ample opportunity for personal connections and student interpretation and discussion. The topic of an untimely death,
the disintegration of a family through grief, the courage of a young girl and her desperate determination to connect to her lost brother, all appeared to present exceptional opportunities for the integrated arts activities I had intended for the unit.

I used the model of a literature circle that includes discussion, guided reading, written response, and vocabulary study—elements accepted as standard practice in reading instruction and addressing two of Gardner’s (2006) Intelligences: Linguistic and Interpersonal. I arranged to have a visiting artist come to work with the children on an art and writing project in which they would create postcards with three-dimensional objects and write a letter as a character from the book. Additionally, the students were to write and perform two plays, one in the beginning of the novel study and one at the end. These projects addressed learning styles often neglected by standard reading instruction: Spatial, Bodily-kinesthetic, and Intrapersonal.

**DATA TOOLS**

I collected data from three primary sources: student work samples, student surveys, and teacher observation notes. Student work was vital to assessing the impact of the visual and dramatic arts on their reading. From student surveys, I wanted to assess student opinions of their reading abilities throughout the unit as well as their responses to the integrated unit. Teacher observation notes were critical to examining the overall trends in student responses, skills, and behaviors related to the strategies being implemented. A fourth source, standardized test data, emerged as a tool that provided some quantitative information on class progress. Although I did not originally anticipate that this test data would be a mode of measurement, I decided to add it as an opportunity for an additional perspective on the progress of my students.

**PRESENTATION**

Before I started this unit, a notable issue arose involving a young girl, Talia, and a tragic life experience that made me question my choice of material for this project. A second issue arose when it became apparent that two of my students, Alfonse and Juan, were responding to this unit in a manner that was noteworthy.

I have chosen to present my findings in a way that allows me to incorporate the journeys of these three students as well as reflect on my class’ response to this unit and its progress. In so doing, each data source will be offered independently, followed by a discussion of that data and the specific responses of my case-study students. Teacher observation journals will be incorporated throughout.

**Talia’s Connection**

On Monday, a week before we began our study, I arrived at work about 45 minutes early to find Talia waiting in the cold. She had been standing outside the school's
locked door since 7:00 am. Wondering why my favorite classroom helper had arrived so early, I asked how her weekend went and if she was all right. As it happened, Talia’s grandmother, who had stepped in as “mother” when Talia’s birthmother died from drugs and alcohol and Talia’s father went to prison, died on Friday. Talia was left with two brothers, a grandfather, and a step-grandmother. We said very little. When the other students arrived, she asked to go see our school clerk, the “mother hen” of our satellite location, and sat under her desk in the school office for the remainder of the day.

Talia arrived early every day after, eventually emerging from her safe haven under the clerk’s desk and rejoining the class. She asked that I keep her heartbreak in confidence, which I honored. During that time, I was conflicted about my choice in literature. Was it truly fair to this little girl to bring up something so tragic and so recent? Would it be rubbing salt in a wound as we studied the journey of grief and anguish through the book’s characters? However, something kept steering me back to my initial choice, and I decided to stay with *Searching for David’s Heart*. It turned out to be the portal to an unexpected journey for Talia and me. The story, characters, and emotions implicit in the novel appeared to offer the construct for grief that Talia craved. Through the course of our reading and integrated art activities, Talia seemed to connect with the grieving sister and found ways to connect her own personal journey with each activity.

**Behavior Issues**

Alfonse and Juan presented chronic behavioral challenges that, at times, compromised the quality of instruction for themselves and other students. Their records indicated excessive detentions, suspensions, and low grades. My experience with them mirrored their records, and reading time seemed to provide them with a forum for unacceptable behavior, particularly in less structured activities.

I was concerned that their behavior might disrupt our integrated unit. Because of the sensitive nature of this novel, I was also concerned that the material might not be handled respectfully, and unruly behavior and inappropriate comments might squelch discussion. However, over the course of the unit, Alfonse and Juan unexpectedly connected to the theatrical and artistic portions of our literature study.

I did not set out to examine behavior as part of my study. However, as our class became immersed in the project, I started to notice that the personality of my room began to shift. One primary indicator that stood out was the absence of traditional behavior “distractions,” particularly during the drama and visual art activities.

**DATA**

**Student work samples**

I have preserved misspellings and punctuation mistakes in all student work to maintain
the sincerity of their voices. Pseudonyms and identifying initials were assigned to student participants to ensure privacy.

**Student "mini plays" — Performance I**

**Description of activity:**
After literature circle discussions, groups chose two characters and wrote a dialogue for them to perform in front of the class. Since this was their first endeavor into theatrical writing, students were instructed to write 10 lines of dialogue and choose two members to perform it.

Five of the six groups chose to write a dialogue between Darcy and her brother David, after he had passed away. One group chose to write a dialogue between Darcy and her best friend, Sam, who accompanied her on her trip to find David’s heart.

All groups wrote about forgiveness. Although all of the plays were very short, the children’s instinct to connect with these characters on such a profound level was apparent.

**Script Excerpt — Darcy and Sam**

**Magenta Group**

*Darcy:* Sam, I am so glad you took me here!

*Sam:* It’s not problem Dee Dee. Are you still mad at me?

*Darcy:* No, I’m not. But can you please forgive me?

**Script Excerpts — David and Darcy**

**Emerald Group**

*Darcy:* I am sorry I screamed at you and threw the necklies at you.

*David:* I understand. I should of told you the truth. Instead of liying to you.

**Crimson Group**

*Darcy:* David, was it my falt you died?

*David:* Don’t worry it’s nobody’s falt. It was my falt for not looking.

**Amber Group**

*Darcy:* I’am sorry I acted like a jeark because you wear going out with Jayne and I felt left out ever since you started going out wit her.

*David:* I forgive you and I’am sorr too for leaving you out of my life. I was to much in love with Jayne.

*Darcy:* I forgive you and I should have had exepted Jayne in the first place instead of breaking you guys up. I miss you a lot.

**Indigo Group**

*Darcy:* How can you be here David?

*David:* I thing [think] its my falt.
Violet Group

Darcy: I am so glad I-I could talk to you.
David: Its not your flaut I died.
Darcy: It is my flaut I ran off.
David: Its not your flaut its mine I did not look both ways.
Darcy: Lets just stop fighting. D-David your fading away.
David: I have one last thing to say I’m sorry! For bringing Jayne over.

Student “mini-plays” — Performance 2

A similar assignment was given in the latter part of the unit. The sentiment of these scenes was lighter and more sardonic than the previous assignment. Several groups created scenarios in which David did not die, while one group enacted a “conspiracy theory” to explain David’s untimely death.

Magenta Group script excerpt:

(Darcy and David settle their differences before the incident so he does not die.)

David: Why are you so mean to Jane?
Darcy: You mean the J-word?
Narrator: Darcy felt her whole body quivering.

(Later in the scene)

David: Darce, I am sorry for yelling at you about Jane. I know you feel uncomfortable with her.
Darcy: I know that you like her so I will give her a chance.
Narrator: Then they hug and kept being friends.

Emerald Group script excerpt:

(David does not die.)
Narrator: Darcy gets mad and runs. David runs after her but she runs too fast for David to catch on so there’s a car and the car does not see David and he get hit but does not die. Darcy was so sad then she realized that she should let her brother love who he wants to and she accepts [accepts] the necklace.

Crimson Group script excerpt:

(David returns from the dead twice to speak to his friends, family, and Winston.)

Narrator: One day Darcy, Same Winston were on the beach and found a sea shell.
Darcy: What a beautiful sea shell.
Winston: What should we do with this sea shell?
Narrator: Darcy, Same, Winston were hearing the shell and suddenly heard David’s voice.

(The voice of David apologizes for not spending time with Darcy. Later in the scene, the character of David visits the other characters while they are playing games.)
David: I’m back.
Darcy: David is that you?
David: Your dum. I am a spirit. It was nice to see you guys but I got to hit the sky!

Amber Group script excerpt:
(Girlfriend Jane hires a hit man to kill David with a car. All characters live but Jane goes to jail.)
Jane: (off to the side) Here’s the money.
Car Driver: (Grabs money) Ok. I’ll run him over

Indigo Group script excerpt:
(Fate of the characters unclear, but forgiveness is evident.)
Darcy: I wish I could be a better sister.
David: It’s ok. I wish I could be a better brother.

Violet Group script excerpt:
(Characters progress, and students insert themselves into the scene.)
Darcy: Hey Winston, want to come to the carvial with us.
Winston: Yah, I’ll come. I will be their in a week.
Darcy: Why a week?
Winston: Because I’m in Calafornia vistin my grandparents.
(change of scene to the carnival — now located in Wisconsin)
Charlene: (from the carnival scene) Hey twerp! Long time no see!
Darcy: Where’s stinky Eddy?
Charlene: There is no Eddy here. Its now Amanda (class member) the Great!

DISCUSSION
During the first mini-play activity, it became evident that the students were taking to this new form of character study. It was noted in my teacher observation journal for the week of January 12th that although the noise in the room was considerably louder than usual, most of the students appeared to be on task. All deadlines were met, and each group was eager to perform. The students’ implicit wish to rectify a character’s struggle indicated that not only had the students connected to the characters in the book, but that they desired to assist the characters in their difficult journey by offering emotional relief.

The second set of plays took this idea much further. There was a higher level of student input in constructing the story extensions, and groups explored variations on character development. One play created a satirical scenario in which a “hit man” is paid by the seemingly innocent girlfriend to get rid of David. This version was strikingly dark in its sense of humor, but nonetheless appeared to reflect a desire by the authors to cope with the loss of this character. Another scene was notably light in nature and focused on what happened to a minor character once the book had ended. Four of the plays
recreated a scenario in which David was alive or present, had settled his differences with his sister, or could visit from beyond. As Fiske (1999) suggests, this exercise indicated that the students were being reached in new ways. Their inclination to resurrect the main character expressed a palpable hope. It also indicated their need to “right” the situation and alleviate the pain of the characters.

**Talia’s Connection**

Talia took the reins in her group by selecting the characters, David and his sister, for their scene. While the group enthusiastically participated, I noticed that Talia assigned herself the role of director and scribe as well as lead actress.

In my journal for January 12th, I noted that the day after these presentations, Talia came to school with a present for me. It was an essay that she had written on her own and she wanted to share it. Here it is in its entirety:

*My gramma Nena*

Hey! Did you know my gramma? Well she was great person to me and everyone around her. even people she did not know cool right? One, the things she loved to do is 1. she loved her garden especilly taking care of it. 2. she loved me and my 2 brothers. 3. she loved being our gramma. Two. The wonderful things she did for me. 1. Is she took wonderful care of me. 2. She loved me with all her heart. 3. She was kind sweet. And all the most just “NenNa!” Three. The things she was proud of me for is me going to school and how I’m doing good and I’m trying. Finnily, my gramma loved me and that’s all I need to keep in my heart forever.

I was encouraged by her enthusiasm for this project and her response. I was hopeful that this might be the start of Talia’s “opening up” and processing her difficult year.

With the second wave of plays, Talia was once again a driving force in her group (teacher journal, week ending March 2). She has the narrator saying, “Darcy gets mad and runs…. David … get hit but does not die. Darcy was so sad then she relized that she should let her brother love who he wants to and she expests [accepts] the neckless.”

The next day, Talia again offered me a present that she had penned the previous night:

*The story of my life*

Hi. I am [Talia] I am 11 years old in age. I love playing all kinds of things. First, I am living with 2 brothers and a grandpa and a xgramma. I am Not so happy that I used to be. I mean imagin. Next, imagin having no mom and no dad and no gram that seemed like your mom. I have imaged. But what I imagined came true. And I mean live true. Then, I not happy because my mom passed away from drugs and my dad got in jail. My “super” gramma passed away from a strok but I love my life still because of my family and teacher  Mrs. Burns. Finnily I love my family and every one in it.
Talia seemed to be using the novel and the dramatic activity to turn an introspective eye on her own life and connect in a truly meaningful way.

**The Behavior Issue**

In both activities, Alphonse and Juan’s behavior noticeably shifted. In the first dramatic playwriting, rehearsal, and performance, they were engaged and focused. I noted (teacher journal, week ending January 12th) that both Alfonse and Juan exhibited “an unusual level of heightened participation and meaningful contribution to group work.”

During the second round of dramatic plays, both students were once again involved and centered during the process. Alfonse took a leadership role in his group and worked on developing a back story for one of the central characters of the novel. Juan was equally focused in his group work and visibly enjoyed what he was doing. In the final presentations, scripts were allowed in performance. Alfonse and Juan were the only two students in the class to fully memorize their lines, demonstrating a level of commitment that they had never exhibited in other classroom activities.

**CHARACTER POSTCARDS — VISUAL ART PROJECT**

A visiting artist worked with me to develop an art lesson that would emphasize character development and plot as well as provide an artistic outlet for the students. We collaborated on developing a list of objects, easily attainable, that would trigger recognition of significant scenes in the story. These objects were wrapped and placed in bag. The students then blindly chose an object, opened it, and worked with their group to determine its meaning.

*Examples of some of the objects are:*

<table>
<thead>
<tr>
<th>Object</th>
<th>Story significance (as determined by teacher and artist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>toy football</td>
<td>David was a star football player</td>
</tr>
<tr>
<td>feather</td>
<td>Darcy found a bird on a sidewalk and tried to save its life when she was little</td>
</tr>
<tr>
<td>sea shell</td>
<td>Darcy and Sam stayed on the beach</td>
</tr>
<tr>
<td>daisy</td>
<td>Darcy and David rode in a truck on their journey with a donkey named “Daisy”</td>
</tr>
</tbody>
</table>

Once the students had determined the significance of their object, their challenge was to incorporate it into a drawing that depicted a scene from the book, and then write a postcard from one character to another.
Many of the students identified the objects immediately. The visiting artist noted that a few students linked the object to an obtuse reference that we had not originally identified. This was surprising and suggested a deeper understanding of the connection between the object and the plot than either the artist or student had imagined.

The following examples demonstrate the variety of final products that this project yielded.

Maria randomly chose a miniature football. Our original intent was to solicit a connection with the main character, David, as a star football player. Maria picked up on the imagery of the football as it was used later in the book when Darcy threw it to win a carnival prize during her journey. She wrote as Sam to Darcy:

Dear Darcy,
That throw was magnificent and then made (it) and got the bunny. I wish I got to throw the football well. that throw was great. were (did) you learn to throw that great it was probley David sorry I asked. so great throw.
Love, Sam
p.s. those 3 kids that laughed were evil!

Carlos chose a seashell. He depicted a scene from the story in which Darcy and her friend Sam go to the beach in Florida looking for David’s heart. His letter is written from Sam to his father, a peripheral character in the novel. His scenario describes a scene that never occurred in the novel.

Dear dad,
I left a note somewhere at home. you am in florida to help darcy find david’s heart. I will come home but darcy might not. Please tell darcy’s parents to come hear so darcy could get over what happen.
Sam
DISCUSSION

Although not all student work showed the depth of connection that these two students demonstrated, the class was engaged and productive and exhibited an understanding of the significance of the objects that they had selected. I noted (teacher journal, week of February 23rd) that the sense of excitement in the room was palpable as the students anticipated opening their concealed objects.

Fiske’s (1999) assertion that the arts reach students who are not otherwise being reached resounds in my observations of Carlos who had been a chronic “non-worker” and presented numerous challenges throughout the year. Carlos’ writing to Sam’s father suggests that he was making a connection to the loss of his own father to cancer two years ago. Although not conclusive, it was encouraging that he pursued this project with focus and effort and enthusiastically turned in a completed postcard.

Talia’s Connection

Talia had been engaged and enthusiastic throughout this unit. By the time we did the final project, Talia was invested in the novel, the characters, and her connection to Darcy’s journey.

Talia chose once again to reach back to David as a character after he passes away, while most students chose to focus on the living characters in the novel. Her postcard (below) is from David to his sister. In it, David asks Darcy to forgive him.

Talia chose hearts as her object. These were thematic throughout the book—from David’s actual heart, donated after his demise, to the heart necklace that David gave to Darcy and his girlfriend, thus prompting the fight that ended in the fatal accident. Talia fashioned the hearts into a necklace on a teddy bear (as in the book). Her letter was from the deceased brother:

Dear Darce,
I am sorry Darce. I did not know you would get mad. I just wanted you to have a great present and wanted you to have a great birthday. Sorry.
Love, David

As with previous arts activities, the next day Talia had her own version of a postcard made from supplies she had at home. I noted in my journal that she also brought with her several of her grandmother’s earrings which she had wrapped carefully in blue
tissue paper. She used the “heart” theme in the new postcard just as she had done in her class project.

The front of the postcard shows Talia and her grandmother exchanging a heart. Underneath the caption reads, “my gramma hugs me because she loves me. She has a heart of gold.” On the reverse side, she writes a letter, as herself, to her grandmother:

Dear nena,
I just still whant you to know I ♥ u! because you’re my life and I will always keep you alive!

Talia’s response touched me. It was the most indicative of a solid personal connection with the actual classroom activity. Although it is difficult to ascertain an explicit connection, she made a personal application with each of the unit’s activities. Her reactions demonstrated that the arts were perhaps helping to fill a void and assisting her in the process of grief and acceptance during this tragic chapter in her life.

Behavior Issues
The most striking comment throughout this unit came from the visiting artist. I had dutifully tried to inform her of possible discipline problems and forewarned her that I might need to escort a couple of my students (namely Alfonse and Juan) from the room in order to maintain a productive environment. The lesson went off without a hitch. As the artist was leaving, she asked me quizzically, “Were those ‘problem children’ absent today?” There had not been one incident of disruptive behavior from either Alfonse or Juan and, yes, they were present for the entire period.

Student Surveys
The students completed two identical surveys that asked them to rate their reading abilities in various categories: skill, comprehension, fluency, word recognition, personal connections to literature, and the ability to imagine text in pictures (see Appendix A). The surveys were administered at the beginning of the unit and again at the end, 10 weeks later. Open-ended responses were solicited regarding their likes and dislikes and strengths and weaknesses in reading (see Appendix B).
DISCUSSION

I saw few notable shifts in student attitudes regarding their reading skills. Small changes occurred with the students’ perception of their ability to recognize words, and to write, discuss, and make personal connections to literature.

However, their responses to question 6: “When I read, I am able to see the characters and events in my mind,” showed a remarkable shift from 16 students in agreement to 25 (about 30%) in agreement.

**Question 6**

<table>
<thead>
<tr>
<th></th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>43</td>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

The number of neutral respondents decreased from ten to only three. However, the strong indication that the majority of students perceived themselves as more skilled in visualization, above all other reading skills, shows a clear indication that Gardner’s (2006) Spatial Intelligence may have been tapped through the integrated art projects in this unit.

In my journal (week of January 12), I noted that students were primarily responding to character and plot questions with concrete answers. Notes from the week that the artist visited our classroom (February 23) indicated that students were engaged and excited about the visual art activity and that their responses to students had become abstract and personal.

In the open-ended portion of the surveys, the number of students claiming that recall and memory were strengths doubled from three to six, and the number of students stating they had no reading strengths decreased by half from four to two (see Appendix B).

When considering the sharp increase in students who believe their ability to visualize a story strengthened, it may be deduced that there is a possible connection between visualization and story recall and fluency.

STANDARDIZED TEST DATA

Eisner’s (2002) promotion of the idea that the arts foster academic performance would not have credibility without ample evidence. Currently, standardized testing, or some kind of quantifiable data, is the predominant measure that brings credibility to qualitative data. So, I turned to my students’ test scores.

In the fall, the students in my room tested at a baseline of 49.4% total correct on the Learning First standardized measure. There was an increase of 0.5% indicated on the
winter test. This aligned with the beginning of our novel unit. The final test in the spring yielded an average class score of 73.4%, which demonstrated an increase of 23% overall for the class.

In the fall, Talia scored 43.8%. In the spring, her score was 87.5%—an increase of 35.7%. Alfonse began the year with a 28.1% baseline. His final score increased 12.5% to 40.6% in the spring. Juan’s scores increased 31.2% from a baseline of 46.9% in the fall to 78.1% in the spring.

DISCUSSION

It would only be fair to admit that the increase in scores is, at best, interesting. I cannot say that it is connected to this unit, since my students were also taught testing skills in order to prepare them for this assessment and material from this unit did not appear on the test. These scores may indicate that after seven standardized tests, my students had become better test takers, or it could be that a self-choice reading workshop that I implemented may have been a contributing factor.

My class experienced an increase in their math scores as well, a subject not directly tied to this unit, so perhaps the increase could simply be a class-wide trend. However, I have not experienced this large of an increase in reading scores in my previous years of teaching.

SUMMARY OF FINDINGS

When undertaking this integrated unit, my class and I embarked on a journey. In attempting to answer my question, we took some unexpected excursions which were not only delightful and profound, but also provided insight for me as a teacher.

The student surveys indicated that in some areas, students’ perception of themselves as readers changed, with many students finding themselves able to visualize characters and events. The level of student engagement was considerable in dramatic portions of the unit. The visual art portion of the unit revealed extensive student insights into story line and characters. The standardized test data indicated that the class had a significant rise in reading test scores.

Talia’s investment in this unit led to an entirely new strand of investigation for me. Her consistent connections to the drama and visual art activities, and her correlation between her life experience and that of the characters in the story, were unexpected yet remarkable. They give ample evidence that the arts activities in this unit, combined with the material in the novel, offered her the chance to process the recent unfortunate events of her life.
CONCLUSION

So, what does happen to student motivation, self-esteem, and self-perception when visual art and dramatic arts are integrated with reading curriculum? There are clear indications that the arts are a vehicle through which students who normally are not touched by traditional curriculum can be reached. Motivation was extremely high and seemed to be transferable between arts activities and designated “reading” time.

There are also indications from the two surveys that students’ self-perception as proficient readers increases with integrated arts as well as their ability to imagine, or visualize, story elements. Self-esteem was also demonstrated through involvement in class activities, assuming leadership roles in arts projects, and confidence in reading ability, as can be seen in the dramatic changes in Alfonse and Juan’s behavior.

Reading standardized test scores in my class rose significantly, although these scores may not be directly related to the activities in the study. What these scores do indicate is the inarguable fact that a departure from standard reading curriculum and focusing on the arts for a significant portion of classroom reading time did not in any way detract from student achievement on standardized tests. Whether these tests indicate that the students learned to read or learned to take tests well is open to debate. However, this data provides, in an NCLB climate where test scores are the primary measure of success, a strong argument for the power of arts instruction.

Talia’s connection to this unit supports Fiske’s (1999) contention that the arts enable teachers to reach students not otherwise reached. While school counseling was in place for Talia, she had made little progress in processing her losses. Her engagement with the unit presents compelling evidence of the power of the arts to tap sensitivities within the human psyche.

FINAL THOUGHTS

I taught an after school arts program this year to students from various classrooms. When I received the final verification paperwork, there was an indicator on the form asking whether the class was “instructional” or “recreational.” “Recreational” was indicated. It was, by no fault of the person completing the paperwork, a misnomer. It is a popular conception of the arts, but it made the hair on the back of my neck stand up. Why was my reaction so strong? I ran through the reasons and it came down to this: the arts have become an afterthought in the development of our children, namely those in underserved, low-income, urban communities. They are no longer considered a valid form of learning or expression. They are a luxury only to be allowed once the “real work” is done.

As quoted in my literature review, Fiske (1999) asserts that “The arts provide learning opportunities for the adults in the lives of young people.” I am that adult. My admitted
bias certainly lies in the arts. However, the transformation of my classroom and the unexpected journeys of three of my students provided abundant support for the arts as a valid tool in the classroom rather than a “recreational” activity. We all learned, and we all emerged with a new knowledge and understanding of ourselves and our abilities.

So where does this leave us? What next? I can’t help but think of the thousands, perhaps millions, of children in our classrooms across the nation who present the same challenges as Alfonse and Juan, but because their school dollars are spent on test prep or special intensive reading programs, are never afforded the opportunity to learn or express themselves through the arts. I think of Talia, who immersed herself in the richness of the arts experience in order to process the tragedies of her life. Working in an urban environment, I am well aware that there are a multitude of Talias out there whose families do not have the resources to assist their children in the healing process. I am not an “art as therapy” promoter, yet these three children were clearly reached and transformed through the integrated study of the arts and literature.

And, finally, we face the question of “culture.” I shudder to think of the statement we are making as a society when the funding we are providing for the arts in our underserved communities is at best sparse. What are we saying to our urban children about their culture and their legacy? Are only our more affluent children in traditionally higher-performing school districts deserving of an artistic chronicle?

Time will tell what price we have paid for the watered-down curriculum presented to this generation of NCLB children. If no child is to be left behind, then all need to be celebrated and respected for being...children.

**POLICY RECOMMENDATIONS**

1. Provide professional development for administrators and teachers and policymakers, educating them in the merits of integrating arts activities into regular instruction time. More reading time is not necessarily the best practice when trying to reach all students.

2. Make the state arts standards as readily available to teachers as are reading and math standards.

3. Hold districts accountable for ensuring that these standards are addressed.

4. Provide funding for arts coordinators who collaborate with teachers to develop curriculum that reaches all students.
REFERENCES


Appendix A

Student Survey Pre- and Post-Survey Likert Results  Survey 1 (n=28) Survey 2 (n=29)

Question 1

I like to read.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>9</td>
<td>1</td>
<td>19</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

Question 2

I am a good reader.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12</td>
<td>4</td>
<td>13</td>
<td>13</td>
<td>3</td>
</tr>
</tbody>
</table>

Question 3

When I read, I usually recognize all of the words.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12</td>
<td>4</td>
<td>15</td>
<td>11</td>
<td>3</td>
</tr>
</tbody>
</table>
### Appendix A (continued)

#### Question 4
When I read, I can remember the details of the story.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>10</td>
<td>4</td>
<td>13</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Question 5
I like to write.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>10</td>
<td>4</td>
<td>16</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Question 6
When I read, I am able to see the characters and events in my mind.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>10</td>
<td>2</td>
<td>25</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Question 7
After I read, I find it easy to talk about what I have just read.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>11</td>
<td>2</td>
<td>18</td>
<td>9</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Question 8
In stories, I usually connect to characters or situations because they are just like me.

<table>
<thead>
<tr>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>10</td>
<td>6</td>
</tr>
</tbody>
</table>
### Question 9 | What do you like most about reading?

<table>
<thead>
<tr>
<th>Survey 1</th>
<th>Survey 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 students responded that plot was the element they most enjoyed when reading</td>
<td></td>
</tr>
<tr>
<td>7 students responded that character development was important to their enjoyment while reading</td>
<td></td>
</tr>
<tr>
<td>4 students responded that acquiring knowledge contributed to their enjoyment of reading</td>
<td></td>
</tr>
<tr>
<td>4 students responded that fluency and reading proficiency gave them satisfaction</td>
<td></td>
</tr>
<tr>
<td>1 student liked being read to rather than reading himself</td>
<td></td>
</tr>
<tr>
<td>1 student expressed a desire to only read happy books</td>
<td></td>
</tr>
<tr>
<td>1 student said that writing made his reading experience more enjoyable</td>
<td></td>
</tr>
<tr>
<td>1 student said that talking about reading was what she liked most</td>
<td></td>
</tr>
<tr>
<td>7 students stated that they liked making connections to and visualizing characters</td>
<td></td>
</tr>
<tr>
<td>7 students said that getting involved in the plot was what they enjoyed the most</td>
<td></td>
</tr>
<tr>
<td>5 students said that reading quality literature was what they most enjoyed</td>
<td></td>
</tr>
<tr>
<td>3 students said that they enjoyed creating pictures to go along with a story</td>
<td></td>
</tr>
<tr>
<td>2 students said they liked becoming more fluent in reading</td>
<td></td>
</tr>
<tr>
<td>2 students stated that learning was what they liked most</td>
<td></td>
</tr>
<tr>
<td>1 student noted he became more relaxed when he read</td>
<td></td>
</tr>
<tr>
<td>1 student said she enjoyed extended novel activities</td>
<td></td>
</tr>
<tr>
<td>1 student said he likes having the teacher read to the class</td>
<td></td>
</tr>
</tbody>
</table>

### Question 10 | What do you feel are your strengths in reading?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7 students felt as though their strength was fluency and reading speed</td>
<td>9 students noted fluency as a perceived strength</td>
</tr>
<tr>
<td>4 students felt as though their greatest strength was visualizing story elements</td>
<td>6 students felt that vocabulary recognition was a strength</td>
</tr>
<tr>
<td>3 students stated that their reading strengths were story recall and memory</td>
<td>6 students said that story comprehension and recall were strengths</td>
</tr>
<tr>
<td>2 students felt as though vocabulary was their strength</td>
<td>3 students noted greater character understanding as a strength</td>
</tr>
<tr>
<td>2 students felt as thought their strengths lie in comprehension</td>
<td>2 students felt as though their progress/ improvement was a strength</td>
</tr>
<tr>
<td>2 students felt their strength was making connections to literature</td>
<td>1 student felt that her ability to choose good literature was a strength</td>
</tr>
<tr>
<td>1 student felt as though her strength was that she got excited about reading</td>
<td>2 students stated they did not feel as though they had strengths in reading</td>
</tr>
<tr>
<td>4 students felt they had no strengths</td>
<td></td>
</tr>
<tr>
<td>2 students did not appear to understand the question</td>
<td></td>
</tr>
</tbody>
</table>
### Student Survey: Open-ended Question Results (2 of 3)

#### Question 11  
**What do you dislike most about reading?**

<table>
<thead>
<tr>
<th>Survey 1</th>
<th>Survey 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 students stated that unfamiliar or challenging vocabulary is what they dislike about reading</td>
<td>9 students noted a dislike for unfamiliar vocabulary</td>
</tr>
<tr>
<td>5 students stated various plot and story elements contributed to a dislike of reading in given situations</td>
<td>7 students stated that fluency with grade level books is something they do not like</td>
</tr>
<tr>
<td>3 students noted specific classroom comprehension activities that they dislike</td>
<td>4 students noted that at times they dislike literature choice</td>
</tr>
<tr>
<td>3 students did not like books without pictures</td>
<td>2 students disliked when reading time ended</td>
</tr>
<tr>
<td>2 students disliked having to put a good book down</td>
<td>1 student disliked his perceived inability to comprehend everything</td>
</tr>
<tr>
<td>1 student disliked having students read in class and preferred the teacher doing so</td>
<td>1 student disliked discussing his reading</td>
</tr>
<tr>
<td>1 students disliked reading aloud</td>
<td>1 student disliked when the teacher doesn’t read</td>
</tr>
<tr>
<td>4 students claimed there is nothing they dislike about reading</td>
<td>1 student disliked reading in groups</td>
</tr>
<tr>
<td>11 students felt as though vocabulary recognition was a weakness</td>
<td>1 student disliked writing about his reading</td>
</tr>
<tr>
<td>7 students felt as though they struggle with fluency</td>
<td>6 students did not feel they had any weaknesses</td>
</tr>
<tr>
<td>3 students said that comprehending what they have read is a weakness</td>
<td>2 students did not appear to understand the question</td>
</tr>
<tr>
<td>1 student felt as though writing about reading is a weakness</td>
<td></td>
</tr>
</tbody>
</table>

#### Question 12  
**What are your weaknesses in reading?**

<table>
<thead>
<tr>
<th>Survey 1</th>
<th>Survey 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 students noted the inability to recognize vocabulary words as a weakness</td>
<td>11 students felt as though vocabulary recognition was a weakness</td>
</tr>
<tr>
<td>5 students said that their weakness was the inability to write about what they had read</td>
<td>7 students felt as though they struggle with fluency</td>
</tr>
<tr>
<td>3 students said that lack of fluency was a weakness</td>
<td>3 students said that comprehending what they have read is a weakness</td>
</tr>
<tr>
<td>3 students said that loss of interest with a challenging selection was a weakness</td>
<td>1 student felt as though writing about reading is a weakness</td>
</tr>
<tr>
<td>1 student said that reading the same book twice was a weakness since the story was boring the second time around</td>
<td>6 students did not feel they had any weaknesses</td>
</tr>
<tr>
<td>1 student did not feel he had any weaknesses</td>
<td>2 students did not appear to understand the question</td>
</tr>
<tr>
<td>3 students did not appear to understand the question</td>
<td></td>
</tr>
</tbody>
</table>
### Question 13: What do you like about writing?

<table>
<thead>
<tr>
<th>Survey 1</th>
<th>Survey 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 students liked the fact that they could express themselves through writing</td>
<td>10 students said that they liked being able to express themselves in their writing</td>
</tr>
<tr>
<td>8 students expressed that they liked the mechanics of writing in either cursive or specific writing structure such as essays</td>
<td>8 students enjoyed making connections to characters and stories through their writing</td>
</tr>
<tr>
<td>7 students liked the elements of fiction writing</td>
<td>7 students liked meeting the challenge of answering a prompt</td>
</tr>
<tr>
<td>1 student said that he enjoyed his improvement in writing</td>
<td>3 students said they enjoyed the mechanics of writing</td>
</tr>
<tr>
<td>1 student expressed that he liked being assessed in writing</td>
<td>1 student said he liked writing paragraphs only</td>
</tr>
<tr>
<td>1 student said he didn’t like anything about writing</td>
<td></td>
</tr>
<tr>
<td>1 student did not appear to understand the question</td>
<td></td>
</tr>
</tbody>
</table>

### Question 14: What do you dislike most about writing?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11 students responded they disliked mechanics of writing such as cursive, essays</td>
<td>12 students stated they disliked required format writing taught for standardized testing (extended response)</td>
</tr>
<tr>
<td>6 students did not dislike anything about writing</td>
<td>5 students disliked their inability to start writing</td>
</tr>
<tr>
<td>5 students thought the physical act of writing was too challenging</td>
<td>4 students disliked their inability to write well mechanically (cursive)</td>
</tr>
<tr>
<td>3 students were frustrated at their level of skill in spelling</td>
<td>3 students disliked writing 5 paragraph essays</td>
</tr>
<tr>
<td>2 students stated they didn’t like writing at all</td>
<td>4 students stated they disliked nothing about writing</td>
</tr>
<tr>
<td></td>
<td>1 student did not appear to understand the question</td>
</tr>
</tbody>
</table>

### Question 15: If you could change one thing about reading class, what would it be?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>13 students said they would like to have more independent choice in reading and more self-directed reading</td>
<td>9 students requested a longer reading period</td>
</tr>
<tr>
<td>4 students had ideas about specific literature in the curriculum</td>
<td>8 students suggested more extended activities</td>
</tr>
<tr>
<td>3 students said they would prefer less writing</td>
<td>7 students asked for more art and/or drama in class</td>
</tr>
<tr>
<td>3 students suggested that it could be more fun but no specifics were given</td>
<td>3 students said they would change nothing about reading</td>
</tr>
<tr>
<td>2 students said he would prefer to read books with less challenging vocabulary</td>
<td>2 students did not appear to understand the question</td>
</tr>
<tr>
<td>1 student wished he could make poor readers better</td>
<td></td>
</tr>
<tr>
<td>2 students did not appear to understand the question</td>
<td></td>
</tr>
</tbody>
</table>
Haley walked up to me at recess with a glazed look in her eyes. She was usually a cheerful fifth grader, but today she looked beat.

“How was that science test?” I asked.

“That was really hard,” she replied.

I got a sinking feeling in my gut. If she, a student with good math and language arts scores didn’t do well, then the other students probably didn’t fair well either.

“What was the hard part?” I asked, trying to be sympathetic.

“I felt like I didn’t know a thing on that test. Why do we have to take science tests only in the fifth grade? Why not in the other grades? Why don’t we study more science?”

“We do study science, but I guess it’s not enough,” I meekly replied.

“That doesn’t seem fair,” she huffed. Then she took out her snack and walked off to the basketball court.

I turned to another upper-grade teacher on the yard and asked if she had heard what I had heard.

“Yes. It’s depressing and frustrating,” she said. The two of us discussed how stressful it had been to fit in enough science instruction over the years. So much emphasis had been placed on math and language arts that science had really taken a back seat. We decided to get together with the other upper-grade teachers and try to figure something out.

This paper will examine the effects of our group of elementary school teachers’ effort to completely overhaul our approach to teaching science in the upper-elementary grades. We realized that we had to do something very different to prepare our students for the California STAR standardized science test, which takes place only in the fifth grade. We didn’t like the idea of standardized tests exclusively dictating our curriculum, but we knew it wasn’t fair for the fifth graders to face the science test unprepared each
year. One teacher said that she had heard of teachers collaborating to form a science rotation. She explained that each teacher could choose one topic to focus on all year, and then the students would rotate through each class in cycles. Suddenly, many ideas started popping up and our conversation grew more dynamic.

Veteran and newer teachers alike at our site have been overwhelmed with trying to set up science labs. Our group of teachers agreed that if we could focus on and teach just one topic each year, we could not only manage the demands of setting up and breaking down science labs, but we could also become expert at each topic. We surmised that the students would surely benefit from this arrangement as well.

Next, we discussed how the science rotation could possibly help us improve student relations on campus, as the rotations could also give us a space for mixing students from the two distinct programs at our site. Perhaps, by working together on science labs, the students from the two programs would form closer bonds. We also thought that that process of students rotating to different classes could help prepare our fifth graders for the transition into middle school the following year.

The planning began quickly and we implemented the first science rotation the following year. Now, in our third year of the science rotation, I figured it was time to take stock and see how we were doing. Hopefully, the fifth grade students today would walk away from the state science test feeling much more confident than Haley had four years earlier.

RESEARCH QUESTION

What has been the impact of the science rotation on our school climate, teacher development, and student learning in science?

CONTEXT

Our elementary school is an urban K–5, with two distinct programs within one school facility. The school has housed the two programs for about 20 years. Each program was initiated by active groups of parents who wanted to ensure specific but different types of enrichments in the curriculum. At the time of their formation, neither program was able to fill a single school facility so they were merged into one building. The two programs are funded by one site budget, overseen by a single principal, and share all building facilities. The district sees our site as one school, and records all testing and other data accordingly. Yet, the two programs have separate parent groups and maintain a clear independence and identity. Over the years, there has been a tension between the two programs, particularly among the students who tend to segregate themselves on campus. The teachers felt that a science rotation that included both programs could help foster better relations, without sacrificing program identity, between all students and the two school communities.
Our school has consistently been one of the highest performing elementary schools in the district, receiving a top California State API (academic performance index) ranking of 10 in 2002. The State of California has released science test scores for fifth graders since 2004. In that year, our students tested 61% at a proficient or advanced level in science. In 2005, our scores dropped to 52%, but then in 2006 went back to 61% at proficient or advanced. These scores compare favorably to the district and state scores, which are at only 30% proficient or advanced. Yet our school performs significantly better in math and language arts (averaging 70% proficient or advanced) so there seemed to be potential for improvement in science. Therefore, our aim was to bring our science scores into alignment with the scores for math and language arts.

Our science rotation class time was scheduled for Wednesdays after lunch for a 75-minute period. We usually managed to fit in four, five-week rotations per school year. However, due to scheduling conflicts, there have been gaps in the rotation, and teachers have needed to create extra class time to make up for the lost sessions.

The primary objectives of the science rotation are to:

1. Improve student relations between the two programs by having the students mix together to form science clusters.
2. Cover all the science standards in a school year to help raise science scores.
3. Allow teachers to focus on one science strand at a time to become more expert at each topic.

A secondary goal was to replicate a middle school experience by creating a distinct science class period, thereby helping prepare students for the transition to middle school.

Additionally, with overall enrollment on the decline in our school district, and with the school board closing under-enrolled schools, the number of merged school sites is on the rise. Our school was merged over a generation ago, and we have learned much from our experiences of sharing a single site. It is, therefore, my hope that our efforts at cross-program collaboration may serve as a model to help other combined sites.

REVIEW OF LITERATURE

While this paper will explore the benefits of teacher collaboration within the science rotation, I have discovered through my reading how challenges teachers face with teaching the elementary school science curriculum fits into a national problem of poor performance in science. Therefore, I consider here issues of teacher collaboration, the quality of science education in elementary schools, and the overall condition of science education in the United States.
Khorsheed (2007) documents how teachers will not naturally develop effective models of collaboration, but need time and strategies to do so. Specifically, Khorsheed shows that teachers require plenty of professional development time to develop meaningful collaborative models in their schools, and that they should be paid to do so.

Yet, even when teachers and other stakeholders come together to create dynamic collaborative models, there can be dangers in letting the model stand for years without critical evaluation (Gajda, 2007). Teachers and other stakeholders often struggle to assess the quality of collaborative dynamics and the merits of collaborative structures at their site. The evaluation piece of collaborative models is often overlooked, but is essential to ensure growing success.

On the other hand, one should not assume that teacher collaboration is a panacea for all school academic concerns (Pomson, 2005). There is great value in giving teachers the freedom to operate their classrooms independently and unencumbered by some of the complexities involved in collaboration. Many teachers have expressed frustration at being forced into collaborating with other staff members. There is true and justifiable ambivalence among many teachers at having to work collaboratively. Yet, these problems often stem from lack of site leadership. Pomson argues, and I have seen in my own experience, that principals and teachers together must communicate in a manner that allows for collaborative models to grow from a needs- and interest-based assessment of their site.

In 2005, the President of Rensselaer Polytechnic Institute, Shirley Ann Jackson, gave a speech called “The Quiet Crisis and the Future of American Competitiveness.” She argued that over the next 10 to 20 years, the science and technology workforce in the U.S. will be retiring at record rates, and there are not enough young people to replace them. Bloubam (2007) claims that the crisis to which Dr. Jackson refers stems not from high school, but goes all the way back to the absence of a consistent elementary school science program in our nation’s schools. Of 164 Kansas teachers who replied to a survey developed by Bloubam, 59% said they had cut out science instruction to focus on math and reading, and about 20% of the teachers said they had given a grade for science without teaching it at all. Many teachers say that the testing demands of No Child Left Behind have forced them to drastically reduce science instruction in favor of instruction of math and direct literacy. Additional evidence from the National Science Teachers Association indicates that there are regular reports from teachers that science is getting cut from elementary schools, often at the request of school administrators (Bloubam, 2007).

If science is not being consistently taught in elementary classrooms, how can we expect our middle and high school students to successfully take on science? Two recently published documents help frame this predicament in terms of student performance, and the public’s attitude toward the study of science in schools.
**Student Performance**

In 2005, the National Assessment of Educational Progress (US Department of Education) published a lengthy report on national science scores over the past decade, focusing on tests at grades 4, 8, and 12. Although there have been some small gains in student performance, particularly for minority students, overall growth in science scores has remained flat. At the fourth grade level, the lowest performing students have made the largest gains, reflecting the recent demands to shore up the achievement gap. Yet, the scores of the higher performing students have been stagnant. Only nine states in the country have shown significant progress in science since 2000.

California students are doing very poorly compared to the other states in the nation. California’s fourth graders ranked second to last, just above Mississippi. Further, 50% of California fourth graders tested at below basic in science. The trend gets even worse at eighth grade, where 56% tested below basic. By the time most students have completed 12th grade, they are simply not adequately prepared for college level courses in science.

**Ambivalent Attitudes**

A survey by Public Agenda (2006) showed that student and parent attitudes about studying math and science have become quite ambivalent. Parents tend to agree that schools need to be more competitive in math and science, they feel the amount of science for their own children is “about right.” Students also acknowledge the need for a more rigorous science curriculum, but they themselves do not to want to study more science.

The Public Agenda report highlights dire concerns about our nation’s high schools. We could help ameliorate this problem by presenting students with a much stronger science program at the elementary level. Our own school’s attempt to revamp our science instruction method can be viewed as one such effort.

**METHOD OF INSTRUCTION**

The four domains of the California science standards are: Physical Science, Earth Science, Life Science, and Investigation and Experimentation. In our rotation, each teacher focuses on one topic from the standards to teach for the entire year. Teachers primarily utilize the district-approved FOSS (Full Option Science System) science kits. Teachers supplement these hands-on science kits with texts, videos, and other resources.

Students from both programs are mixed into groups that stay together all year, traveling to each class on a five-week basis (see Table 1).

On Wednesday, when the bell rings after lunch, the students quickly return to their homerooms, drop off their lunch bags, retrieve their science lab books, and dash off to their special afternoon class. There is much independent, enthusiastic, and purposeful movement in the halls on these days.
Trying to be Consistent
We wanted our science rotation to be as consistent as possible with regard to methods and expectations. Therefore, we provided each student with a science lab book in which to record their findings for all lab work. The teachers created a guide sheet: “Think Like a Scientist” (see Appendix A). This paper was glued onto the inside front cover of their lab books to help students write up their lab reports after each experiment. Our intention was that students would be expected to write their reports in exactly the same manner in all classes.

We discussed how we would assess students, and mutually agreed on general expectations for the students. We attempted to complete every rotation in a timely fashion to enable us to grade the lab books and return them to the homeroom teacher, who was ultimately responsible for the report cards. But completing the grades proved to be a challenge. Elementary school teachers in our district need to write comprehensive reports cards, covering all academic and social categories. Because we cannot simply give letter grades, communicating student performance became a time-consuming challenge.

To make matters worse, young students are just beginning to learn to take care of multiple binders, do extra assignments, and change classrooms to work with different teachers. Thus, we have struggled to create a reliable system of shared evaluation.

COLLECTING DATA
I focused my inquiry on teacher and student attitudes to the science rotation, and on student performance. I also sought the perspective of the principal, ancillary staff, and parents. In addition, I examined school testing data in science for the past two years.

To document and evaluate the quality of student inquiry, I used two tools: multiple surveys and work samples. To evaluate the teachers’ attitudes toward and success with the science rotation, I conducted opened-ended interviews.

I set up an online survey for the students because I thought it would be an easier way to manage the data. I used our school computer lab to run groups of students through

<table>
<thead>
<tr>
<th>Table 1 Sample Science Rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Magnetism Room #1</strong></td>
</tr>
<tr>
<td>1st Group</td>
</tr>
<tr>
<td>2nd Group</td>
</tr>
<tr>
<td>3rd Group</td>
</tr>
<tr>
<td>4th Group</td>
</tr>
</tbody>
</table>
the series of surveys. The questions allowed students to respond by clicking radio buttons and to type their comments. I told each group before they began the survey that the purpose was for the students to help the teachers improve the science rotation for future classes. I wanted the students to know that their opinions were valuable. I made it clear that students could remain anonymous if they preferred. I managed to survey over 60% of all fourth and fifth graders (see Appendix B).

For the teachers, I conducted an in-person survey to ascertain general opinions about what is working well and not well in the rotation process. Additionally, I inquired into the ways the teachers had individually or collaboratively made changes (see Appendix C). These questions were intended to enable teachers to express both big ideas as well as specific concerns about the science rotation. I tried to remain as objective as possible during the interview, but since I am one of the teachers participating in the science rotation, I know that my follow-up questions were biased toward reflecting my own observations and opinions. However, the follow-up questions drew out many interesting points for our staff to discuss later.

**FINDINGS/ANALYSIS**

**Student Survey Results**

Here I will focus on the most revealing questions from the student survey. The results (see Table 2) demonstrate how well the science rotation is meeting the goals of improving our campus climate by mixing the students between the two programs at our site.

| 1) How do you feel about working with students from the other program? |
|--------------------------|--------------------------|
| **FOURTH GRADE** | **FIFTH GRADE** |
| I like it | 60% | 47% |
| It’s difficult | 34% | 17% |
| No opinion | 6% | 36% |

| 2) Have you made friends from the Science Rotation? |
|--------------------------|--------------------------|
| **FOURTH GRADE** | **FIFTH GRADE** |
| Yes | 49% | 32% |
| No | 51% | 69% |

In both grades, most students either enjoyed or didn’t mind working with students of the other program. It is interesting that only 17% of fifth graders found it difficult, compared
to 34% of fourth graders. This may indicate that it takes time for students to warm up to each other. Also, the fact that over a third of fifth graders had no opinion about working with the other program may indicate that either student relations are actually reasonably smooth, or that there is indifference about working together. Simply put, the majority of students have no real difficulty in working with students from the other program in science.

4th grader comments:
- They were friendly.
- I like it a lot. You get to have new friends!
- I don’t like the other program, but I like some people in it.

5th graders comments:
- Sometimes they (other program students) can be mean.
- I met a friend that way.
- I think it’s good that we can work with students from the other program.
- It’s not any different.

The fact that almost 70% of fifth graders claim to have not made a friend after two years in the rotation suggests that students do not find science class an environment conducive to making friends. Many fifth graders indicated that because the lab experiments and write-ups are so demanding, there simply isn’t time to socialize.

Asking students whether they liked learning science in different classrooms with different teachers (see Table 3) provided insights into an area where campus climate can be affected in a positive manner—the relationship between teachers and students. Students clearly expressed that they found working with different teachers to be beneficial, particularly at the fifth grade level, where two-thirds enjoyed the process.

Table 3

<table>
<thead>
<tr>
<th>Do you like learning science in different classes with different teachers?</th>
<th>FOURTH GRADE</th>
<th>FIFTH GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>48%</td>
<td>64%</td>
</tr>
<tr>
<td>No</td>
<td>9%</td>
<td>20%</td>
</tr>
<tr>
<td>No opinion</td>
<td>43%</td>
<td>16%</td>
</tr>
</tbody>
</table>

4th grade comments from this question included:
- You learn different things.
- I never knew that teacher. I’m glad I met her.
5th grade comments from this question included:
• It prepares me for middle school.
• Different teachers teach differently and that helps.
• I like to know more teachers and what’s in their rooms.

OTHER QUESTIONS FOR THE STUDENTS
To discover student attitudes about writing their lab reports, I asked how they would like to write the results of their science labs. Only 11% said they preferred to write the labs in response to open-ended questions; 26% said they preferred to write short answers to specific prompts; and a whopping 63% said they preferred to answer multiple-choice questions.

Finally, in an open question asking students what they liked best and least about the science rotation, we discovered some interesting opinions. In the positive, many students commented that they really enjoyed having the opportunity to work with different teachers. The science rotation gave students a chance to work in otherwise off-limit classrooms with unknown faculty members. Students became more comfortable with all the upper-grade teachers on campus, and teachers reported that this growing familiarity has had a very positive effect on our school climate.

In the negative, students overwhelming stated that the worst part of the science rotation was the demands on writing lab reports. They often said they hated the writing. The teachers also noted that the students’ conclusions were very weakly written, even among the best language arts students. By demanding that all writing be in an open-ended manner, we left too many students unsupported. They were often unsure how to respond.

FOLLOW-UP STUDENT SURVEY
Just after this year’s fifth graders took the STAR Science test, I conducted an impromptu online survey. I wanted to probe the students’ perceptions regarding the impact of the science rotation. I wanted to see how their reactions compared to what Haley had told me three years earlier. Fifty-eight percent of fifth graders reported that the science rotation had been helpful in some way in preparing them for the STAR science test.

TEACHER SURVEY RESULTS
Three of the questions that I asked teachers were especially revealing about what is and is not working in the science rotation and what can be done. In general, teachers have been pleased with the science rotation. They believe that the methodology is sound. They are becoming more adept at teaching science, and more knowledgeable about the specific topic on which they focus. They have also benefited from collaboration. However, they are struggling to address all the current California State Science Standards. They claim that there is not enough time for students to process the information; that the
rotation class doesn’t lend itself to daily and follow-up observation; that there are too many scheduling conflicts; that we need more meeting time.

Teachers’ solutions to these shortcomings focused on using time in different ways—essentially giving students the extra time that is necessary to conduct experiments and process the results.

**WHAT WE LEARNED**

**Assessment**
There is much room to improve how we track student progress. We do not have an effective and simple system of evaluation and reporting grades. Therefore, we may need to enlist the support of the administration to enable teachers to spend more time to process grades and to work collaboratively to develop a consistent framework. With more time, we could go over a few labs from each class and compare how we grade them to see where we are not consistent. We could create an internal, online database for recording student scores and written evaluations to enable us to track student growth from class to class and become familiar with incoming students prior to the next rotation.

**Improving Lab Conclusions**
Many students said that they simply hated writing lab reports. By only asking students to respond to open-ended questions, we left them frustrated. We need to revise the way we ask students to respond to the experiments. We should modify our lab reports to include short answers to prompts and multiple-choice questions. Though not the best measure of students’ understanding, responding to multiple-choice questions could prepare students to perform better on standardized tests.

**Scheduling Conflicts**
Time is a big problem. We have found it very difficult to squeeze in all science topics to cover the four strands. Scheduling conflicts prevent us from having instructional consistency and have meant that teachers have had to add extra instructional time on their own. It may be better to rotate between fewer classes, perhaps just two, to reduce the number of such conflicts and to simplify the process.

**Is science class the time to make friends?**
Our hypothesis that the rotation would lead to improved student relations on campus did not pan out. For most students, the rotations were mainly a time for studying science, not for making friends. However, all teachers noted that the rotations enabled the students to get to know other teachers. This has been an unexpected benefit of improving campus climate. The staff needs to explore other avenues to improve student relations between programs. Perhaps mixed P.E. classes, common interest Lunch Clubs, and other non-academic time may provide students with opportunities to form stronger bonds between programs.
Follow up with Graduates
Perhaps the only way to evaluate whether the science rotation helped prepare students for the routines of middle school would be to interview graduates of the program. Fifth graders often boast how the rotation makes them feel like they are going to middle school. The students take pride in freely walking the halls and dashing off to class after lunch. It’s a real change of pace compared to the fully self-contained classroom experience from kindergarten to third grade. In the future, we would like to ask our graduates to respond to a survey to reflect upon this question.

NEXT STEPS
The 2007 fifth grade STAR science scores were reported in time for the 2007-08 school year. We were pleased to find that our students were testing at 70% proficient or advanced in science. This has long been our goal, and we think with the rotations we can get the test scores even higher. Because a growing number of students have reported feeling positive after completing the standardized science test, it is my hope that the frustration expressed by Haley years ago will now be the exception.

For the coming year, we have decided to simplify the rotation. First, we will rotate between just two classes at a time, thus reducing scheduling conflicts. Additionally, because students indicated that science time was not effective for developing friendships across programs, we will keep our own classes intact in the rotation. This will help to simplify our assessment and grading process.

We have also added an additional science session to each week’s rotation. Instead of just meeting on Wednesday afternoons for 75 minutes, we have added a 30-minute follow-up session on Fridays. We use this time to have students reflect on, expand upon, or continue an experiment in progress.

Finally, our fifth grade teachers have joined the Schools Focused on Science program with the University of California San Francisco (UCSF). This program is based upon a Genentech Corporation grant that pays teachers to meet and collaborate to work on areas of need in their science programs that will be shared with other schools in the district. Our site will create a rubric and an assessment model that will make it easier for teachers to track their students’ progress in a science rotation program.

CONCLUSIONS
The science rotation is more complicated than any of us had ever imagined, yet without it, we would not be able to teach science as well as we do now. We find that we are not only refining and deepening our instructional design, we are learning the process of what goes into effective collaboration and we now know how important it is to continually assess our own progress (Gajda 2007).
**POLICY IMPLICATIONS**

**District Level**
1. Make teacher collaboration a key part of professional development in elementary science.
2. Provide funding to support faculty collaboration when two or more schools are forced to merge.
3. Encourage and support low performing schools to find ways to integrate science into literacy and math classes.

**State Level**
The number of science standards should be reduced from four to two at the elementary level. The California standards for elementary science currently demand that each year teachers cover four strands: Earth, Physical, Life, and Investigation and Experimentations. This is simply asking too much of schools and results in teachers skimming over topics rather than going into depth, or worse, not teaching science at all. Even at our school, one of the highest achieving in the state and with experienced teachers who are effectively collaborating, we are still unable to do justice to the demands of the state science standards. Schools with struggling populations and higher teacher turnover rates will no doubt be unable to come close to addressing the standards.

**Federal Level**
The No Child Left Behind act has created a grave situation whereby elementary teachers are forced to focus mainly on reading and math. One negative effect of this act has been that science instruction is being left behind. The irony is that science provides many opportunities to improve both literacy and math skills in a constructivist model (Duckworth, 1990). If the No Child Left Behind act is to remain in force, it must be revised to ensure that science is more explicitly and effectively covered in all elementary classrooms.
REFERENCES
A minds-on approach for the elementary years. Mahwah, NY: Erlbaum.
collaboration: A school improvement perspective. American Journal of
Evaluation v28 n1 p26-44.
Presidential Symposium.
http://www.rpi.edu/president/speeches/ps082905-acs.html
Khorsheed, K. (2007). Four places to dig deep: To find more time for teacher
Martin, R., Sexton, C. & Gerlovich J. Teaching science for all children. Allen and
National Assessment of Educational Progress (2005). The nation’s report card,
science, grades 4, 8, and 12.
Pomson, A.D.M. (2005). One classroom at a time? Teacher isolation and community viewed
through the prism of the particular. Teacher’s College Record 107(4) 783-802.
Public Agenda. (2006). Are parents and students ready for more math and science?
Education Insights, Reality Check (1).

Appendix A

Think Like a Scientist guide sheet:
1 Problem • What are you trying to figure out? Write down a question that you
will try to answer.
2 Hypothesis • What do you think will happen? Make a thoughtful guess.
3 Materials • What items do you need to solve the problem? Write them as a list.
4 Data • What happened? Show your results as a graph, notes and/or drawings.
5 Conclusion • What did you learn? What were the results? Can you explain why
your experiment turned out the way it did?
Appendix B

Student survey questions and the purpose for the question.

Fourth Grade Survey:

1. Did you hear about the Science Rotation in earlier grades?
   To probe into what extent students had discussed this topic on the yard. Was there good talk? Bad talk? Indifference?

2. Did you enjoy studying science in earlier grades? To ascertain prior attitude sets.

3. How did you feel when you heard we would do the rotation with other classes? To measure attitudes going into this proposition.

4. How do you feel about working with students from other classes and programs? To find out the affect of commingling.

5. Have you made new friends from the Science Rotation? To see how many students made friends.

6. Do you think students are getting along better on campus because of the Science Rotation? To discover if students have any insights in this area.

7. Do you think you understand science better by doing the Rotation? To measure learning attitudes and self-assessment.

8. Do you like learning science in different classes with different teachers? To measure how students felt about changing the learning environment, and for feedback on teachers.

9. What’s the best part of the Science Rotation?

10. What’s the worst part of the Science Rotation?

The Fifth Grade Survey contained all questions that were in the Fourth Grade Survey above, except for the following question:

Did you enjoy Science Rotation in Fourth Grade?
To assess attitudes shaped from the previous year in the rotation.
Appendix C

Teacher Survey Questions:

1. How do you see effective science instruction for elementary students in general?
2. What are the strengths of the science rotation?
3. What are the weaknesses of the science rotation?
4. What are some interventions you have made to redress the shortcomings?
5. Other thoughts?
Impact of Student Motivation, Achievement, and Success in a Self-contained Special Education Classroom

By Christine Lancaster  MetLife Fellow, Teachers Network Leadership Institute

RATIONALE

I teach a self-contained special education class for first through fourth grade students who have severe to profound learning disabilities. For students to be enrolled in my class, they have to have been unsuccessful in the general education classroom. Typically, their problems begin in kindergarten and, despite modifications and accommodations made along the way, by the end of first grade or the beginning of second grade, these students have fallen behind. They are used to not being able to do the work. They have stopped seeing themselves as learners and have developed strategies for avoiding work. They can appear withdrawn, have behavior issues, and/or can be inattentive. One student said to me on his first day in my room, “I don’t read. I’ll go play.” Even though they are younger than eight years old, they see themselves as failures in the classroom.

After being in my classroom for a short time, I see students blossom. Those who before did not complete any homework at home, begin doing so. Children, who did not previously participate, begin to be active participants. Students who used to hide under the table when it was time to listen to a story now sit attentively on the rug during the read-aloud. Instead of flipping pages aimlessly in the book, children begin looking at the words and figure out the story from the words and the pictures. Instead of being filled with words that are copied down—even when the student doesn’t know what they say, journals begin to be filled with words that have been sounded out. As these children begin to meet with success, they change.

Mine is a large, urban district where the push is towards inclusion; that is, providing remediation within the context of the regular classroom. The district is moving away
from self-contained special education classrooms like mine. I became interested in taking a look at how the experience of success impacts my students. This research has implications for my school, my district, and many other districts that are working to eliminate self-contained special education classrooms.

**QUESTION**

What happens when I establish a classroom environment where my first through fourth grade students with severe learning disabilities experience high levels of success?

**CONTEXT**

Shepard Elementary School, a pre-K-6 public school of approximately 650 students, is located a few blocks from the prestigious University of Chicago. Built in 1886, Shepard’s three-story building and its playground take up one block on a tree-lined street in the Hyde Park neighborhood of Chicago. It is a neighborhood school—any children who live within its boundaries can be enrolled at Shepard. Remaining vacancies are distributed through a lottery system directed by the Chicago Public Schools. There are three classes at each grade level. Special education programs at Shepard include two classrooms for students with severe learning disabilities, a hearing-impaired preschool, and support for hearing-impaired students of all grade levels. All students are included with the general education classes as appropriate. Shepard is a multi-racial/multi-ethnic school. Eight percent of the students are Limited English Proficient. The students are 57% African American, 18% Caucasian, 16% Asian, and 9% Latino; 34% of students receive free lunch.

My school has made its overall AYP (Adequate Yearly Progress) benchmark each year. Based on statewide standardized testing, approximately 72% of the students met the standards in reading and math last year. The attendance rate is 95%. The principal has been with Shepard for 17 years and is very supportive of the staff. As an experienced special educator, the principal supports a variety of service delivery models for special education instruction, ranging from self-contained classrooms to full-inclusion classes.

My classroom has a different profile from the rest of the school. While most of the students at Shepard reside within the neighborhood, only two of my students live there. Six are bussed in because their home school is not able to meet their needs. Though 34% of Shepard students qualify for free lunch, 89% of the students in my class receive free lunch. All of my students are African-American. A third live in single parent homes. In all two parent homes, both parents work outside of the home.

Mine is one of seven classrooms that serve severe to profound learning disabled students in the Chicago public elementary schools; it is one of two that serves first,
second, and third graders. Our multidisciplinary program was developed to be comparable to private day schools in the Chicago area for students with learning disabilities. I teach eight students language arts, math, and social studies. Everyone is included with the general education classes for team taught science classes. My classroom includes three fourth graders, two third graders, two second graders and one first grader. Two students are girls. For the first half of the year, we worked with a teacher’s assistant for four periods of the day.

Along with their services for learning disabilities, most students in my classroom also have language disorders so they receive speech and language services. Additionally, most students attend a weekly group focusing on social skills. In addition to the components of balanced literacy used throughout the school, we use a variety of multi-sensory reading programs (Wilson Reading System, 2002; the Lindamood Bell LiPS program—both scientifically-based reading systems).

**LITERATURE REVIEW**

The Individuals with Disabilities Education Act (IDEA 2004) offers a definition for learning disabilities that is used in schools across the United States:

- “The term ‘specific learning disability’ means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

- Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

- Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.” (Cortiella, 2006)

Public Law 94-142 encourages districts to educate students in the least-restrictive environment and has led to debates over the benefits and drawbacks of different educational placements for students with learning disabilities. Least-restrictive environment is educational instruction in a placement that encourages maximum interaction between disabled and non-disabled children at a level appropriate to both (Baumel 2007). This can range from a student being in a regular education class who receives support from a special education teacher in the classroom, to a resource room model, to a self-contained special education classroom where a student is in a separate class for most of the day. Elbaum (2002) found that students in less restrictive settings have increased social acceptance, improved social skills, and higher self-esteem. In many
schools, when the IEP team decides the placement for a student, they are frequently guided by such research.

In their longitudinal study, Chapman, Tunmer, and Prochnow (2000) examined the relationship between academic self-concept (how students think of themselves in academic settings—the extent to which they see themselves as learners) and reading-related performance in early elementary school children. This study was based on earlier findings that academic self-concept develops in response to early learning experiences. That is, children’s experiences with learning when they first begin school correspond to how they feel about themselves as learners. Students with poor pre-reading skills exhibited a negative academic self-concept. For example, those students who began school with poor phonological awareness and letter-name knowledge—not unlike many students with severe learning disabilities—were found to have a negative self-concept soon after they began school and this negative image remained relatively constant as the children progressed in school (Chapman et al., 2000). Additionally, Chapman et al. (2000) found academic self-concept predicted later reading performance. Among school-age children, it is estimated that 6% of students have specific learning disabilities in reading. Chapman and colleagues’ research make it seem highly likely that self-concept will have a major impact on these children and that the special education services that these students typically require should address the issue of self-concept.

Gottfried (1990) found academic intrinsic motivation to be related to academic achievement, IQ, and perception of competence. He also found that academic intrinsic motivation, at ages seven and eight, led to higher academic intrinsic motivation at age nine and in later elementary school years independent of achievement and IQ.

Boersma, Chapman, and Battle (1979) and Elbaum and Vaughn (2003) found that there was no reliable association between self-concept and educational placement—self-contained, resource, or inclusion. Moreover, Morovitz and Motta (1992) found that the self-esteem of students in self-contained classes is not significantly lower than that of non-learning disabled students in general education, even though self-contained students have greater difficulty in school than those in less-restrictive placements. They also found that students in the self-contained class had self-esteem higher or equal to that of regular class students who are experiencing learning problems. Lazarus and Callahan (2000) looked at the attitudes toward reading among students in resource room settings and found that their positive attitudes equaled or exceeded the attitudes of low and average non-disabled students in the regular education classroom.

Social comparison theory suggests that students compare themselves to their peers in their class, and this may explain Morovitz and Motta’s (1992) finding of high self-concept in students in self-contained settings. It may also help to explain Butler and
Marinov-Glassman’s (1994) finding that children in self-contained classrooms compared themselves to others in their class as a reference group, not with their general education peers. This led to a strong, positive self-concept among children in the self-contained environment.

In addition to comparing themselves to academically similar peers in the self-contained classroom, children in these classrooms tend to receive more intensive remedial services which can lead to faster growth in academic achievement. That is, as the students’ achievement levels rise, so do their self-concept and motivation (Boersma et al., 1979; Chapman et al., 2000; Elbaum & Vaughn, 2003; Forman, 1988; Gottfried, 1990). It seems that motivation, achievement, and self-concept are so intertwined that changes in one affect all three.

DATA COLLECTION AND ANALYSIS
Between September 2006 and March 2007, I studied my students in an attempt to tease out how motivation, attitudes, and achievement interplay with each other in my self-contained, special education classroom. My data came from four sources: student work, observational and anecdotal notes, student surveys, and my teacher journal. I have focused my study on four boys—John, JJ, Detrell, and Jason—whose progress seemed typical for children in my class.

**Student work** consisted of writing samples from two students collected during our thrice-weekly writer’s workshop. During writer’s workshop, students participated in a mini-lesson, followed by independent work, conferencing time, and sharing with the class. I focused on changes in the number of words written, consonant sounds correctly represented, and sight words used and written correctly.

**Observational and anecdotal notes** were completed almost daily from December–March through observational checklists and note-taking sheets (see Appendices A and B). The observational checklist and anecdotal note sheets contained information that pertained to achievement, motivation, attitudes, and classroom habits by covering such areas as strategies used, book choices, independent reading behaviors, and progress with the Wilson Reading System (2002). By using these checklists, I was able to see changes in student attitudes (how they approached work by comments they made) and changes in achievement that were difficult to measure in more formal ways. Most important, this was a means to note instances of student success in our classroom and to track its impact.

A **student survey** (see Appendix C) was given once in January and once in March. The questions were developed to assess each student’s motivations and attitudes towards school and our classroom.
I wrote in my teacher journal after school approximately three times a week between October and March. I used the journal to reflect on the data gathered during the day and to synthesize my data.

**Classroom Environment**

We follow a pretty consistent morning routine in our classroom. I begin each morning by greeting my students at the door when they enter the room. As they unpack their bags and turn in their homework, we chat about their time since they left school. Next, they choose one or two books and settle in on the rug for DEAR (Drop Everything and Read) time. They can read quietly with a friend. They can also use this time to read the Morning Message before we go over it as a group. The Morning Message is written on a dry erase board beside the rug. On it I post the date, the name of the student who will be first in line, our specials for the day, and any other important information about upcoming activities or activities recently completed. During DEAR time, I check everyone’s homework, hold reading conferences, and practice sight words with individual students. After about thirty minutes, we move on to the Greeting—a varying set of activities all of which enable each student to be greeted by name and to greet another child by name. Next, we sit down for the Morning Message. We take turns reading the message, talking about what it says. Students are given opportunities to come up and circle different words in the message, look for different sounds or words, and correct mistakes in the message. Last, we read it together and address any questions children have about the day. Then, we move to writer’s workshop.

This school year, we began using the Writer’s Workshop Model for teaching writing. Specifically, we used Lucy Calkins’ *Units of Study for Primary Writing: A Yearlong Curriculum* (2003). The workshop model is a five-stage process that begins with review of the previous session, which is followed first by a mini-lesson during which the goals for the day are introduced, then group/guided practice with the skill, independent writing (with conferencing from the teacher), and finally sharing writing. This model is easily individualized. The review in the beginning enables all students to begin at the same place. The mini-lesson focuses on one skill and seems to have a remarkable impact on my students. As I noted in my journal,

> Mini-lesson on stretching words to sound them out: Everyone was more successful at this than I predicted. It seemed to get kids on the right foot for working on their own too. This was highly successful before independent work and it seemed to work well! JJ stretched out superbowl to “sowpog” and back to “pad.” He got more sounds correct than usual and didn’t seem as frustrated. (2.20.07)

The guided practice gives struggling students a chance to practice before they try on their own, thus giving students support with new skills. And both the independent work and the sharing with the group give kids a chance to demonstrate their new skills.
**Studying My Class**

Using my teacher journal and my anecdotal notes, I quickly noticed that there were distinct differences between days which I described in my journal as “bad day,” “frustrating,” “difficult day,” and days that were described as “wonderful.” On bad days, the students began the day having problems. On mornings like these, a mood seemed to settle in over our classroom. Class participation dropped. Trying to get a class discussion started was often like pulling teeth. Some students would get that glazed-over look. Others would begin sniping at each other. When time for independent work came, some students seemed to plod along, not accomplishing much, while others would break down saying the work is too hard, and some would simply stare out the window. By contrast, a “good day” in my journal was one during which every student had something to share with the class, the discussions were animated, the kids got along, and they went right to work at independent work time. On these days, they seemed proud of their work, and both the quality and quantity of it increased.

I was puzzled by the contrast. As I studied my journal, it appeared to me that the difference in the days seemed to have something to do with the level of success the students felt at the start of the day. It seemed to me that when students met with failure early in the day, it affected the classroom atmosphere in a negative way. This led me to wonder what I could do to get us back on track when students felt they had failed, and to move smoothly through the rest of our morning. I began my inquiry by studying my journal and notes to see if I could identify what seemed to be causing bad days. I came up with four issues: district-mandated assessments, frequent absences and tardiness, problems on the playground before school began, and incomplete homework. I then set about trying to find ways to handle each so that my students’ days would all become successful.

**District-mandated Assessments**

The district-mandated assessments seemed to be the most problematic activity that my class encountered early in the day as is clear from the following journal entry after our first assessment morning:

> …a super frustrating day for everyone today. The district-mandated Learning First Assessment may have something to do with that. Another challenging task. Maybe this bad day ties right into the high success classroom. Also—very frustrating to see all the unsuccessfulness/failure at the beginning of the day. This may be something to continue to watch.

> Perhaps that low success just permeated everything throughout the day. For instance, Jason missed Friday (book fair and movie), John—missed Friday, did not do his homework, JJ—had trouble on the playground (before school)—all started the day with very unsuccessful activities. (12.11.06)
The assessments are pegged to grade level which means that each assessment is two to three grade levels above the reading and math skills of my students. Despite their clear learning disabilities, none of my students was considered so disabled as to qualify for an alternative assessment. While I could modify the conditions of the assessment making it untimed and giving students as much as 80 minutes to do what their grade level peers were required to do in 45 minutes, many of my students could not complete it. I was not allowed to read the reading section of the test to those who could not read. The most I could do was tell them to look through a question, circle words they knew, and then try to read and answer the question. I have seen students struggle to read the first paragraph of a five-paragraph story for 30 minutes and simply not be able to finish because they can’t read well enough to answer the questions. While the math section is read to them, no additional explanation may be given. By the end of the assessment, students were understandably frustrated. I tried responding to these assessment mornings (one per quarter) by giving the kids a snack time—a rare occurrence in the morning in our classroom. I found that once we repaired the break in routine this way, we could move into the Morning Message and then students would get right down to work.

**Frequent Absences and Tardiness**
The insertion of a snack into the morning routine did not seem to help kids who were frequently absent or late, a circumstance I described in my journal in February:

**John**—Difficult day for John. During DEAR time, he came in late, chose only one book instead of two, and was upset when he couldn’t switch books. He refused to read or look at his book and ended up away from the group, sitting in a chair. During independent reading—he was given his choice of decodable books to read—stalled at getting started by arranging his reading buddy, bean bag chair, and choosing books. Chose book with only one word, “dot,” in it. Reminded many times to read. Appeared not to. Did not participate fully during sound drill or work with Ms. H. (classroom assistant) Why? Just an off day? Three-day weekend? Will offer more structure tomorrow to see what happens.

I figured that I needed to develop something that would help these children get over their insecurity about what had been happening in the classroom when they were not there. I focused my efforts on John, a second grade student in my class, whose frequent tardiness throughout the year seemed to have an overwhelming effect on his ability to get down to work as well as to work independently. I tried conferences with his mother and notes home; nothing changed. I tried different ways of welcoming John into the classroom to try to build his self-esteem from the moment he walked in the door; that seemed not to have an impact. Then, one day, I tried having him sit right by me while
I checked his homework. I complimented him on his well done work, and then I sent him to read. That worked!

Trouble on the playground before school—arguments, pushing and kicking—was a problem for some of my students, especially for JJ, a third grader in my class who had begun with me in first grade after only spotty preschool attendance, multiple foster homes, and physical and emotional abuse. This, too, required a special intervention. JJ and I tried leaving what had happened before school at the door of the classroom; we tried writing about it so as to let it be. Finally, I tried spending a slightly longer period of time with the Morning Message thereby giving JJ more opportunities to participate. While behavior during DEAR time remained tricky, the Morning Message could turn things around for JJ: If he was asked to come to the board for an extra turn or two to find words or sounds, his confidence appeared to grow and he became more enthusiastic about his work for the morning.

Incomplete Homework
Every once in a while, two to three students came to school not having finished their homework. The routine for checking homework and the response to incomplete homework was as follows: As homework was checked during DEAR time, I called students over whose homework was incomplete and said, “Your math/reading is not done. You will need to stand at the wall at recess.” This meant that during recess they would stand by the wall, watching recess and not talking to anyone. My journal notes described the problem:

> Three boys did not return homework. Consequences were dealt. Difficult time for the rest of the morning with Morning Message and whole and small group work. (2.8.07)

Once I focused on this interaction, I realized that I needed to change the entire process. If students did not finish their homework, I called them over from their books and gave them a choice of either going back to their reading or finishing their homework at their desk. Everyone chose completing their homework then and there. They still had to stand at the wall at recess, but the opportunity to finish their homework seemed to bring back their feelings of success. When they rejoined us at the Morning Message, these students seemed to feel as successful as if they had completed their homework at home. After I began this, I noted in my journal a decrease in problems resulting from incomplete homework.

Good Days
I also noted in my journal how a great day in the class seemed to lead to students tackling challenges independently. For example, JJ (the third grade child who had problems on the playground) had a severe learning disability characterized by gaps in his working and short-term memory which affected his ability to read and write. In January, he could
read some sight words and knew most consonant sounds. However, he could not blend sounds into words and was most comfortable with copying. When expected to “sound out” words, he would sit and write a letter or two—rarely letters that were actually in the word. In January, we went on a field trip to see an enactment of a book we had read together. Everyone had a great time. When we got back, everyone talked about the play. I decided we would write about it. For the first time ever, JJ sounded out a word in his writing. It was the first time he had written a sentence that I could read. He wrote,

\[ \text{we gat no the pis in the pis smw minw we was omos} \]

\[ \text{We got on the bus and the bus started moving we was going.} \]

He used his sounds for the words “got,” “started” and “moving.” He wrote with ease, not the usual struggle.

Throughout my observations of my class, I found situations when high success in our classroom environment was followed by better work and high focus throughout the day. It seemed as if giving students more opportunities to be successful helped to counteract any negativity that came from rough starts to the day.

**Monitoring Student Achievement**

My journal and anecdotal notes show student growth throughout the year. My best examples of change were two second graders, John and Detrell, who began the school year with many poor work habits but were showing huge progress by March. To measure their progress, I took three representative samples of their work. The writing samples were compared on the basis of:

1. Mean number of words written: The average number of words written over the three samples.

2. Accuracy of consonant sounds correct in non-sight words: This assesses the student’s ability to sound out a word. For example, the word “cat” written as “ct” gets a score of 2 out of 2. “Dog” written as “dk” would get a score of 1 out of 2.

3. Total number of different sight words used: The total number of different sight words used (all three samples).

4. Mean number of sight words spelled accurately: The number of sight words spelled accurately.

5. Mean number of sight words used (per writing sample): The average number of sight words used per sample.

**JOHN**

When I looked through my observations and journal, I saw a change in John (second
grader described above) who entered my class for half days in the last month of first grade. He had been unsuccessful in both kindergarten and first grade and was facing retention in first grade until his severe learning disability was identified. When he entered my classroom he was able to independently write only his name and “dog.” He could read five sight words. He would ask to go to the bathroom or get water every time we began independent work. He often asked many questions about topics unrelated to our discussions. It seemed as if he was doing all he could to avoid working. His first writing of the year can be seen in Figure 1. John wrote his name (blurred out) and two initials to stand for his brothers’. The sounds he chose to stand for his brothers’ names are incorrect. He showed no real evidence of a story—instead, describing a similar situation every day (see Figure 1).

![Figure 1  John’s writing in the fall](image)

By December, I could see changes and recorded them in the following months:

**John**—Writer’s Workshop: worked for 30 seconds, then began making noises. Next, he went back to saying the words slowly. Began talking about unrelated topics. Lost choice time minutes. Went back to work—erased “b” (the only letter he had written down)—John was attempting to write “bus.” He has now been working on “bus” for 10 minutes and 23 seconds. Next he begins to write, and then erase, rewrite, and erase the “b” in “bus,” saying that sound over and over again. (12.13.07)

**John**—Used “Christmas begins” as written on our calendar to write “Christmas begins”—sits and says words. (12.19.07)

**John**—Used the word wall to write a few sight words; stuck to the day’s topic. (1.9.07)—no stretching out of words.
**John**—I worked with John to choose a work to publish—only three of nine are finished—This needs to be a goal for next quarter. (1.30.07)

**John**—writes one sentence using stretching words! (2.22.07)

Between September and February, John had adapted our classroom strategy/habit of stretching out words to spell them. The spring writing samples show more of a story structure. More sight words are used and more words are written (see Figure 2).

---

**Figure 2  John's writing in the spring**

---

“I dinlike De Sod I Dinsos De so mz bing”

*I didn’t like the show I didn’t show The show was boring*

“I Went to the uenis / I won a lot of teit / I pot my in the mhei. A Rse / I tlc it the ckain I goat a toe bait bell / I Lot”

*I went to the Chuck E Cheeses I won a lot of tickets I put my in the machine A receipt I took it the counter I got a toy basketball I left*

“I Se De Sor4adegb / Sebob herbrinhe sno / Serbeb packts friend”

*I see the show 4 spongebob Spongebob runs in the house Spongebob Patrick’s friend*
Changes in John’s Word Use
In September, the mean number of words that John used in his stories was 3.34; by March, it was 18. The accuracy of consonant sounds correct in non-sight words grew from 44% to 62%. The number of sight words used grew from 3 to 12 and the number of sight words spelled accurately grew from 50% to 92.3%.

DETRELL’S WORK
Another example of change shows in my notes on Detrell, another student like John who came to me for the last month of first grade and began full days in our classroom the following fall. In the regular education first grade, Detrell rarely participated appropriately. He typically sat under his desk or the table during read alouds and when he was supposed to read on his own. In the past he received an increasing number of discipline reports from the assistant principal for acting out in the classroom. When he began second grade in the fall, Detrell did not read books independently. He would browse the pictures, but made no attempt to read the words (see Figure 3).

Table 3  Detrell’s writing in the fall

<table>
<thead>
<tr>
<th>“DHNDJNPCTaZoe / SCEMBCC.</th>
<th>“Detrellnmom wat to Gat the mal”</th>
<th>“Detrell n DjnBSD / Playwdyy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detrell and DJ and PH and cat and Zoe Skeeball.</td>
<td>Detrell and mom went to get the mail.</td>
<td>Detrell and DJ play with their yoyos.</td>
</tr>
</tbody>
</table>

As the year progressed, Detrell began reading books on his own during DEAR time. By March, he was attempting to read The Butter Battle Book. I noticed that he was decoding when possible and retelling the story. He read and re-read Go, Dog, Go and unsuccessfully attempted Three Little Wolves. By mid-March, I saw him attempt Green Eggs and Ham and heard him remark to himself, “Dang…I can read this” and he did read most of it; but, he abandoned it when it became too difficult. By June, he had successfully read several Little Bear books independently.

Detrell’s writing showed remarkable changes (see Figure 4). In the fall, the mean number of words in his stories was nine; by spring, it was 42. The number of different
sight words used grew from three to 19 and the mean number of sight words spelled accurately grew from 40% to 87%. In his reading, the accuracy of consonant sounds read correctly in words that were not sight words grew from 73% to 89%.

**Figure 4** Detrell’s writing in the spring

```
“went to get me sum / woetr I luk ot the winbow I sow a / Gicit The BFG gavr Detrell / he put Detrell in the tisho / the BFG iuk ham in his kav”
Went to get me some water
I look out the window I saw a
giant The BFG grabbed Detrell
he put Detrell in the tissue
the BFG took him in his cave.

“The tom I went to / my DJ
hmoe it wus / new 2 cats
that 2 cat a was / sit on me.
And That 2 cat wazs / Ku too me
1 cat is / A boy 1 cat is / A girl.
The time I sent to my DJ home
it was new 2 cats That 2 cat
was sit on me and that 2 cat
was come to me 1 at is a
boy 1 cat is a girl.

“I wocup but the / cat wus
on me / hed wiwu that cat / on my hed / I the cat /
Was Big of miman / It was fribay / And wen I gat
Bak he was big in Detrell /
Said my wish cum chuw /
The ca is Big.”
I woke up but the cat was
on me head Well that cat
on my head. I the cat was
big of remind me it was Friday
And when I got back he was
big and Detrell said my wish
come true the cat is big.
```
Detrell’s responses to the survey question, *How good are you at reading? Writing? Math?*, provide a nice indicator of changes in his thinking over the course of the year. In January he said, “Sometimes I don’t know how to read words, sometimes I do. If I don’t know how to read words, I sound them out.” He described his writing as “not really that good,” but claimed, “I good at math.” By March, he was claiming to be good at reading: “Yes, I keep tapping it out,” and writing “because it is easy to spell words.” “Everytime I go home,” he said, “my brother has me do my ABCs to see what letters I know. My mom is so proud.” He saw improvement in math, too: “I good at math, because I remember in first grade I did math and now I know how to do it this year.”

**JASON**

Like John and Detrell, other students showed changes in motivation and commensurate changes in the quality of their work. Jason was a fourth grade student who spent only one period a day—language arts—in the regular education fourth grade class. During the period, the students in that classroom were working independently or in small groups on individualized work. Because Jason had his own individualized work, he should have been successful during this time. However, the classroom teacher reported that during independent work time, he would sit and do nothing, even though he had been given work appropriate to his skill level. She also claimed that he rarely completed his homework. His teacher and I decided to try keeping him full-time in the self-contained classroom.

Jason was disappointed by the change in his schedule and his disappointment made me try to find a way to get him to complete his homework and to work independently in the fourth grade classroom. I noticed that he liked to write stories about a space alien named Zim. I gave him a blank composition book to use to draw his stories. On the days Jason came to school with his homework completed, he could go to the fourth grade class to work on his story. Once this policy was implemented, I saw a change in Jason and in his work habits which I chronicled in my journal:

We pulled Jason from the fourth grade because he isn’t completing any work. He doesn’t like this, but he hasn’t been completing his homework, and I don’t want to reward this behavior. Ms. G and I talked about putting him back in for the social experience, beginning with something he would be successful with. We should start this on Tuesday or Wednesday. Maybe this will help things out. (1.23.07)

The difference in Jason when he has done his homework vs. when he has not done his homework is huge. When his homework is done, he eagerly attacks classroom activities. When it has not been done, everything is difficult and a struggle. (2.28.07)
Jason has enjoyed writing his Zim story. His success in this task has begun to carry over to his other activities. His homework is complete more often and he is enthusiastic about other tasks.

**JJ**

In January, our class began a new reading program, the Wilson Reading System (2002). This is a systematic, scientifically proven method of reading instruction, focusing on decoding and spelling and seemed most appropriate for Detrell and JJ who seemed to flourish after we introduced this program. The success they felt appeared to carry over into other classroom activities. One day in January, JJ carried the word list we had been practicing over to the rug. He chose to practice reading his words as the other students were using their free time to talk with each other.

**Survey Results**

The most common question I hear from teachers and parents about my small, self-contained, special education class is whether the students feel bad about being in a small class. I decided to survey my students, once in January and once in March, to ascertain their feelings about being in the self-contained, small class.

In both January and March, the students’ responses to the questions: What do you like about being in a small class like ours? How do you think being in a small class helps your reading, writing, and math? were overwhelmingly about the quietness and calmness of the self-contained class (see Figure 5).

**Figure 5** Student Responses in January and March

<table>
<thead>
<tr>
<th>January</th>
<th>March</th>
</tr>
</thead>
<tbody>
<tr>
<td>“We can all do something at once and it is more quiet. We can think more…. the big class scared me to do it. There was more pressure when there is something that was hard before. Now when I do it, I feel like I did something right.”</td>
<td>“You’re not yelling much because Ms. G’s kids (general education class) can do things right, but they don’t. And there are so many it is hard to make them all listen.”</td>
</tr>
<tr>
<td>“You can put a lot of stuff in it, it looks big.”</td>
<td>“It’s easy to listen.”</td>
</tr>
<tr>
<td>“When I was in my big class, we didn’t have much teachers. They didn’t go around. Now that I’m in a little class, I get more help.”</td>
<td>“It isn’t that small actually. When there are a lot of kids, usually there are a lot of problems.”</td>
</tr>
<tr>
<td>“We can get more work done.”</td>
<td>“Get more work done.”</td>
</tr>
<tr>
<td>“It’s not a lot of kids—it’s not every loud in here.”</td>
<td>“It’s not that many kids. So, there doesn’t have to to be a lot of talking….I can learn better. In my old class a whole bunch of people used to be talking.”</td>
</tr>
</tbody>
</table>
They also commented on getting more work done; they claimed that it was easier to learn and listen. Hearing such comments from students who did not seem to see themselves as learners at the beginning of the year was remarkable. Their responses suggest that they had begun to think about themselves as learners and of what might help them with their work.

**FINDINGS/CONCLUSIONS**

I began this project searching for an explanation for the changes I see in my students once they enter my class. This was especially important to me because the trend in special education seems to be to move away from self-contained classrooms and towards inclusion classes. My belief is that students’ experience of success impacts their self-concepts and motivation which, in turn, leads to more advances in achievement. It seems to me that it is easier for severely learning-disabled students to experience such success in a self-contained environment.

As I observed and studied my classroom over the year, I was struck by the ways in which theory, research, my practice, and my students’ actions seemed to coalesce to corroborate my theory. However, I do recognize that my inquiry and actions taken in response to data that I gathered were critical to my students’ progress, so I can no longer claim that it is the self-contained classroom alone that makes the difference. Part of what may be happening may be explained by the work of Morovitz and Motta (1992) and Butler and Marinov-Glassman (1994): in a small special education class, the students stop comparing themselves to the students in the regular-education setting and compare themselves instead to the students in their new situation, thereby developing a higher self-concept. Another factor may have been my developing breaks with the routine that helped children “reset” themselves, as was the case with John and the quarterly assessment, with JJ’s writing, with John’s absences and tardiness.

I now think that experiencing success instead of failure early in the day seems to affect motivation and achievement throughout the day—a clear demonstration of Chapman and colleagues’ (2002) finding that motivation, self-concept, and achievement are deeply intertwined. And, as John and Detrell’s reading progress suggests, it is not just a matter of experiencing success early in the day but throughout the day. As their self-concept and motivation began to change, they seemed to become more comfortable in their class work and this, in turn, led to higher achievement.

It is difficult for teachers to zero-in on individual students as my assistant and I were able to do with my small class. This is what makes the self-contained environment so special and so powerful. So, for example, we could take time with the Calkins’ (2003)
model, especially with the guided practice which seemed to support students’ use of new habits and skills when working independently: The success they felt from practicing the skills first as a group, then in the mini-lesson led to their adopting the new skills as their own.

Much of the push for inclusion seems to stem from concerns that learners’ self-esteem is negatively impacted by being in self-contained classes (Zigmond, 2003). I have not seen this happen among my students. Jason, John, JJ, and Detrell are four examples from my eight students, but I could have used any of the other four as well. It is not the self-contained classroom per se that makes the difference, but certainly the small numbers of children and the focused attention that each is able to get in that environment makes it an important part of any effort to help change the achievement trajectory of severely learning-disabled students. Since completing this study, I have also come to the conclusion that developing an inquiry-stance, which is what action research supports, is essential to practice, particularly in the special education classroom.

POLICY RECOMMENDATIONS

1. Assumptions that self-contained special-education classrooms are detrimental to a student’s self-concept should be examined on a case-by-case basis.

2. Early elementary students with severe learning disabilities can benefit from intensive services to build both achievement and self-concept.

3. Students’ self-concept should be considered when deciding special education placement.

4. Smaller class size in both special-education and regular-education classrooms would allow teachers to better differentiate instruction for their students.

5. District mandated assessments should be examined for their impact on special education students and alternative measures of achievement should be accepted as an important part of the assessment protocol for them and all students.

REFERENCES


## Appendix A

### Behaviors Checklist / Notes

<table>
<thead>
<tr>
<th></th>
<th>Student #1</th>
<th>Student #2</th>
<th>Student #3</th>
<th>Student #4</th>
<th>Student #5</th>
<th>Student #6</th>
<th>Student #7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time on Task</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>with Task</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>(Scale of 1-4)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>includes active</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>listening</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Working</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independently?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Using the</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Word Wall</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Working on</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decoding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independently</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stretching out</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Words</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Book Choices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>during DEAR Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Participation/ Hand Raising</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tackling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Problems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independently</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Use this chart with:**

- DEAR
- Writer’s Workshop (WW)
- Readers Workshop (RW)
- Independent Reading (IR)
- Science (S)
- Math Problem Solving (M)
- Guided Reading (GR)
Appendix C

Survey • Spring 2007

NAME ___________________________ DATE ____________

1. What is your favorite part about our class?
2. What is your favorite learning activity that we do in class?
3. What do you like about being in a small class like ours?
4. How do you think being in a small class helps your reading, writing, and math?
5. Do you like school more or less than you used to?
6. Have you gotten better at your reading, writing, and math? How can you tell?
7. What is something at school you have improved at this year?
8. How good are you at reading? Writing? Math?
The Power of Word Knowledge:
The Impact of Explicit Vocabulary Instruction on Reading Comprehension

By Anokhi Saraiya, MetLife Fellow, Teachers Network Leadership Institute

Public School ABC opened in 1995 in a low-income, largely Dominican area in the Washington Heights section of Manhattan, New York City for children in Early Head Start, Head Start, and kindergarten through grade 5. It is a full-service, barrier-free, and handicapped-accessible community school that has a partnership with an on-site community-based organization, The Children’s Aid Society. During the school day, we offer an array of programs to our diverse population. These include monolingual classes, transitional bilingual classes, and a two-way bilingual program for grades K-5. In addition, there is a fourth grade ESL (English as a Second Language) self-contained class. We also have a push-in/pull-out ESL program that provides services to many of our English Language Learners (ELLs) who are in monolingual classrooms. There are also services provided for special education students, K-5, by an academic intervention team of teachers. Finally, we have four special education classrooms for grades K-3.

Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Public School ABC</th>
<th>City Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>740 735 738 711</td>
<td></td>
</tr>
<tr>
<td>Recent Immigrants %</td>
<td>7.4 9.0 11.2 12.1</td>
<td>7.5 7.6 9.1 8.3</td>
</tr>
<tr>
<td>Attendance %</td>
<td>92.7 94.0 93.9 93.5</td>
<td>92.6 92.9 92.9 92.8</td>
</tr>
<tr>
<td>Eligible for Free Lunch %</td>
<td>96.1 95.7 93.5 93.6</td>
<td>74.7 75.1 72.2 90.9</td>
</tr>
<tr>
<td>English Language Learners (ELL/LEP) %</td>
<td>34.7 32.7 40.6 46.7</td>
<td></td>
</tr>
</tbody>
</table>
As a school community, we are focused on supporting our ELLs through numerous educational programs including bilingual programs, dual language programs, ESL push-in/pull-out, and self-contained programs. However, despite our many support programs, a strong academic curriculum, a focus on instruction using state and city reading and writing standards, and a school-wide incentive and motivational campaign to read more books, our English Language Learners’ progress has been minimal. Over the past five years, the school has consistently been cited as not meeting Adequate Yearly Progress for the New York State English Language Arts (ELA) Exam and the New York State English as a Second Language Assessment Test (NYSESLAT). What can the school do? How does it need to change? More specifically, what can I do?

RATIONALE

The frustration of watching my classes of predominantly English Language Learners work hard, try their best, read their hearts out, and still not meet standards, has been overwhelming and disheartening. In the past, many students entered my classroom years below grade level in reading. I have tried to address their disadvantages in a number of ways. My students were in a reduced class setting which enabled me to differentiate instruction, especially during reading. They also received external support services including reading and math intervention services, special education services (speech, resource room), and ESL services, where students were pulled out of class for small group or individual instruction. Despite these efforts in my class and across the school, my students were way behind their native English-speaking peers in reading proficiency. What could I do to help my students improve as readers?

I carried these concerns with me into my current role as the Comprehensive School Reform Coordinator for the school. As our school has been repeatedly cited for not achieving Adequate Yearly Progress in English Language Arts for our ELLs, we are now in restructuring and are focused on reforming our school’s instructional programs. In my role, I oversee the America’s Choice School Design Model, a whole school reform model that our school decided to adopt as part of our efforts to address our restructuring. The America’s Choice model focuses heavily on enhancing five broad aspects of the school in an effort to address student needs and improve student achievement, especially in the area of literacy. These aspects are: High Performance Management, Leadership, and Organization; Standards and Assessments; Aligned Instructional Systems; Professional Learning Communities; Parent/Guardian and Community Involvement. My responsibilities include professional development for teachers in the areas of standards-based planning for instruction and assessment. It is because of my experiences in this role and with ELLs as a classroom teacher that I became interested in studying the effects of vocabulary instruction on reading comprehension.
**RESEARCH QUESTION**

How does explicit vocabulary instruction, instruction that is teacher-directed, sustained, and implemented daily, impact the reading comprehension of English Language Learners?

**Research and Readings**

When I began reading research related to the topics of English Language Learners, Reading Comprehension, and Vocabulary Acquisition and Instruction, I found that the challenges my students are facing are not unique to their population or circumstance. In fact, students all over the country are facing similar comprehension challenges:

- Students from lower socioeconomic (SES) groups have a significantly smaller word knowledge base than those of higher SES groups. In fact, a study of first graders has shown that those from high SES groups knew about twice as many words as those from low SES groups (Graves, Brunetti, & Slater, 1982; Braves & Slater, 1987).

- The size of a child’s vocabulary, based on a study of the language acquisition of 42 children from birth to age three, was most closely related to one factor: the number of words the parents spoke to the child (Hart and Risley, 1995).

When thinking of my students, many of whom are recent immigrants and definitely in the lower socioeconomic group, I found these studies troubling because they suggest that from the start, a student’s knowledge of words is affected by their class and economic situation—both circumstances beyond their control. Given my student’s home contexts, Hart and Risley’s research is compelling considering most of my students come from households where little or no English is spoken, and therefore English language acquisition is stunted, affecting vocabulary development.

With deficiencies in vocabulary from the beginnings of their education, it seems important to conduct explicit instruction. In turn, this explicit instruction, should build students’ word knowledge base, thereby improving reading comprehension (Beck, McKeown, & Kucan, 2002; Pearson, 2007). Although in the case of my students the challenge is not only socioeconomic status, but also second language acquisition, the same theories apply.

Gibbons (2002) explains that when teaching reading to ELL students, it is important to create a linguistically and culturally rich reading environment, where they can develop reading strategies to better construct meaning from texts. This includes vocabulary-rich environments.

Beck, McKeown, & Kucan (2002) suggest that while some words can be learned in context while reading, such learning occurs in small increments, due to the fact that
learning words from context requires reading a wide array of texts, as well as having the ability to infer meaning. I have seen this often: I observe students simply skip over the words that they do not understand and continue reading without ever finding out the word’s meaning. This is problematic for two reasons: first, they either did not recognize or did not have a strategy for how to find the word meaning, and second, they most likely did not comprehend the text they were reading.

Explicit vocabulary instruction goes beyond simply exposing students to vocabulary words. It allows teachers and students to engage in activities that encourage use of words and interaction with vocabulary. Students are more likely to internalize and better understand new words when they have multiple, sustained opportunities to interact with and use new words (Gibbons, 1991). Beck and colleagues (2002) outline various activities and techniques for conducting explicit vocabulary instruction:

1. Provide multiple encounters with the same words in order to truly learn and use the words at a later time.
2. Give definitions because this ensures that learners will start their study with a correct understanding of the words.
3. Provide Tier Two words—words that “are likely to appear frequently in a wide array of texts and in written and oral language of mature language users” (Beck, McKeown and Kucan, 2002).

In implementing my research, I used their suggested activities as the framework for my action research.

METHODS AND DATA COLLECTION

As I am an out-of-classroom teacher, I chose to work in a fourth grade ESL classroom of 32 students, where I conduct vocabulary lessons and support his classroom instruction. The class is comprised of 32 students, whose English language skills range from Intermediate to Proficient. I chose this class because its students are representative of the entire school population.

From December through April, I conducted 20-30 minute lessons (see Appendix C for lesson examples) for one week each month, for a total of five cycles of instruction covering approximately 50 words. In May I collected final reading comprehension data using the DRA. In addition to my instruction cycles with the class, the teacher supported our vocabulary work by continuing to implement vocabulary instruction during his skills block time, using the same methods and lesson activities. I also kept a journal in which I recorded observations from the classroom.
Baseline Data

I began my study in November with baseline data collection. I used a word survey (Appendix A) that I created using an excerpt from the book *Ramona the Brave* by Beverly Cleary, and reading data from the DRA, the Developmental Reading Assessment (Beaver, 1999).

Word Survey

Students were given a passage of 122 words from the text and asked to read the passage. As they read, they were asked to underline all words that they did not understand. Students were then asked to answer comprehension questions based on the passage.

Based on a survey of 28 students (four were absent), the average number of words that a student underlined was four. The most common underlined words were: fibber, approach, spoiled (see Appendix B). Many students underlined only a few words, but then had little or no comprehension on the meaning of the text. The word survey results confirmed my belief that the students needed grade level vocabulary instruction, i.e., Tier Two words (Beck, McKeown, & Kucan, 2002) in order to improve reading comprehension (Pearson, 2007).

First Developmental Reading Assessment (DRA)

The DRA assesses reading fluency, rate, and comprehension through the use of a running record (where the teacher notes how many words out of 100 a student reads without error). According to New York City Standards, fourth graders should be reading DRA levels 34-40, which correlate as levels O through R (Fountas and Pinnell, 2000). In the class, only 10 students (n=32) were at or above grade level reading (see Figure 1).

Cycle 1

In December, I began the first cycle of instruction. I taught vocabulary as well as strategies for studying and working with vocabulary. The vocabulary was taken from a book that had been read aloud and discussed in class. Drawing on the research of Beck, McKeown, & Kucan (2002), we focused on the same 8-10 words for a full week and provided student-friendly definitions for each word. For example, in Cycle 1, I taught vocabulary from the book *Sky Tree: Seeing Science through Art* by Thomas Locker. One of the words I selected was “huddled.” I gave the students a student-friendly definition “for several people to get really close together.” I placed the word in different contexts to show how it could be used.

After introducing the words and providing students with definitions, we began a four- to five-day study of the words using various activities to increase opportunities for them to use and develop an understanding of the words. Each day, I utilized different game-like activities to engage the students in the word study. Most of the activities were oral and involved acting out words. At the end of each week, I conducted an assessment to see how well students understood the words.
Between January and April, we continued intensive vocabulary study, using a variety of activities to help students use words, to think about their meanings, and to apply them whenever possible. Gibbons (1991) explains, “Being immersed in language and having access to good language models is of course important, but it is not itself sufficient to develop language competence…Children also need to use language in interaction with other children and adults” (Gibbons, 1991).

One of the class’ favorite activities was Can of Words (Appendix D)—a container in the classroom where students collected interesting or unfamiliar words that they found in their reading or other contexts. They wrote the words on slips of paper, and dropped them in the container. Periodically, at the end of a vocabulary lesson, the teacher or I would pull words out of the can and discuss them, sharing the definition and some examples.

The class also was enthusiastic about Word Wizard charts. Each week, the words we studied were listed on a chart. At the end of the week, we tallied the number of times students used or interacted with the words we were studying during the week.

Throughout, I used my journal to record observations and reflections about the progress students were making. Students often shared their excitement about studying new words by “showing off” their new words in my presence. I always tried to record these encounters, as they demonstrated how much the vocabulary instruction was impacting their thinking about words, as well as their excitement about words and reading. My
journal was also useful in recording conferences with students, and noting informal assessments about student word use.

**Final Assessment**
After months of explicit vocabulary instruction, daily classroom instruction in literacy, and an emphasis on daily reading, students made great progress. The year ended with nine students at or above grade level for the end of the year (levels R and above), 15 students approaching and just below grade level (Levels P and Q), and seven students reading below grade level (Level O and below) (see Figure 2). Although all students did not meet or exceed grade level, all students did make reading progress: 50% students advanced at least three reading levels; 31% advanced two reading levels; 19% advanced one level (see Figure 3).

![Figure 2](image1)
**Figure 2 • Reading Classes in Class 4-X • 2006-2007**

![Figure 3](image2)
**Figure 3**
**Number and Percent of Students Who Improved 1, 2, or 3 Reading Levels**
October 2006 to April 2007
(out of 32 students total)

- Students Who Improved 3 Reading Levels
- Students Who Improved 2 Reading Levels
- Students Who Improved 1 Reading Level
FINDINGS AND CONCLUSIONS
The data I have collected appears to support direct vocabulary instruction and its positive impact on reading and reading comprehension. Students were building a word knowledge base throughout the year, through explicit vocabulary instruction as well as through reading daily and engaging in discussions to develop oral language, and they were able to improve comprehension (Beck, McKeown, & Kucan, 2002; Pearson, 2007).

After beginning our vocabulary work together, I noticed that students were becoming more attentive to text, specifically looking for and identifying words with which they were unfamiliar. As we became engaged in the study, they developed strategies to figure out the words that they didn’t understand and were more willing to try to find out word meanings.

Students achieved deeper, more meaningful understanding of the words studied, and more often noticed, used, and understood the words in other contexts (in oral conversations, television/movie encounters, and in writing). Our intensive focus on words pushed students’ curiosity and fascination with words as well. Oral language development eventually led to reading and writing development, as demonstrated by students’ improved attention to words in text and their use of words in writing. In keeping with Gibbons research (1991, 2002), the vocabulary activities enabled a type of oral language development that is extremely important for English Language Learners.

POLICY RECOMMENDATIONS

Classroom Level Recommendations
1. Teachers should set aside space in their classrooms to display new vocabulary words.
2. Rather than simplifying language, teachers should model the use of high-level vocabulary in the classroom.
3. Teachers should encourage students to ask questions about words that they don’t understand.

School Level Recommendations
1. Emphasis should be placed on the importance of daily explicit vocabulary instruction during the literacy block.
2. Opportunities should be created for multiple encounters with words. The schools should be conscious of displaying words all over the school.
3. The school should provide teachers with opportunities for professional development and study groups to learn about methods of explicit vocabulary instruction.
4. The school should utilize school-wide literacy initiatives (e.g., Book of the Month, Million Words Campaign) to engage the school community in vocabulary study and make vocabulary more “present.”
REFERENCES


Appendix A • Word Survey

Directions: Read the following passage and underline ALL the words you do not understand.

Ramona began to feel heavy with guilt. Now the whole class and Mrs. Griggs thought Ramona was a fibber. Here it was, the first half of the first morning of the first day of school, and already first grade was spoiled for her. When the class returned to Room One, Ramona did not raise her hand the rest of the day, even though she ached to give answers. She wanted to go to Mrs. Griggs and explain the whole thing, but Mrs. Griggs seemed so busy she did not know how to approach her.
The class forgot the incident. By lunchtime, no one classed Ramona a liar with pants on fire, but Ramona remembered, and as it turned out, so did Howie. (Ramona the Brave, p. 73)

Comprehension Questions:
1. What do you think happened right before this part of the story?
2. Who do you think Mrs. Griggs is? How do you know?

Appendix B • Word Results • November 2007

<table>
<thead>
<tr>
<th>Student Identified by Letter</th>
<th>Number of Words Underlined</th>
<th>Words Underlined</th>
<th>Question 1 Comprehension: Full, Some, or None</th>
<th>Question 2 Comprehension: Full, Some, or None</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>4</td>
<td>fibber, incident, liar, Howie</td>
<td>none; “that Ramona remembered th I think her pants got on fire”</td>
<td>some; “because I new he was a teacher or principal”</td>
</tr>
<tr>
<td>X</td>
<td>2</td>
<td>fibber, ached</td>
<td>none; “I that Ramona will feel shi and not go to school when I frist saw the book in 3 grad.”</td>
<td>full</td>
</tr>
<tr>
<td>R</td>
<td>5</td>
<td>guilt, fibber, spoiled, incident, approach</td>
<td>none; “I think that Ramona was feeling scared or afraid they was going to make fun of her.”</td>
<td>full; “I think Mrs. Griggs is the principal or a teacher because she was bossy.”</td>
</tr>
<tr>
<td>E</td>
<td>5</td>
<td>guilt, spoiled, ached, incident, approach</td>
<td>none; “I think that before she was feeling well but then she got sick”</td>
<td>none; Mrs. Griggs is busy. I know that because it says that Mrs. Griggs seemed so busy she did not know how to approach her.</td>
</tr>
<tr>
<td>Y</td>
<td>3</td>
<td>fibber, ached, incident</td>
<td>none; “Ramona ran to school excited thinking that it will be a good bay. They gave her class to her and then she ran to her class.”</td>
<td>some; “I think Mrs. Griggs is a teacher because if it would not de a teacher I would not have a Mrs.”</td>
</tr>
<tr>
<td>G</td>
<td>9</td>
<td>heavy, guilt, Griggs, fibber, spoiled, ached, incident, liar, Howie</td>
<td>some; “I think the class don’t like Ramona.”</td>
<td>full; “Mrs. Griggs is a teacher because Ramona went to explain what happened to her.”</td>
</tr>
<tr>
<td>K</td>
<td>1</td>
<td>spoiled</td>
<td>none; “Ramona began to feel heavy with guilt. Now the whole class and Mrs. Griggs thought Ramona was a fibber.”</td>
<td>none; no response</td>
</tr>
<tr>
<td>Student Identified by Letter</td>
<td>Number of Words Underlined</td>
<td>Words Underlined</td>
<td>Question 1 Comprehension: Full, Some, or None</td>
<td>Question 2 Comprehension: Full, Some, or None</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td>------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>O</td>
<td>3</td>
<td>guilt, fibber, spoiled</td>
<td>full; “I think everyone was calling her a liar with pants on fire.”</td>
<td>Full; “Mrs. Griggs is the teacher”</td>
</tr>
<tr>
<td>P</td>
<td>6</td>
<td>guilt, thought, fibber, spoiled, raise, though</td>
<td>none; “The class forgot the incident.”</td>
<td>Full</td>
</tr>
<tr>
<td>H</td>
<td>3</td>
<td>spoiled, Griggs, approach</td>
<td>some; “I think Ramona was nervous because it was the first day of school”</td>
<td>Full</td>
</tr>
<tr>
<td>AC</td>
<td>2</td>
<td>spoiled, Griggs</td>
<td>none, “I think Ramona was feel guilt because she said she feel heavy.”</td>
<td>none; I think that Mrs. Griggs is coling the ners.”</td>
</tr>
<tr>
<td>B</td>
<td>9</td>
<td>guilt, fibber, spoiled, ached, seemed, liar, approach, incident, Howie</td>
<td>none; “Before I read the pasege I that that Romona was going to saiy that she was nervis.”</td>
<td>none; no response</td>
</tr>
<tr>
<td>V</td>
<td>3</td>
<td>guilt, spoiled, approach</td>
<td>none; no legible answer</td>
<td>Full</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>fibber, ached, approach</td>
<td>none; “that she thought there were givin her a presen that means when you are here.”</td>
<td>Full; “a teacher who is married because it says Mrs. that means she is a teacher and married.”</td>
</tr>
<tr>
<td>Q</td>
<td>5</td>
<td>fiber, spoiled, raise, ached, incident</td>
<td>some; “I think Ramona was in her classroom and she had a problem with something.”</td>
<td>some; “I think that Ms. Griggs is married because it is Mrs.Griggs with a s.”</td>
</tr>
<tr>
<td>A</td>
<td>6</td>
<td>guilt, spoiled, ached, approach, incident, liar</td>
<td>none; “I think that she was getting ready for school and she miss the bus so she had to run fast.”</td>
<td>Full; “Mrs. Griggs is a teacher because in the first word it said Mrs.”</td>
</tr>
<tr>
<td>AD</td>
<td>4</td>
<td>guilt, fibber, ached, approach</td>
<td>none; no response-did not understand question</td>
<td>Full</td>
</tr>
<tr>
<td>U</td>
<td>4</td>
<td>guilt, spoiled, ached, approach</td>
<td>none; did not answer question “before-mean something that happens first than anything”</td>
<td>Full</td>
</tr>
<tr>
<td>Student Identified by Letter</td>
<td>Number of Words Underlined</td>
<td>Words Underlined</td>
<td>Question 1</td>
<td>Question 2</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------</td>
<td>------------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Comprehension: Full, Some, or None</td>
<td>Comprehension: Full, Some, or None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Written exactly as students wrote</td>
<td>Written exactly as students wrote</td>
</tr>
<tr>
<td>S</td>
<td>2</td>
<td>guilt, approach</td>
<td>Some; “maybe Ramona was doing lots of work and she was tired.”</td>
<td>Full</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>guilt, fibber, ached, incident</td>
<td>None; “Mrs. Griggs was happy that Ramona was not teses”</td>
<td>None; “I think Mrs. Griggs happy.”</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>guilt, fibber</td>
<td>Some; “that there were people who were lafing at her”</td>
<td>Full</td>
</tr>
<tr>
<td>J</td>
<td>9</td>
<td>heavy, guilt, Griggs, fibber, spoiled, liar, approach, incident</td>
<td>None; “I think she din’t feel heavy before but know she is.”</td>
<td>Full; “I think she is a teacher because her name being Mrs. Grigg.”</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>guilt, fibber, spoiled, ached, approach</td>
<td>Full; “Everybody started to think Ramona did some thing. Ramona was saying she didn’t do that.”</td>
<td>Full; “It is a teacher. Why I know because her name begins in Ms, so that why I know she is a teacher.”</td>
</tr>
<tr>
<td>Z</td>
<td>5</td>
<td>guilt, fibber, ached, approach, incident</td>
<td>full; “that maybe she was a liar with pants on fire.”</td>
<td>none; “because if it was mr. it is a man and mrs. means a married women.”</td>
</tr>
<tr>
<td>AA</td>
<td>4</td>
<td>fibber, ached, approach, liar</td>
<td>Full; “Ramona told her teacher a lie the teacher saw her doing it and she got in trouble they began to call her names</td>
<td>Full</td>
</tr>
<tr>
<td>W</td>
<td>4</td>
<td>fibber, spoiled, approach, incident</td>
<td>some; “I think everyone in Ramona’s class knows about her.”</td>
<td>Full</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>guilt, fibber</td>
<td>none; no response/did not understand question</td>
<td>full; “the teacher because of Mrs.”</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>guilt, fibber</td>
<td>none; no response/did not understand question</td>
<td>full; “the teacher because of Mrs.”</td>
</tr>
<tr>
<td>AB</td>
<td>5</td>
<td>fibber, approach, incident, liar, Howie</td>
<td>none; “what happened was that he was on fire.”</td>
<td>none; “Mrs. Griggs was sorry because he was busy.”</td>
</tr>
</tbody>
</table>
SUMMARY OF DATA:

✱ Average number of words that students did not understand:

   118 (number of times words were not understood)
   28 (number of students who took the survey) = 4.2 words

✱ Most commonly underlined words (in order of frequency, most to least):

<table>
<thead>
<tr>
<th>Word</th>
<th>Number of times selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibber</td>
<td>21</td>
</tr>
<tr>
<td>Approach</td>
<td>16</td>
</tr>
<tr>
<td>Spoiled</td>
<td>16</td>
</tr>
<tr>
<td>Guilt</td>
<td>18</td>
</tr>
<tr>
<td>Ached</td>
<td>14</td>
</tr>
<tr>
<td>Incident</td>
<td>13</td>
</tr>
<tr>
<td>Liar</td>
<td>7</td>
</tr>
<tr>
<td>Howie</td>
<td>5</td>
</tr>
<tr>
<td>Griggs</td>
<td>4</td>
</tr>
<tr>
<td>Raise</td>
<td>2</td>
</tr>
<tr>
<td>Heavy</td>
<td>2</td>
</tr>
</tbody>
</table>

✱ Number of students who achieved FULL comprehension on both questions: **3**

✱ Number of students with FULL comprehension of question 1: **4**

✱ Number of students with FULL comprehension of question 2: **18**

Appendix C • Examples of Vocabulary Activities

1. **Introduce** the vocabulary after you have read, discussed, and responded to the book in some way.

✱ Give the student the word, read the sentence/context of the word, then repeat the word again. Have the students repeat the word to you (this helps them create a phonological representation of the word). It may be useful to show a picture that demonstrates each word as you introduce them, especially for lower grades and classes with lots of ELLs.

2. Give the students a “student friendly” definition and contextual examples.

✱ **flutter** • to move with a quick flapping motion; Ex: Butterflies flutter their wings. Eyelashes flutter. The flag fluttered in the wind.

✱ **hurry** • to go from one place to another quickly; Ex: The doctor hurried to the hospital to help a patient. I was late for school, so I had to hurry.
**glisten** • to shine because of another light; Ex: The girl’s hair glistened in the sunlight. The snowflakes glistened as they fell to the ground.

**buried** • hidden or covered beneath another object; Ex: My homework was somewhere in my bedroom, buried under a pile of dirty clothes.

**gather** • to bring together or come together; Ex: The family gathered around the table for dinner. The class gathered ideas for their math project in a brain storming web.

**drift** • to move easily and slowly through water or air; Ex: The leaves drifted to the ground as they fell off branches. The boy drifted in the lake on top of an inner tube.

**huddle** • to get very close together in a group, often to talk something over; Ex: The football team huddled together to discuss their next move.

---

**ACTIVITIES to do to continue to build student understanding (you can do these over several days, for short periods of time):**

* Have students write the word on one side of an index card, and draw an illustration that reminds them of the vocabulary word on the other side of the card. For example, for the word huddle, a student may draw a picture of people huddled together.

* Ask students questions to help them contextualize the words. Ex: When would you need to hurry? When would you need to bury something? When you get together very close, are you gathering or huddling? When you rake leaves, do you gather or huddle them?

* Ask students “which would you do questions” Ex: Which would you do if you and your friends were cold and wanted to get warmer? (huddle or gather?) Which would you do if you were being chased by a shark in the water? (hurry or drift?) Which would you do if you were running in a race? (flutter or hurry?)

* Ask students to act out or demonstrate a word: Can you show me what it looks like when people huddle? Can you show me what it looks like when someone hurries?

* Closed Sentences: Toward the end of your work with these words, give the students sentences to complete using the words they’ve learned. Use new sentences or examples for students to complete, so that they are again deepening their understanding and ability to apply the word in many different contexts. Give them the word list and have them fill in the blanks. Examples (you can also create your own):

  - At the sleepover, because we were sharing lots of secrets, my friends and I were __________ together in one corner of the room (huddled).
After we washed the dishes, mom checked if they were clean by holding them under the kitchen light to see if they would __________ . (glisten)

To hide her embarrassment after making a mistake in class, Sarah __________ her head under her arms so no one would see her. (buried)

Before leaving for school, Jim __________ his school books from around the room and put them into his backpack. (gathered)

As she sang, her words __________ through the air and reached the ears of her fans in the audience. (drifted)

As the storm approached, the family had to __________ to find a safe place to stay dry. (hurry)

The bee __________ from one flower to another as it collected pollen. (fluttered)

**Word Wizard:** On a chart paper, list all the students’ names. Keep track of when they use the words, hear the words (on TV, in the street, at home), or read the words that you have introduced using tally marks. Explain that when they use the words over 10 times, they receive the title of Word Wizard.

In order to prove that they have used a word, they must explain the context in which they encountered the word, as well as the sentence they heard/read/used, or show you the writing in which they used the word. (Even if they didn’t really use the word at home, when they explain it, they are using the word, so you can still count it, as long as they use it correctly.)
Appendix D • Examples of Student Work

CAN OF WORDS
Number of words collected in one month (February 2007): 73 words

crisis
approached
multi-detonator
esquezit (exquisite)
trotter
craft
clan
exporting/export (x 3)
wool
boroughs (x 2)
tics
headquarters
stock exchange
congressional
myth (x 2)
jambo (jumbo?)
scarves
lungwor
fiber-optic
spire
remainder
media
beasting
discriminated
curtain
remarkable
nollage (knowledge)
Trafalgar Square
rattling
judicial branch
anti-security
explorer
catapulted

in termenate (entertainment? intermittent?)
bundle
prevention
vaccine
variable
straddled
ion limpet
decency
independently
sarcastic
cucumbers
gymnasium
astronomers
pluto
paralyzed
marinated
ethnic
fertile
journalism (x 2)
horizon (x 2)
nozzle
handbook
succession
isosceles
inprofe
convention
lopsided
scampered
acquaintance
determining
gargoyles
courtesy
Directions: Fill in the blank in each sentence using one of the words below. Each word is used only once.

glisten | buried | huddled | gathered | fluttered | drifted | hurry

1. At the sleepover, because we were sharing lots of secrets, my friends and I were __________ together in one corner of the room.

2. After we washed the dishes, mom checked if they were clean by holding them under the kitchen light to see if they would __________.

3. To hide her embarrassment after making a mistake in class, Sarah __________ her head under her arms so no one would see her.

4. Before leaving for school, Jim __________ his school books from around the room and put them into his backpack.

5. As she sang, her words __________ through the air and reached the ears of her fans in the audience.

6. As the storm approached, the family had to __________ to find a safe place to stay dry.

7. The bee __________ from one flower to another as it collected pollen.

Bonus: On the back of this paper, write a story using some of the words from this week. Be sure that the story makes sense and is interesting!
I began my career seven years ago as a middle school special education teacher at School of the Future (SOF). For the first four years of teaching, I felt as though I was doing good work. Even though there were many struggles, the successes seemed to far outweigh the failures. Two years ago, I decided to move up to the high school and work with eleventh and twelfth grade students. This year, I was fortunate to meet up with the students who I worked with throughout middle school, now juniors in the high school. Having the opportunity to work once again with the same students has given me a unique perspective on their growth and has led me to the question: How is the inclusion program meeting the needs of my students?

SOF is located in Gramercy in Manhattan. There are 632 students in classes of approximately 25 in this grade 6 through 12 progressive public school aligned with the Coalition of Essential Schools. The school is heterogeneous with regard to race, ethnicity, class, and academic achievement; 98% of students attend college or university. SOF is part of the New York Performance Standards Consortium, a group that advocates and practices assessment practices that serve as alternatives to high-stakes testing: Unlike most high schools students in New York City, our students are required to take only one Regents exam—English Language Arts. In lieu of other Regents exams, students take part in a rigorous exhibition process through which they complete an independent research project in every subject.

Classes in the middle school and the ninth and tenth grade are divided into four sections. Students travel with their section to content area classes. This year, the school decided to begin a new model for the Junior and Senior Institute: eleventh and twelfth graders were able to choose from a variety of different topics in English and history thus combining the grade levels; math and science classes stayed separate.

Fifteen to twenty students in each grade receive Special Education Teacher Support Services (SETSS), and each grade has one special education teacher who works with two to three sections per grade in content area classes. There are no more than eight
Individualized Education Plan (IEP) students in each section. SOF follows the “push-in” model, which enables a child to receive services within the regular classroom setting. To better meet the students’ needs, the SETSS teacher will sometimes work with a group of students in the hallway or in the classroom on content that is being considered in the general education classroom.

I am responsible for pushing into different content area classes according to a student’s IEP. I also meet with the content area teachers weekly in order to discuss students’ needs and differentiate the curriculum for them. In addition to SETSS, I am the Transition Coordinator. Some of my responsibilities include applying for SAT modifications, completing exit interviews with graduating seniors, and ensuring that students understand how to access support services once they leave secondary school.

When I began in the fall, there were a total of 19 SETSS students in the eleventh and twelfth grade in English, history, and math. Another staff member worked one quarter time as a SETSS teacher in the sciences. Thus, in the first semester, I worked with five teachers: two English teachers (four times a week), one history teacher (two times a week) and two math teachers (11th grade twice a week; 12th grade twice a week). Each time I work in classroom it is for a 45-50 minute block. By spring, two additional students had been evaluated and given services, so I was then responsible for 21 students. Having felt scattered and unproductive in the first semester, I decided to prioritize my second semester schedule by focusing only on English and math.

LITERATURE REVIEW

With the reauthorization of the 1997 Individuals with Disabilities Education Act (IDEA) in 2004 and No Child Left Behind (NCLB), there is a push towards making sure all students with disabilities, including learning disabilities, demonstrate success academically. In accordance with NCLB, special education students’ standardized test results are included in the data to determine a school’s Adequate Yearly Progress (AYP). In accordance with IDEA, students with learning disabilities must take part in the general education curriculum and standardized assessments (Morocco, Aguilar, Clay, Brigham, & Zigmond, 2006, p.138). Now more than ever, there is little room for error.

Inclusion programs that involve collaborative planning and teaching between general and special education teachers are increasingly used as the service delivery model for students with learning disabilities (McLesky, Henrey & Axelrod, 1999 as cited in Klingner and Vaughn, 2002). Most of the research on inclusion focuses on the benefits it provides for younger students. The degree to which learning-disabled students benefit from being placed in the general education classroom full time is still unclear and particularly so with regard to high school students (McLesky et al. 1999 as cited in Klingner and Vaughn, 2002).
Klingner and Vaughn’s study suggests that there was no differentiation of instruction for students who struggled the most (Klingner and Vaughn, 2002, p. 26). In part, the difficulty of knowing how to work with learning disabled high school students has to do with the fact that there is little research about these students: “Special education students have approximately twice the dropout rate of general education students” (Blackorby & Wagner, 1996; Thurlow, Sinclair & Johnson, 2002 as cited in Morocco et al. 2006, p. 139).

I focused a large portion of my research on the Good High School Project—a three-year study of high schools that showed positive results for their interventions with students with disabilities (Morocco, Cobb, Clay, Parker, Zigmond, 2006). According to the study, high school is a time when students need to strengthen their academic skills and special learning strategies, build competence and independence, develop strong and rewarding relationships, and prepare for transition from school to the work force and/or a post-secondary environment (Morocco, et al., p. 135). Thus, the best high school practices for students with disabilities include providing academic choice and an ensemble of academic support, connecting with and motivating students, building an adult community to work with students and developing responsive leaders (Morocco, et al., p. 138).

Higgins, Raskind, Goldberg, and Herman (2002) conducted a 20-year longitudinal study of 41 individuals with learning disabilities (LD) to try to “understand as fully as possible and describe the common life-span experiences of our students so that generalizations, implications and recommendations could be made for all persons with LD” (Higgins et al., p. 3). One of the key features of success for these students according to the study was self-awareness which the researchers describe as “the ability to develop an understanding of LD, develop comprehensive awareness of how LD impacts life, develop awareness of successful coping strategies to compensate for LD, and enhance general self-acceptance as well as acceptance of LD” (Higgins et al., p. 8).

Other indicators of academic success in college are self-determination and metacognition (Garcia & Pintrich, 1994 as cited in Trainin, Lee, 2005, p. 262). Metacognition is the ability to adjust behavioral and environmental functioning in response to changing academic demands (Zimmerman, 1986). Therefore, the role of the special educator is “to create accommodations and modifications that maintain the integrity of the lesson while addressing the unique learning needs of the student” (Fisher, Frey, & Thousand, 2003 as cited in Dukes and Dukes, 2005, p. 57).

TOOLS AND DATA

Critical Friends Groups

Critical Friends Groups (CFG) is SOF’s professional development. The groups meet
once a month for two and a half hours. Mine was an eclectic group of seven teachers representing different content areas, support positions, and grade levels. Each time we met, a different teacher presented a question. Various protocols for looking at student work were used to help us analyze our teaching. I presented three eleventh grade SETSS students; we looked at three years of their written work, progress reports, and transcripts (Appendix A).

**STUDENT 1** was diagnosed with a learning disability in elementary school. The student did not speak English at home and had no exposure to the English language until the first grade. Student 1 had trouble with language processing and perhaps had some language delays due to his limited exposure to English. His vocabulary was extremely weak, and he struggled with basic reading comprehension and writing. He used a laptop in the humanities for taking notes and writing assignments. He was an extremely motivated and hardworking student and did not believe that he had a learning disability because he had a 85%-90% average. Despite the fact that he failed the ELA Regents twice and did very poorly on the SAT, it was difficult to convince him to accept support and did not plan to do so in college. He was very respectful to staff members and kind to other students but he did not have a lot of friends and often ate lunch alone.

**STUDENT 2** was diagnosed with a learning disability in elementary school and had been at SOF since middle school. He had dysgraphia and struggled with organizing his thoughts and expanding his ideas. At home, he used a computer equipped with organizational software to complete written assignments. Over the year, his writing improved and he seemed to enjoy learning about current events. He did not often draw on the special education support. He was respectful to staff members, got along with students, and had a close social network.

**STUDENT 3** was also diagnosed with a learning disability in elementary school and had been at SOF since middle school. He had extremely strong critical thinking skills, verbal expression, and listening comprehension. He had dyslexia and struggled with reading, spelling, and writing, which he compensated for by memorizing sight words. Neither his interaction with print, which was labored, nor his writing reflected his high level of thinking. Though he seemed to think that everyone perceived him as “dumb,” he would not accept any academic support. He failed ninth grade humanities and was often at risk of failing other courses because he was unable to complete assignments. He was typically either late or absent from school. He had a lot of friends who formed a rebellious social network.

In the CFG, we used Meier’s five “habits of mind”—point of view, evidence, significance, alternative point of view, and connections—to frame our discussions of students’ writing. Following the habits of mind, we used writing to assess evidence, connections, and
alternative points of view. We measured growth by comparing writing samples, looking for development of structure, a decrease in grammatical and syntax errors, and a decreasing need for support.

**Teacher Questionnaire**

I surveyed 40 staff members regarding the strengths and weaknesses of SOF’s inclusion program (Appendix B) and 23 responded. The teachers surveyed had very little formal training in special education. Most of the teachers’ first exposure to special education had been through teaching in an inclusion classroom. Three teachers had taken one class in their graduate program and two teachers attended Mel Levine’s Schools Attuned workshop.

**Strengths included:**

✱ Weekly planning time during preps, lunch, or after school. These meetings enabled teachers to plan lessons with accommodations and to discuss students.

✱ The push-in of SETSS teachers into their class one to five times per week.

✱ Coaching from the SETSS staff, which helped them learn strategies, such as graphic organizers, as well as alternative methods of assessment.

✱ Equitable learning environment for all students, including those who do not have IEPs.

✱ Increased self-esteem among students.

✱ Greater class participation and on-task behavior by LD students.

✱ Better written papers.

**Weaknesses included:**

✱ Concern about slowed-down pace of the classroom.

✱ A need for a special education teacher in the classroom constantly.

✱ SETSS teachers are spread too thin.

✱ Not enough planning time for teachers to affectively modify lessons and provide appropriate accommodations for students.

✱ Not enough time to work one-on-one with severely disabled students.

✱ Not enough support to improve basic literacy and math skills.

✱ Resistance by some students to the support of special education teachers in the classroom with them.

The three special education teachers who completed the questionnaire felt that the success of the inclusion program is highly dependent on the strength of the content area teacher.

Table 1 lists teachers’ suggestions for changes to the inclusion program in four broad categories: curriculum, structure, support, and collaboration.
**Class Observations**

I wanted to look more deeply at three classes to keep track of the type of activities taking place when I was in the classroom. I choose one class where I felt my time was productive, one class where I sometimes felt productive, and one class where I was frustrated. I attended each of the classes two to four times per week for a period of approximately 45 minutes each. I kept a running record over a period of three weeks noting how much time was spent on group work, independent work, teacher-led discussions, student-led discussions, and lectures. I made a chart and divided it into 10-minute blocks and kept a tally of how much time was spent on each of the five activities (see Figures 1, 2, 3).

Class 1 had an almost even split among the different activities: 40% of class time was spent on teacher-led activities; 5% on student-led discussion; the remaining time was spent on class work, either in groups (25%) or independently (30%) (see Figure 1). Initially, I felt moderately successful in Class 1. However, as the year progressed, I began to feel more useful because the class structure shifted towards student-directed activities.

I felt the most successful in Class 2, where only 5% of class time was spent on lectures and 35% on group work. Twenty percent of class time was spent on student-led discussion and 20% on independent work (see Figure 2).

Class 3 spent less than a quarter of class time on student-led activities. It was the class in which I felt the least productive. I often spent my time standing in the back of the room listening to lectures (see Figure 3).

---

**Table 1: Staff Suggestions for Inclusion (n=23)**

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Structure</th>
<th>Support</th>
<th>Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocols to check in with comprehension of the IEP students</td>
<td>Collaborative Team Teaching</td>
<td>America Read tutors and senior students to act as tutors</td>
<td>Require assignments to be looked at by both content and special education teacher</td>
</tr>
<tr>
<td>Assessments that take into consideration different student needs</td>
<td>Focus SETSS time with students (1 on 1)</td>
<td>Books on tape/listening stations in class libraries</td>
<td>Teachers inform SETSS teachers of curriculum</td>
</tr>
<tr>
<td>More basic skills work</td>
<td>More SETSS teachers</td>
<td>Explicit strategy charts in the classroom</td>
<td>More consistent time to plan with SETSS teacher</td>
</tr>
<tr>
<td></td>
<td>More leveled grouping</td>
<td>Forced Small Group Instruction attendance</td>
<td></td>
</tr>
</tbody>
</table>
Student Survey

All 21 11th and 12th grade SETSS students completed a survey that I created based on questions that were used in surveys from the Good High School Project (Morocco et al. 2006) (see Appendix C).

In order to show the results of the survey, I broke down the questions into two categories: learning and school tone (see Figures 4 and 5). The majority of the students felt positive about school, believing that they were encouraged to work together and that they had the learning opportunities that they needed.
The students liked the school. They felt they had friends and teachers who cared about them. For them, school was a safe place.

**Figure 4 Learning (n=21)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree and Somewhat Agree</th>
<th>Disagree and Somewhat Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think school work is important</td>
<td>87%</td>
<td>5%</td>
</tr>
<tr>
<td>Students are encouraged to work together</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Students are encouraged to think not memorize</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Provides learning opportunities</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>School is not boring</td>
<td>68%</td>
<td>32%</td>
</tr>
</tbody>
</table>

**Figure 5 School Tone (n=21)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree and Somewhat Agree</th>
<th>Disagree and Somewhat Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel like I belong in this school</td>
<td>84%</td>
<td>15%</td>
</tr>
<tr>
<td>SOF is a safe place</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Teachers show respect for students</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Teachers show caring for students</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Teachers and staff respects me</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Teachers and staff care about me</td>
<td>92%</td>
<td>8%</td>
</tr>
</tbody>
</table>
**Questionnaire about Self-Awareness of Learning Disabilities**

Self-advocacy and self-understanding are large indicators of success for students with learning disabilities. As a result, I wanted to gain a better sense of my students’ thoughts on learning disabilities and how they connect that awareness to themselves as learners. I gave all of my SETSS students a questionnaire, and 14 out of 21 responded (see Appendix D).

Most students showed a rudimentary understanding of their own learning disabilities. They described their learning issues as follows:

- I can’t memorize formulas
- It is harder to pass tests
- I get headaches when I read
- I need extra help
- I retain information in a different way
- I use alternative learning styles
- Something is wrong with me
- I was told I did
- I have problems with visual and fine motor skills
- I need extra time to learn
- I retain information in a different way

Students described the support they received in school as:

- I get help after school
- Teachers come into the class to help
- I get extra time on tests
- I have Occupational Therapy and Speech Therapy
- I get one-on-one help
- I get help for reading and writing
- I discuss problems with a teacher

While the majority of students felt that they received extra help as needed, few requested support. Only five students claimed to have seen their IEP and to have participated in the annual review process. More than half of the students said that they planned to apply for support services in college (see Figure 6).
A Special Elective

I decided to take specific action by concentrating on a few elements of SOF’s inclusion program: For the second half of the year, I taught a small elective class focused on the academic needs not being addressed in the content area classes. I chose five students—three students with learning disabilities (including Student 1 and Student 3 from the CFG) and two whose parents had recently requested an evaluation. During the course of the class, one of the students was diagnosed to have a learning disability. I focused the class on self-advocacy, literacy, and basic writing skills.

Since all students were responsible for completing an exhibition, I decided to use the exhibitions to work on writing skills. I also experimented with grading and assessment; instead of adding up points using the typical categories of tests, quizzes, homework, and behavior, I focused on specific language arts standards, e.g., reading comprehension. I tried to be transparent about the specific skills or standards we were addressing so they could see exactly where they were successful and what they needed to work on.

Each student received a copy of Learning Outside the Lines, by two graduates from Brown University, as our primary text. The book is divided into three sections: the authors’ memoirs of growing up with learning disabilities, sections on specific literacy, and classroom strategies to achieve success.

The first class was rocky. The students felt targeted and singled out; they did not want this “special elective.” One student, who is often resistant, kept joking that this was the “retard room.” Because I was aware that students feel less targeted when not removed from class, I was prepared for the backlash and knew that it was important
for the students to express their anger and dissatisfaction. I gave them a list of famous people who had learning disabilities, and all of a sudden, the class tone changed.

Over the next few weeks, I read aloud the memoirs of the authors, focusing on reading comprehension strategies and self-advocacy. The students seemed engaged and connected to the text. They spoke about their terrifying experiences of the resource room in elementary school and their feelings of helplessness when staring at a page of jumbled-up words.

Each class began with a short writing activity that focused the students on basic writing, grammar, and syntax skills not covered in the general education classroom. They practiced writing complete and clear outlines for essays. By the end of the term, they successfully mastered the skill.

Students worked on their exhibitions by concentrating on research skills, thesis development, evidence, and the revision process. Three of the five students passed the exhibition: Student 1 from the CFG group was finally able to ask for help and received Mastery, his highest exhibition score ever; another student received the highest grade possible (Mastery with Distinction). Student 3 did not submit an exhibition paper. Another student handed in a paper but did not pass.

**The Annual Review Process**

Having discovered that most students had never seen their IEP or participated in their annual review, and knowing that self-awareness and self-advocacy are critical to success, I decided to make the students an integral part of the annual review process. Instead of sending an invitation only to parents, I also gave an invitation to students. This was my second action.

In order for students to become more familiar with the IEP, I had pre-conference meetings with them to discuss the previous year’s IEP. Then, during the IEP meeting that involved the parents, I made the student the focus of the meeting by first asking them how they felt they were doing academically and then asking for the input of others. I tried to follow a similar protocol when writing the student goals. If a student did not feel comfortable attending the annual review, we met after the IEP was completed. Together, we would discuss it, and I would make sure that s/he understood what was discussed.

**ANALYSIS**

Drawing on the data from the Critical Friends Group, the surveys, the special elective, and the pre-conference meetings, there seem to be some general lessons for our high school inclusion program. The first lesson comes from our study of student progress. It seems that when we look at Student 1 who had good grades but failed the ELA Regents twice, it was his participation in the special elective where he was
focused on writing skills and able to see the benefits of teacher support that he was able to do his best work ever. This is in keeping with Higgins et al. (2002), finding that self-awareness is extremely important for students with learning disabilities. If a student continues to receive high grades even when the work does not meet academic standards, the student is at risk of not recognizing his or her academic needs and will not build necessary metacognitive skills. It misleads students and parents. If a student has an 85% to 90% average, it is shocking when they are not able to pass the Regents or do very poorly on the SAT.

A second lesson comes from looking at Students 2 and 3. Student 2, with mild learning disabilities, benefited from SOF’s current inclusion model but Student 3, with severe learning disabilities, seemed to be beyond the scope of academic assistance available at SOF. According to The Good High School Project (Morroco et al., 2006) and Klingner and Vaughn (2002), most struggling students are not being taught at their instructional level—corroborating the SOF teachers’ suggestions that additional one-on-one time and more focused small-group instruction is necessary to meet the needs of certain students.

A third lesson has to do with student choice. In accordance with the Good High School Project (Morroco et al., 2006), successful programs for students with learning disabilities provide academic choices for students. The SOF experiment, offering different electives in the humanities, seems to have created “buy in” and led to an increase in motivation on the part of the learning-disabled students.

A fourth lesson has to do with teacher perceptions of special education and inclusion. Like many other teachers (McLesky et al. 1999 as cited in Klingner and Vaughn, 2002), most teachers at SOF believe that they need more help and more training for working with special education students in this environment. They want an increase of one-on-one time with the students. However, on a positive note, teachers and students believe that the inclusion program provides an equitable learning environment and helps student self-esteem. This is in keeping with the findings of Morroco et al. (2006), who claim that self-acceptance and a strong support system are necessary elements to create strong high schools for learning-disabled students.

A fifth lesson has to do with providing role models for learning-disabled students in order gain confidence and create goals for their future. According to the Good High School Project, this is an important element that creates successful program for students with learning disabilities (Morrocco et al. 2006). Students in the elective class were shocked and delighted to read about successful people with learning disabilities, and this understanding seemed to motivate them.

There are lessons here for special education teachers, too. Like the teacher in the Klingner and Vaughn study (2002), I discovered that I was most effective in the classrooms
that spent a significant amount of time on group work (see Figure 2). In student-centered classrooms, I did not have to single out students to work with them. The class that I was most frustrated with spent 40% of class time on lectures (see Figure 3). It was very frustrating, when my time was so limited, to stand in the back of the class during a lecture instead of actually supporting the students. In this same classroom, the remaining class time was spent completing independent work. Although this gave me the much needed one-on-one time, it also meant that when I was in the class I was forced to specifically target a student by sitting directly next to him or her, often causing feelings of self-consciousness and resentment.

Another lesson for special educators has to do with how little involvement and understanding students had of their IEPs (see Figure 6). For 11th and 12th graders, playing an active role in this process is essential for their futures. In order to receive support in college, students must advocate for themselves, as IDEA only protects them until the completion of high school. In order to continue receiving support in college, students are required to go to the disabilities office on campus to request services. They must be able to communicate their needs to both advisors as well as professors. Students must gain a strong understanding of the documents and laws that protect them. The more they understand about learning disabilities, the more power they have.

**POLICY RECOMMENDATIONS**

1. **Give students a specific role in developing the IEP**
   The IEP is a legal document required for all students who receive special education services in public schools. Students should be central in creating this document. Students are successful when they are self-aware and are self-advocates. The IEP process should support the development of these skills.

2. **Provide professional development to help teachers work effectively with special education students**
   For schools to meet AYP, they must include special education students. That means for teachers to be considered “highly qualified,” according to NCLB guidelines, they should be able to provide the appropriate education for all learners in the classroom.

3. **Hire faculty who have experience working with inclusion models**
   Teachers cannot be expected to automatically understand how to effectively teach in an inclusion classroom. Hiring committees must commit to hiring teachers who have prior experience or training with special education students.

4. **Provide faculty with sufficient time for planning**
   In order for inclusion to be successful, teachers need to be able to plan together
to maximize the time spent together in the classroom and create effective modifications for students. By extending the school day four times a week, students could be dismissed early one afternoon per week and use the additional time for such meetings.

5 Provide students with sufficient time for one-on-one skill development without missing content area classes
Special education students are often behind in basic skills and tend do well with one-on-one training. Students need to be provided with electives, special morning classes, and small group instruction that do not interfere with important class time. Schools should also develop volunteer programs with partnering organizations as well as peer tutoring programs to increase the amount of individual attention special education students receive.

6 Create reports that clearly communicate student’s progress and abilities
Students need to a have clear picture of their academic progress. By rewarding students for strong work habits, students do not walk away with a realistic understanding of their academic abilities. Schools need to separate work habits from the students’ academic achievement and skill development. In order to ensure student success, learning-disabled students need self-awareness and metacognition.

7 Create mentor programs for students with learning disabilities
It is extremely important for students with learning disabilities to be exposed and connected to people who have had similar experiences, who have overcome challenges and are leading successful lives.

8 Provide academic choice in high school
The more engaged students are, the more motivated they will be. Allowing students to choose different classes based on interest will cause an increase in effort and will create a more positive and engaging learning environment.

REFERENCES


### Appendix A

Slice / Learning from Student Work

CFG’s

Monday, November 27, 2006

Cara has been trying to answer a bigger question about whether the inclusion program at SOF is successful. For the CFG we have narrowed it down to look at three senior institute students to see if their writing has improved since they have been at SOF.

1. Connections (5 minutes)
2. Cara will present her dilemma (5 minutes)
3. In your journals write down what growth in student writing might look like. Share (5-7 minutes)
4. Look at the student work. What do you see? Using the Habits of Mind as the skills we are teaching, look for growth in the student work. Take notes (20 minutes)
5. What do you see? What does it mean? Notes taken on flip chart (25 minutes)
6. Open Discussion: From looking at the student work, what are the strengths and weaknesses of the inclusion program at SOF in terms of teaching writing? (20 minutes)
Appendix B

1. What does inclusion look like at SOF?
2. How do you feel about our inclusion program?
3. What successes have you had with IEP students because of our inclusion program?
4. What successes have you had with non-IEP students because of our inclusion program?
5. What failures have you had with IEP students because of our inclusion program?
6. What failures have you had with non-IEP students because of our inclusion program?
7. If you could make changes to the way we run our inclusion program in order to meet students’ needs, what would they be?
8. What training or background do you have in special education (school classes, experience teaching, etc.)?

Appendix C

1. totally disagree | 2. somewhat disagree | 3. somewhat agree | 4. totally agree

1. SOF is a safe place.
2. Teachers show respect for students.
3. Teachers show caring for students.
4. I feel safe at school.
5. This school provides learning opportunities.
6. School is not boring.
7. Teachers and staff respect me.
8. Teachers and other staff at school care about me.
9. I feel like I belong in this school.
10. I get the extra help in school I need.
11. I think schoolwork is important.
12. Students are encouraged to work together.
13. Students are encouraged to think not memorize.
Appendix D

1. Do you know what a learning disability is?
2. Explain what you think a learning disability is.
3. Do you think that you have a learning disability? Why or why not?
4. Do you receive extra help at school?
5. Explain the kind of help you get.
6. Do you ask for help when you need it?
7. What is an IEP (individualized education plan)?
8. Have you ever seen your IEP?
9. If so, what is on it?
10. Have you ever participated in the annual review (meeting where the IEP is discussed)?
11. If yes, what was it like?
12. Will you try to get support when you go to college? Why or why not?
Teachers Network Leadership Institute (TNLI)—an initiative comprising 14 affiliates nationwide and hundreds of teacher leaders—was established in 1996 by Teachers Network to connect education policy with actual classroom practice to improve student achievement. TNLI MetLife Fellows—teachers with full-time classroom teaching responsibilities—conduct action research studies in their classrooms and schools, develop policy recommendations based on their findings, and document and disseminate their work locally and nationally. To get the word out, fellows join task forces; present to school districts and school boards; participate in major conferences; and serve on local, state, and national advisory councils.

TNLI affiliates include: Chicago (IL); Fairfax County (VA); Gainesville (FL); Mason (VA); Miami/The Ed Fund (FL); Milwaukee (WI); New York City (NY); Sacramento (CA); Los Angeles (CA); Santa Barbara County (CA); San Francisco (CA); State of Delaware; State of Kentucky; and State of Wyoming. TNLI works in partnership with New York University Steinhardt School of Culture, Education and Human Development. Major funding for TNLI is provided by MetLife Foundation. Additional funding is provided by New York Community Trust and the Spencer Foundation.

TNLI is an initiative of Teachers Network, a non-profit organization—by teachers, for teachers—with a 27-year track record of success, dedicated to improving student learning in public schools. Using the power of our award-winning website, video, and print resources, we leverage the creativity and expertise of a national and international community of outstanding educators. Teachers Network is unique in its focus on the teacher as key to improving student achievement in public schools. Through its leadership, Teachers Network empowers teachers to transform public schools into creative learning communities so every student will succeed and contribute to the public good. Over the years, we have directly impacted over 1.5 million teachers and nearly 40 million students.

For more information about Teachers Network, see:  
www.teachersnetwork.org
The purpose of this book is to provide a sampling from over 120 action research studies conducted by teacher leaders nationwide. MetLife Fellows—full-time classroom teachers—in the Teachers Network Leadership Institute (TNLI) conduct these studies in their classrooms and schools to better understand the connections among practice, research, policy, and student achievement. Fellows then use their findings for two purposes: first, to improve their own practice or to support change in their schools; second, to generate specific policy recommendations—in order to ensure that policy is more in sync with the reality of classroom practice. The fellows’ recommendations are influencing policy at all levels—school, district, state, and federal. When policy is informed by teacher research and teacher voice, then our nation’s schools can provide our students with the best possible education.

You can find all TNLI action research studies to date at www.teachersnetwork.org/tnli. We also invite you to join us in this work. For more information, contact us at info@teachersnetwork.org.

EDITED BY
Ellen Meyers, Director, Teachers Network Leadership Institute
Frances Rust, Dean of Faculty, Erickson Institute
Peter Paul, National Coordinator, Teachers Network Leadership Institute

DESIGNED BY
Heidi Fener

PHOTOGRAPHY BY
Kristine Larsen
TNLI Fellows featured in the photos:
Jennifer Lindauer-Thompson
Christopher Peyser
Shahzia Pirani-Mellstrom
Sara Ridge
Carmen Robles

Made possible by a grant from the Spencer Foundation.
THE MISSING LINK
CONNECTING TEACHER RESEARCH, PRACTICE & POLICY
TO IMPROVE STUDENT LEARNING

By METLIFE FELLOWS in the TEACHERS NETWORK LEADERSHIP INSTITUTE

This book has been funded by a grant from Spencer Foundation

teachersnetwork.org
285 West Broadway, Suite 200
New York, NY 10013
212.966.5582
info@teachersnetwork.org
www.teachersnetwork.org