Capital High Academy for Ninth Graders Exceeding Standards (CHANGES):

Description and Evaluation of the 2004-2005 Implementation

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December 2005

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CONTENTS

CONTENTS (continued)

CONTENTS (continued)

APPENDIXES
    A: CHANGES Teacher Implementation Log
    B: CHANGES Counselor Implementation Log
    C: Parental Consent Information and Form
    D: Interview Protocol for Faculty Interviews
    E: Administration Instructions for Student Instruments
    F: Student Assent Information
    G: Evaluation Standards Checklist

LIST OF TABLES

LIST OF FIGURES

SECTION 1: INTRODUCTION AND LITERATURE REVIEW

The Transition from Middle School to High School

Although transitioning from school to school can be challenging at any level, the transition to high school may be particularly fraught with challenge because students are experiencing a change in schools as well as the physical, emotional, and psychological changes inherent to adolescence.

Educators and researchers agree that ninth grade is a pivotal year for students. It is typically the year that marks the transition into high school and plays a crucial role in setting the stage for future educational outcomes. Success or failure during the freshman year of high school is directly linked to the probability that a student will drop out before graduation (Legters, 2005). Neild, Stoner-Eby, and Furstenberg (2001) demonstrated that student outcomes in the ninth grade contribute substantially to the researchers' ability to predict whether or not a student would drop out of high school, over and above student background variables such as family and peer relationships.

What Happens?

Legters (2005) states that freshmen often comprise the largest class in high schools because many of them fail to earn sufficient credits to be promoted to the next grade level. Several researchers have described significant negative outcomes after the transition into the ninth grade, such as a decline in grades and grade point average, decreases in attendance, and declining participation in extracurricular activities (Isakson & Jarvis, 1999; Neild & Weiss, 1999; Reyes, Gillock, Kobus, & Sanchez, 2000; Newman, Myers, Newman, Lohman, & Smith, 2000). Some students may also develop lower self-esteem and a decreased sense of belonging to their school. These outcomes can combine to create feelings of alienation and helplessness in students, thereby decreasing their motivation to achieve and increasing the likelihood that they may fail and eventually drop out.

Not all changes are negative. The transition to high school can have positive impacts as well. Some students are very excited about becoming high schoolers and look forward to the new chapter in their lives (Mizelle, 2005). Weiss and Bearman (2004) also contend that the ninth-grade transition can be beneficial for some students, providing a fresh start and allowing students to start over in a new school with a clean slate. Most of the literature on the middle school to high school transition, however, focuses on the potentially negative effects of the move to ninth grade.

Reasons the Transition May Be So Difficult

Educators and researchers have offered many thoughts and theories about why the transition to high school may be so challenging for new freshmen. High schools are often very

different from middle schools in terms of size, social structure, and academic environment. In the ninth grade, students typically face a larger school with more students and more teachers and also more diversity (Kerr, 2002). The larger school size often equates to a more impersonal environment with greater anonymity for students who have less personal contact with their teachers (Blyth, Simmons, & Carlton-Ford, 1983; Mizelle, 2005; Roderick, 1993). Because the transition generally involves moving to a new building, new ninth graders also have to learn to navigate through unfamiliar surroundings. Transitioning to a new high school also inherently involves acclimation to a new social environment and structure and becoming acquainted with new peers (Mizelle, 2005). Eighth-grade students become accustomed to being the oldest, most experienced students in the school; as freshmen, however, they are the youngest and most inexperienced students. Some students may even experience what Newman and colleagues (2000) call "role loss," a phenomenon where students are no longer the best athlete or smartest student. The sudden changes in social status and role can be stressful for ninth graders. These environmental and social changes can often exacerbate feelings of isolation or anonymity and inadvertently encourage disengagement and decreased sense of belonging to the school (Simmons & Blyth, 1987; Blyth, Simmons, & Carlton-Ford, 1983; Roderick, 1993; Kerr, 2002).

The academic environment in high schools is also very different from the environment students experience in middle school. High schools are more competitive and comparative, and grades become much more important (Eccles, Midgley, & Adler, 1984). High schools are more likely than middle schools to use ability levels to assign students to tracks, and there is typically a greater degree of departmentalization (Roderick, 1993, 1995). Teachers expect more from their students and may assign more homework than students had assigned to them in middle school. High school curricula are more challenging than middle school curricula, and students are given much more responsibility for making a variety of choices that will likely impact their future in important ways (e.g., course selection, extracurricular activities) (Mizelle, 2005).

Despite the greater academic challenges ninth graders face, they are more likely than upperclass students to have inexperienced or uncertified teachers (Neild & Farley, 2005). Thus, freshmen do not have the benefit of experienced teachers to guide them successfully though the transition. Additionally, many freshmen need instruction in basic skills (e.g., time management, study skills). Many high school teachers, however, are not prepared or able to teach such skills and may take a "sink or swim" attitude to student success. Combining these issues with the fact that some students do not have access to various family resources and social support can create a difficult transition environment for new freshmen.

SECTION 2: CAPITAL HIGH ACADEMY FOR NINTH GRADERS EXCEEDING STANDARDS (CHANGES)

Description of the Academy Initiative

In the spring of 2004, administrators and school leaders at Capital High School (CHS) in Kanawha County, West Virginia, began planning for a small learning community (SLC) within the school to help new freshmen successfully navigate the middle school to high school transition. CHS administrators decided to undertake the effort after reviewing literature and examining data suggesting that new freshmen often struggle to do well during their transition to high school. They were concerned that CHS freshmen were struggling, as evidenced by the fact that during the 2002-2003 school year, 42% of CHS's 288 ninth graders were reading below the 50th percentile, according to standardized test scores. Funding for the SLC effort was secured from Kanawha County School District (KCSD) for implementation beginning in the fall semester of 2004.

The new initiative was called Capital High Academy for Ninth Graders Exceeding Standards, or CHANGES for short. CHANGES was a school-within-a-school and incorporated special scheduling, embedded study skills, research-based instructional and classroom management strategies, and culturally responsive teaching and schooling practices. Details are provided below. The central aim of CHANGES was to accelerate student achievement and increase the pass rate of ninth graders. The goals of CHANGES were to (1) increase the pass rate for ninth-grade students and courses at CHS, (2) increase the number of low-achieving students enrolling in both honors and/or Advanced Placement (AP) courses during their junior and senior years, and (3) increase the number of students with baseline test scores in the 35th to 49th percentile range who may select the *Professional Pathway.* The primary goal (the first listed above) was the only goal to focus on performance during the students' freshman year; the others are long-term goals for student success throughout their high school careers.

During the summer and early weeks of the fall semester of 2004, CHS faculty and staff members participating in the CHANGES initiative selected new freshmen to become CHANGES (alternately called the "Academy") students. For the most part, students were selected based on their performance on the West Virginia Educational Standards Test (WESTEST) during their eighth-grade year. Students whose scores fell between the 35th and 49th percentile were eligible for selection, although those percentile boundaries were broadened in order to reach the desired goal of selecting 60–75 Academy students. Other criteria, such as grade point average (GPA), may also have been used to select students into the Academy and reach the desired population goal. During the selection process, efforts were made to ensure that the student population of the Academy reflected the ethnic diversity of the broader student population of CHS. Parents of the CHANGES students were sent letters informing them that their children had been selected to participate in this new effort. Parents did have the opportunity to withdraw their students from the Academy at any time, although very few elected to do so. Ultimately, approximately 70 students were enrolled in the Academy, although some of those students were removed from the program for various reasons (e.g., transfers, parental choice, suspension).

Academy faculty were selected from among the current faculty at CHS because of their previous performance at CHS and on the basis of the following factors: a strong desire to work with challenging students, willingness to participate in professional development, and demonstrated knowledge of and competency in culturally relevant instructional strategies. The selected faculty members had a broad range of experience, having served as teachers from 2 to 35 years; their length of service at CHS also ranged greatly from 2 to 15 years. During the summer of 2004, Academy faculty received special professional development to enhance and refine their skills related to such topics as culturally responsive instructional strategies, assertive discipline, classroom management, and various technology-related skills. School district officials felt that these teachers should have extra support for learning to use instructional strategies that might be especially helpful with the population of students that would comprise the Academy. In general, one faculty member attended the training and disseminated the training to other Academy teachers. The teachers arranged for common planning time throughout the school year so they could continue to engage in professional development and planning activities. Academy teachers were also allowed to purchase a limited number of additional student materials (e.g., manipulatives, whiteboards) to aid instruction. Academy faculty and staff attempted to communicate and work directly with parents to inform them of Academy activities and to encourage them to influence their children to stay in the Academy and stay focused on academics.

The Academy was structured as a school-within-a-school. The initial structure of CHANGES included an administrator, a counselor, five teachers, and another teacher who was to provide support and professional guidance to CHANGES classroom teachers. However, early in the school year, the Academy administrator left the school for administrative reasons, and Academy administrative duties were assumed by the teacher who was initially to provide support and guidance. This teacher did not teach an Academy class but did participate in the planning of the initiative; she assumed administrative duties in addition to her regular teaching responsibilities at CHS. Midway through the year, a retired vice principal was assigned to the Academy to help perform some of the administrative and discipline-related functions. The vice principal worked only part time (i.e., three days a week) because of state regulations limiting the number of days retired educators can work in school systems. Five CHS faculty members taught Academy classes in five subjects: Algebra/Geometry Prep, Coordinated and Thematic Science – Nine (CATS9), history, English, and reading. Additionally, study skills were embedded in the Academy curriculum and in the form of special instruction during homeroom. All CHANGES classrooms were located in one wing of the high school. The counselor who participated in the CHANGES initiative worked in an office located in the area of the school set aside for CHANGES classrooms.

The CHANGES initiative incorporated a special bell schedule different from that used at CHS. In the high school, classes were 49 minutes long, with a 20-minute current events miniclass/homeroom period and a 10-minute break scheduled in the middle of the morning. In the Academy, students attended alternating 30-minute classes and 70-minute lab periods, with a 10-minute break and a 20-minute homeroom period scheduled in the morning. During fifth, sixth, and seventh periods, Academy students attended classes in the regular high school population. They returned to CHANGES classes for eighth period, which was designed to be an

elective class and/or Intro to Majors. Initially, the homeroom period was scheduled at the end of the morning before lunch. Based on their experiences in the first semester, however, administrators and faculty decided to align the homeroom period during the second semester more closely with that of the regular school population thinking that doing so would lead to improvements in behaviors and attitudes of the Academy students. Therefore, homeroom was moved to mid-morning and was followed by the 10-minute break. The second semester bell schedule for the Academy is presented in Table 1, and the bell schedule for CHS in general is presented in Table 2. Movement from class to class in the Academy depended on teachers' and students' ability to abide by the established schedule; there were no bells to mark the beginning or end of class periods.

Table 1: CHANGES Bell Schedule (Second Semester)

Period	Type	Time	Minutes
1st Period	Lab	7:35 – 8:45	70
2nd Period	Class	8:50 – 9:20	30
Homeroom	Homeroom	9:25 – 9:45	20
Break	Break	9:45 – 10:00	15
3rd Period	Lab	10:00 – 11:10	70
4th Period	Class	11:15 – 11:45	30
Lunch A	Lunch	11:45 – 12:20	35
5th Period	Class	11:51 – 12:40	49
Lunch B	Lunch	12:40 – 1:15	35
6th Period	Class	12:26 – 1:15	49
7th Period	Class	1:21 – 2:10	49
8th Period	Team Elective	2:16 – 3:05	49

Table 2: Capital High School Regular Bell Schedule

Period	Type	Time	Minutes
1st Period	Class	7:35 – 8:24	49
2nd Period	Class	8:30 – 9:19	49
Current Events	Miniclass	9:25 – 9:45	20
Break	Break	9:45 – 10:01	16
3rd Period	Class	10:01 – 10:50	49
4th Period	Class	10:56 – 11:45	49
Lunch A	Lunch	11:45 – 12:20	35
5th Period	Class	11:51 – 12:40	49
Lunch B	Lunch	12:40 – 1:15	35
6th Period	Class	12:26 – 1:15	49
7th Period	Class	1:21 – 2:10	49
8th Period	Class	2:16 – 3:05	49

Another feature of the Academy schedule was alternating A-schedule and B-schedule days. The order in which students attended classes varied according to whether the day was designated as an "A" day or a "B" day. On an "A" day, students might attend their 30-minute history class first, then attend their 70-minute science lab; on the following day (a "B" day), students would attend their 30-minute science class during first period and then attend their 70-minute history lab session during second period. Typically, Wednesdays were exempt from designation as "A" or "B" days because clubs were convened on Wednesdays. Academy students followed the regular school bell schedule on those days. Academy students also followed the regular school bell schedule on other days designated by the school as Staff Meeting Days (SMDs). See Table 3 for the CHS SMD bell schedule.

Table 3: Capital High School Staff Meeting Day Schedule

Period	Type	Time	Minutes
Movement Bell	Bell	8:15	*na*
Homeroom	Homeroom	8:22-8:42	20
1st period	Class	8:48-9:31	43
2nd period	Class	9:37-10:20	43
3rd period	Class	10:26-11:09	43
4th period	Class	11:15-11:58	43
Lunch A	Lunch	12:53-1:27	34
5th period	Class	12:04-12:47	43
Lunch B	Lunch	12:04-12:38	34
6th period	Class	12:44-1:27	43
7th period	Class	1:33-2:16	43
8th period	Class	2:22-3:05	43

Evaluating the CHANGES Program

Purpose of the Study

KCSD and CHS administrators decided to collaborate with an independent third party, the regional educational laboratory at Edvantia, Inc. (hereafter, the "lab" or "laboratory"), to study the implementation of CHANGES. CHANGES and CHS officials set for themselves the goals of determining what effect, if any, participation in the Academy had on students' course passage rates, GPAs, and standardized test scores. Laboratory staff, therefore, examined other aspects of the Academy initiative. The focus of study was limited to the implementation of CHANGES; questions of impact or effectiveness were not addressed by the study described in this report.

First, because the specific classroom structures, activities, and practices were not clearly defined by CHANGES and CHS officials at the start of the 2004-2005 school year, laboratory

evaluators proposed to document the strategies, processes, and activities used in the Academy. In order for other findings to be meaningful, the instructional strategies, classroom management practices, and so on must be documented and described and the intervention defined. The second goal of the evaluation was to determine what differences in instruction, if any, exist between Academy faculty and regular faculty at Capital High School. This evaluation objective was important because Academy faculty intended to employ instructional strategies that differed from those typically used by CHS faculty. Finally, because CHS administrators and faculty were to examine academic student outcomes, lab evaluators chose to examine student outcomes related to perceptions and attitudes. Thus, the third goal of the evaluation was to determine what effect, if any, participation in the Academy had on students' perceptions, attitudes, and skills.

Audience for this report. The primary audience for this evaluation report consists of CHS and KCSD administrators and personnel who are charged with overseeing and administering programs like CHANGES. Further, CHS faculty and administrators who participated as CHANGES staff during the 2004-2005 school year, or those who may participate in CHANGES or similar initiatives in the future, are an important audience for this report. The results reported herein may be useful for informing and improving future implementations of ninth-grade academies at Capital High. Because this project was funded through the Appalachia Education Laboratory at Edvantia, another key audience consists of the Institute of Education Sciences (IES) and other U.S. Department of Education officials who support regional educational laboratory work.

Evaluation Questions and Design

The following primary evaluation questions guided the effort:

- What instructional strategies and processes are employed in Academy classrooms?
- What differences in instructional strategies, format, and substance exist between the practices of Academy faculty and regular faculty?
- What are the effects of participation in the Academy on students' perceptions of the academic climate of the school; perceptions of their own academic efficacy; attitudes toward school, teachers, and self; perceptions of familial academic support and nurturance; and acquisition of various skills?

These questions provided the structure for the lab evaluation of aspects of the Academy. In addition, they allowed project staff to examine issues both of process and outcome. Administrators at Capital High School selected three indicators of success for the primary goal of the Academy: course passage rates, students' GPAs, and standardized test scores. CHS staff and administrators collected data relevant to these indicators. Laboratory staff agreed to collaborate with school staff and administrators to analyze and interpret success indicator data for Academy and control students. At the time this report was drafted, CHS staff had not requested assistance from lab evaluators in examining or interpreting student academic outcomes.

Evaluation design. The evaluation incorporated a quasi-experimental design that included two components: one focusing on Academy and control group students and one

focusing on Academy and regular classroom teaching strategies. The student-focused component was designed to incorporate a pre/post design in which target students were to be compared with a control group. However, because CHS and Edvantia staff had tremendous difficulty collecting signed parental consent forms from Academy and control group students, the design was modified (see Appendix C for parental consent forms). The final student-focused evaluation design was a posttest only comparison of Academy and control students. As a result of the change in the evaluation design and due to CHS officials' decision to administer a standardized achievement test (discussed below), the final evaluation question was modified:

- What differences, if any, exist between Academy and control students' perceptions of the academic climate of the school; perceptions of their own academic efficacy; attitudes toward school, teachers, and self; perceptions of familial academic support and nurturance; and perceptions of leadership qualities?

The modification was made because the original question sought to examine attitudes and perceptions with pre/post analyses. The design change made those analyses impossible. Thus, the posttest only design relied on the control students to serve as the counterfactual.

Because Academy students were selected for participation by CHS staff, Edvantia staff selected a group of students, matched as closely as possible on relevant characteristics, to serve as the control group. Academy and control students were surveyed using various Edvantia instruments at the end of their ninth-grade year at Capital High School. Initially, the evaluation design called for students to complete three paper-and-pencil instruments: the Measure of Academic Supportiveness and Climate (MASC), which assesses students' perceptions of their school and family support for academic endeavors; the Student Attitudes toward Self and School (SASS) instrument, which assesses students' attitudes; and the Student Skills Inventory (SSI), which measures students' acquisition of various academic skills. During negotiations with CHS officials, however, Edvantia staff learned that CHANGES faculty planned to administer the Terra Nova, a standardized achievement test. Because collection of SSI data would have duplicated the data collection efforts of CHS, Edvantia evaluation staff decided to eliminate that instrument from the design and thereby reduce the paperwork and response burden of the student participants. Thus, the final student design can be depicted in the following manner:

	2004-2005 School Year	**Spring 2005**
Academy Students	X	O_A O_B
Control Students		O_A O_B

O_A = MASC O_B = SASS
X = Participation in the Academy

The teaching-focused component consisted of systematic classroom observations. Because Academy faculty received some of their professional development during the summer before the start of school and because the Academy was implemented at the start of the 2004-2005 school year, Edvantia researchers were unable to collect any "pure" pre-treatment data regarding classroom strategies used by faculty. Classroom observation data were collected and reviewed throughout the year to assess instruction by Academy and regular faculty (i.e., non-

Academy faculty who served as the teacher control group). This time series design can be depicted as

	Summer 2004	Fall 2004		Winter 2004/2005		Spring 2005
Academy Teachers	X_{PD}	O_1	X_A	O_2	X_A	O_3
Control Teachers		O_1		O_2		O_3

X_{PD} = Professional Development X_A = Implementation of the Academy
O = Classroom Observations

Additionally, Academy faculty completed implementation logs to describe strategies, activities, and events employed in the Academy classrooms. These implementation logs were reviewed to provide a clearer understanding of the processes of the Academy and to aid in the interpretation of quantitative findings. To add richness and depth to the findings of the evaluation and to further explore the context and implementation of the Academy, in-depth interviews were conducted with CHANGES faculty during the summer of 2005.

SECTION 3: EVALUATION METHODS

Samples

The evaluation design and evaluation goals called for comparisons between the Academy and regular CHS classrooms, both in terms of student attitudinal outcomes and in terms of teaching strategies and classroom processes. Therefore, Edvantia staff devised a plan for selecting a sample of non-Academy ninth-grade students, matched as closely as possible to Academy ninth-grade students on relevant variables, to serve as a control group. In order to compare teaching strategies, classrooms in which control group students were enrolled were selected as control classrooms.

Student Samples

All students selected by the administration at CHS to participate in the Academy composed the treatment group. As mentioned previously, new freshmen students were selected to participate in the Academy on the basis of their eighth-grade achievement test scores, which were mostly in the lowest two quartiles, and grade point averages. Lab evaluators received the first list of Academy participants in mid-September 2004 and received the final list of students selected into the Academy in early October 2004. Approximately 70 students were initially enrolled in the Academy; by the end of the 2004-2005 school year, however, Academy enrollment was 61 students. Lab evaluators received signed parental consent forms for 56 Academy students whose parents agreed that they could participate in the study.

A sample of students was selected to serve as a control group. In collaboration with the counselors and administrators at CHS and KCSD, Edvantia evaluators received a list of all new freshmen students (by student identification number) not selected for participation in the Academy. Through a matching process, control group students were selected based on how closely they resembled Academy participants on the basis of ethnicity, gender, middle school attended, and middle school achievement test scores. Every attempt was made to match control students to Academy students as closely as possible with regard to achievement test scores in order to reduce variance between the groups. The process was iterative and required three rounds of matching. There were problems with the initial matched sample submitted to CHANGES staff in late September 2004. It included the ID numbers of students who had been selected into the Academy after the initial list of participants had been received by lab evaluators; also, some of the students listed were not enrolled at CHS. The second sample included similar issues. The final sample of control students' ID numbers was submitted to CHANGES staff in early October 2004, and the names of those students were returned to Edvantia staff in mid-November 2004. It was not possible in all cases to achieve an exact match; the resulting control sample tended to have slightly higher levels of performance on the WESTEST. However, other characteristics (e.g., gender, ethnicity) were similar across the two student samples. Only 15 consent forms were received from the 65 students who ultimately were selected into the control sample. Researchers acknowledge that those students whose parents gave consent for participation in the control

group (*n* = 15) may have differed from their counterparts whose parents did not give consent for them to participate in the study.

Because there were an unequal number of students in the Academy and control groups who were eligible to participate in the data collection (i.e., had signed parental consent), evaluators selected a subsample of CHANGES students for comparative analyses. Evaluators wanted to achieve samples that matched as closely as possible in terms of student demographic characteristics. Therefore, when comparative analyses on the student instruments were performed, data for CHANGES students who shared similar characteristics with the control students were used. Data for other Academy students not selected into the subsample were not included in the analyses.

Classroom Samples

Academy teachers were selected to serve in that capacity by the administration at CHS. All five of the teachers were women and White, and each one taught a different core curriculum subject (mentioned previously). All five teachers' classrooms served as the treatment sample for the examination of strategies, processes, and activities used in the Academy classrooms. In order to select a control sample of classrooms, evaluators drew on the sample of control students. The evaluators, in coordination with CHS staff, collected the class rosters for the core curriculum classes in which control group students were enrolled. From these rosters, the evaluators selected one control classroom per subject (e.g., English, science). This method of control classroom selection was employed to enable the comparison of Academy teaching strategies with the teaching strategies being used to instruct the control group students. Five control classrooms, one per subject area, were selected to serve as the control classroom sample for classroom observations and instructional comparisons.

Instruments

Implementation Logs

The laboratory evaluators collaborated with Academy faculty to gather data about treatment implementation and Academy activities. Prior to the start of the 2004-2005 school year, the evaluators consulted with Academy administrators and teachers to design a structured activity log to be used by Academy teachers for documenting events, activities, instructional strategies, discipline issues, and other happenings in Academy classrooms. Logs were designed for weekly entries and included a reflective component that allowed teachers to reflect on which strategies worked best, which strategies did not work, and possible alternative strategies for the future. Likewise, because the Academy initiative employed a counselor to work specifically with CHANGES students, laboratory staff collaborated with the counselor to design a counselor's log. The weekly counselor's log included documentation of the number of students counseled, the number of parents contacted, reasons students sought or were referred for counseling, and referrals made by the counselor. The implementation logs were designed collaboratively so that

they would be useful both to evaluators and to Academy staff who wanted to use the logs as part of professional development discussions during planning and professional development sessions. These implementation logs were reviewed to provide a clearer understanding of the processes of the Academy and to aid in the interpretation of quantitative findings. See Appendixes A and B for copies of the teachers' implementation log and the counselor's implementation log, respectively. Control group teachers did not keep logs; however, intensive classroom observations provided systematic evidence of the classroom behaviors of both groups of teachers.

Special Strategies Observation System-Revised

Evaluators used the Special Strategies Observation System-Revised (SSOS-R) to collect systematic classroom behavior data for Academy and control classrooms three times during the 2004-2005 school year. This system, composed of four instruments, is designed for use in a variety of settings to systematically collect data on essential elements of classroom behaviors related to instruction, management, and context. A unique feature of the SSOS-R is that it can be employed to collect classroom data on a teacher; a specific targeted student; or both during an observation period, as well as to provide snapshots of the entire classroom. The SSOS-R is a viable instrument for school effectiveness research due to its strong grounding in the current literature on effective teaching and its utilization of a variety of methodologies. This combination of instruments generates low-, moderate-, and high-inference data; this triangulation of data sources further documents the veracity of the data collected. The four instruments include the Classroom Observation Form, QAIT Assessment of Classroom, Standards Performance Continuum, and Classroom Environment and Resources Checklist. The entire observation could last a maximum of 60 minutes. Figure 1 portrays the SSOS-R system as a clock, with the time allotments specified for each instrument. The four instruments are described more fully below.

Classroom Observation Form (COF). The COF is a combination observation system that is best described as a category system with low-inference items and multiple coding procedures (Nesselrodt & Schaffer, 1993; Sullivan & Meehan, 1983). It is based on the Stallings Observation System (Stallings, 1980) and the Classroom Activity Record designed by Evertson and Burry (1989). The top page of the COF collects typical demographic information, including observer, date, teacher observed, number of adults and students in the class, grade level, ethnicity and gender of subjects being observed (teacher and target student), and type of class (Academy or control).

The COF segment of the observation includes a maximum of 58 minutes—2 minutes for coding the cover page and then 56 minutes for coding classroom behaviors. The 56 minutes are divided into seven 8-minute time periods; each 8-minute block is captured on a separate page. The first minute of each block focuses on the entire classroom and provides a class snapshot by looking at both student engagement (the number of students on task, off task, waiting, or out of the room) and groups and activities (whether students are clustered in teacher, aide, or student groups and their type of involvement, such as working alone, management, interaction, or socialization). The remainder of each 8-minute block (either 7 or 8 minutes, depending on the

length of time required to fill in the snapshot information) is devoted to observing either the teacher or "target" student.

For the CHANGES project, researchers decided to include both the teacher observation and a target student. The focus of the observation switched from teacher to target student for each 8-minute block. There were a total of 28 discrete, mutually exclusive activities that could be chosen to describe the teacher and target student behaviors.

Figure 1:
Graphic Depiction of the Special Strategies Observation System-Revised (SSOS-R)

QAIT Assessment of Classroom. This instrument is best described as a moderate-inference, simple coding, rating device. QAIT stands for Quality of Instruction, Appropriate Level of Instruction, Incentives for Learning, and Use of Time. This two-page instrument contains 40 items grouped under those four major categories. Each item has a Likert-type response scale of 1 to 5 (*unlike this class* to *like this class*). This instrument was completed at the end of each observation session.

Standards Performance Continuum (SPC). This instrument is a rubric used to quantify the implementation of the Standards for Effective Pedagogy (Tharp, Estrada, Dalton, & Yamauchi, 2000). It is best described as a high-inference, simple coding, rating device. The SPC contains five standards labeled Joint Productive Activity, Language and Literacy Development, Contextualization, Challenging Activities, and Instructional Conversation. Each standard is rated on a Likert-type response scale of 0 to 4 (*not observed* to *integrating*). This instrument was completed at the end of each observation.

Classroom Environment and Resources Checklist (CERC). This instrument is a low-inference, simple coding, sign system. This one-page checklist contains 16 classroom attributes that are coded either as present or not present, such as adequate lighting, use of multiracial materials, posted assignments, etc. Next, 18 classroom resource items, such as textbooks, computers, and worksheets, are listed. Observers indicate first whether such resources were visible or not. If visible, observers then indicate whether the resources were used during the observation. This instrument was to be completed at the end of each observation session.

The SSOS-R instruments were originally tested and used in a pilot test of the evaluation for the Kentucky Extended School Services program (Nesselrodt & Schaffer, 2000a, 2000b). They were then modified and converted to a scannable format by Edvantia staff in 2001 and used in the evaluation of the Kentucky Extended School Services program (Cowley et al., 2002) and again in the evaluation of a culturally responsive teaching pilot project in Kanawha County schools during the 2003-2004 school year (Hughes et al., 2004). Thus, these instruments possess face and content validity and have proven their utility in prior research. Further, a high degree of inter-rater reliability was achieved among the data collectors during the 2001 and 2003 SSOS-R training sessions.

In a previous project using the SSOS-R instrument (see Hughes et al., 2004), Cronbach's alpha coefficients were computed to assess the degree of internal consistency reliability. The reliabilities for that administration of the SSOS-R were moderate to high. For the COF instrument, the activity code section coefficient was .51, the student engagement coefficient was .76, and the grouping strategy coefficients were .76 for the grouping section and .38 for the number of students section. For the QAIT instrument, the coefficient for all 40 items was .96; by scale, the coefficients were .95 for quality of instruction, .69 for appropriate level of instruction, .91 for incentives for learning, and .91 for use of time. For the CERC instrument, the coefficient for all 50 items was .87; by section, the coefficients were .78 for the environment items, .81 for the visible resource items, and .44 for the used resource items.

Measure of Academic Supportiveness and Climate (MASC)

The Measure of Academic Supportiveness and Climate (MASC) was administered to Academy and control students in May 2005. The 42-item instrument assesses students' perceptions of themselves as students and of their school experiences and also asks students about their families' awareness of and involvement in their children's school lives. Respondents rate each item using a scale ranging from 1 to 5 (*not at all true* to *always true*). The four scales

within the instrument are: Student Belonging, Family Expectations, Student Academic Efficacy, and Family/School/Student Involvement. Taken together, these subscales assess the degree to which students think that their schools and families provide them with academic nurturance and support, and the extent to which students view themselves as intellectually capable. In previous administrations, the MASC has demonstrated satisfactory reliability, with Cronbach's alphas from .78 to .93 for the four subscales and .95 for the overall instrument (Cowley, Riffle, Howley, Voelkel, & Ermolov, 2004). Cowley and colleagues also found that the MASC possesses satisfactory concurrent validity with the Miami-Dade School Climate Survey ($r = .56$, $p < .01$).

Student Attitudes Toward Self and School (SASS)

The Student Attitudes toward Self and School (SASS) was administered to Academy and control students in May 2005. The 39-item instrument assesses students' attitudes (e.g., self-efficacy, enjoyment of school, perceptions of teacher supportiveness). Respondents rate each item using a scale ranging from 1 to 5 (*strongly disagree* to *strongly agree*), and the overall instrument has demonstrated satisfactory reliability in previous administrations ($\alpha = .92$). Although the original authors of the SASS instrument (University of Maine, 1999) proposed eight scales (Belonging, Heroes, Sense of Accomplishment, Fun and Excitement, Spirit of Adventure, Curiosity and Creativity, Leadership and Responsibility, and Confidence to Take Action), Wilson, Wilson, Cowley, Meehan, and O'Keefe (2003/2004) found that with a large sample of West Virginia students, four scales emerged, two of which represent an internal locus of control where the other two represent an external locus of control:

- **Self-Efficacy:** describes a student's ability to identify a problem and take corrective action
- **Teacher-Centric:** focuses on student's perceptions of the teacher's attitudes toward the student and the student's belief about their teacher's supportiveness
- **Leadership:** focuses on effective leadership and includes being excited about seeking the solution to problems; the scale further reflects the influence of both peers and teachers on leadership perceptions
- **Like School:** describes a student's ownership of learning and the resulting enjoyment

Taken together, these subscales assess conditions that support high levels of aspirations in youth.

Faculty Interviews

A semi-structured interview protocol was developed by an Edvantia evaluator and a consulting research fellow (see Appendix D for a copy of the interview protocol). The interviews primarily focused on the four major program components described in the CHANGES proposal: professional development, curriculum and instruction, the alternative/block schedule, and parental involvement or parent-teacher contact. Additionally, to a small degree, the interviews explored the nature and prevalence of challenges faced by teachers and administrators on the CHANGES faculty. Interviews were designed to last approximately 30 minutes and were semi-

structured to allow additional probing and exploration of responses in order to discover the most pertinent and useful information.

Data Collection

Implementation Logs

The CHANGES teachers and counselor were instructed to complete their implementation logs each week in order to capture the most accurate data about the instructional strategies, classroom practices, and activities or events that occurred each week. The logs were provided to Academy staff members in electronic form, for convenience and ease of completion and data entry. Three teachers completed their implementation logs and submitted them electronically each week. Two other teachers and the counselor, however, felt more comfortable completing their implementation logs in a paper-and-pencil format. The evaluators were amenable to this adjustment in data collection. The paper-and-pencil implementation logs were collected by the CHANGES support teacher (who assumed the duties of the original Academy administrator) and submitted to Edvantia evaluators throughout the year.

Systematic Classroom Observations

The six data collectors who were involved in the CHANGES classroom observations were formally trained in the SSOS-R system in the fall of 2004, prior to any observation data collection. Five of the data collectors were assigned to specific classrooms (one Academy classroom and one control classroom each), and one data collector was chosen as an alternate in case of scheduling conflicts. All primary data collectors were able to complete the observations; the alternate was not required to perform any classroom observations for the CHANGES project.

Observations took place during the 2004-2005 school year at three time periods: December 2004, late February and early March 2005, and May 2005. Each data collector conducted two approximately hour-long observations of each Academy classroom and each control classroom for each of the three time periods. Laboratory evaluators observed Academy classrooms during the 70-minute lab sessions and during the 30-minute class sessions. For each observation time period, the observers completed one visit to a 70-minute lab session and two visits to the same 30-minute class (being mindful of the alternating A/B day schedule). Observers made two visits to the 30-minute class sessions to complete the full 56-minute COF observation. The two classroom visits were counted as one complete observation. Thus, a total of 30 Academy classroom observations (15 lab session and 15 class session) and 30 control classroom observations were completed during the 2004-2005 school year. Each data collector completed her classroom observations individually; however, the observation team was consulted if observers had questions about how to code particular classroom events or activities.

All data collectors used the SSOS-R forms to record data systematically during the classroom observations. The COF instrument was fully completed during the classroom

observation. Because the Academy lab sessions were 70 minutes in length, Edvantia observers completed the 56-minute COF and were able to complete most items for the QAIT, the CERC, and the SPC during class time. However, it was not always possible for the data collectors to fully complete the QAIT, SPC, and CERC while in the classroom because some observations ran consecutively or because class ended before observers could complete the forms. These instruments were completed as soon after the observations as possible.

SSOS-R COF observations allow for data to be collected about teacher and/or student behaviors. In this project, Edvantia observers collected data both for the teacher and for a target student in each classroom observed. For the Academy classrooms, any student could be chosen as the target student, given their participation in the program. For the control classrooms, each data collector was given a class list identifying those students who had been selected into the control sample of students. It was then up to the individual data collector to choose a student from the list to serve as the target student for that observation. Up to four of the eight-minute COF segments could be coded for teacher behavior, and up to three of the segments could be coded for target student behavior.

Student Instruments

The MASC and the SASS were administered to Academy and control students whose parents had given consent for them to participate in the evaluation project. Among Academy students, 56 students had signed parental consent forms on file; among control students, Edvantia had records indicating parental consent for 15 students. Administration of these two instruments occurred in May 2005, with all students being provided sufficient information about the project to give their assent to participate. Because Academy teachers were administering the Terra Nova to CHANGES students at that time, the evaluators and CHANGES staff agreed that the Academy teachers would administer the instruments to the 56 students with parental consent at the end of Terra Nova testing. The lab evaluators prepared instrument administration packets and provided them to each of the teachers. The packets included administration instructions for the teacher (see Appendix E), student assent information (see Appendix F), the MASC, the SASS, and a large manila envelope in which students were to seal their completed questionnaires. Academy teachers then collected the envelopes containing the completed questionnaires and turned them in to a central collection point (i.e., the Academy counselor's office), where an Edvantia evaluator retrieved them.

Because control students were distributed in many classes throughout the regular CHS ninth-grade population, a special data collection session was held to administer the MASC and the SASS. Students whose parents had signed consent forms were called out of class at the beginning of one class period and asked to report to a classroom. There, an evaluator administered the two student instruments using the same administration packets that had been prepared for the Academy teachers. Completed questionnaires were collected in the sealed envelopes, and the control students were free to return to their classes as soon as they had submitted their questionnaires. Students required approximately 20 minutes to complete both paper-and-pencil questionnaires.

Faculty Interviews

Interviews with CHANGES faculty members occurred during the late summer of 2005. The interviewer was able to contact and interview five of seven faculty members either in person or via telephone. In-person interviews were conducted either at Capital High School or at Edvantia's office in Charleston, West Virginia. Faculty members who were not available to arrange an in-person interview were contacted by telephone. Interviews required approximately 30 minutes to complete.

Analyses

All data collected throughout the CHANGES project were entered into electronic databases (e.g., SPSS, Excel) and cleaned. Quantitative data were analyzed with descriptive and inferential statistical tests, as appropriate for the type of data and research question. Qualitative data, such as responses to implementation logs, were analyzed by question or topic, as appropriate. Data was segmented into passages through coding, and themes were identified and given broad codes. Finer coding was applied as necessary, using patterns emerging within each broad category of responses. Themes were then tabulated to provide a general, quantitative analysis of the most salient and prevalent issues. The following section presents more specific information for analyses employed for each data collection instrument.

Implementation Logs

Teacher and counselor implementation log data were entered into Excel files. Each question was assigned a separate sheet within the Excel workbooks. Responses to the first two items, which were included at the request of Academy teachers and administrators, were not analyzed further because their purpose was to provide immediate information to Academy staff for discussions during common planning time throughout the school year. Quantitative data, such as the number of parent contacts and effectiveness ratings for instructional strategies, were analyzed via descriptive statistics (e.g., frequencies, means). Qualitative data, such as reflections, were coded by question according to common themes.

Classroom Observations

Because the SSOS-R is a machine-scannable instrument, laboratory staff designed data entry templates using Remark scanning software. SSOS-R data were scanned by observation period; data files were then cleaned and exported to SPSS. Following data cleaning, all three data files were merged into one master file for statistical analysis.

COF. COF activity data provided the number of minutes spent in any of 28 discrete activities for both the teacher and the target student. These numbers were summed across the eight-minute intervals for each observation by both teacher and target student. Up to four of the eight-minute blocks focused on the teacher and three on the target student (if the observation

lasted a full hour). These data were analyzed using the 28 individual activities and by collapsing the data into four main categories of teacher-led, student-led, management/organization, and off-task.

COF classroom snapshot data provided information on student engagement (i.e., the number of students on task, off task, out of the room, or waiting during the first minute of each eight-minute block) and on grouping and activities (i.e., the number of students involved with the teacher, any aide, or other student groupings, along with the type of activity taking place). The student engagement numbers were summed across the eight-minute intervals for each observation by classroom and also by determining the percentage of students engaged in each category (on task, off task, out of room, waiting). These data were analyzed using the four engagement codes of on or off task, out of the room, and waiting. For the groups and activities segment, the number of students involved with the teacher, aide, or other students by activity (interactive, working alone, management, or social/uninvolved) were summed across the eight-minute intervals for each observation. These data were analyzed by number of students per activity. Further, one-way ANOVAs were conducted for all of the COF data (activity, student engagement, and groups and activities) to determine if statistically significant differences existed among the Academy and control groups. Effect sizes were computed as appropriate.

QAIT. QAIT data were analyzed by creating four scales composed of the 40 individual items: quality of instruction, appropriate level of instruction, incentives for learning, and use of time. Since there were unequal numbers of items in each scale, the item scores were summed and then averaged to generate the scale score. Descriptive statistics were used to describe results for the Academy and control groups. Further, one-way ANOVAs were conducted to determine if statistically significant differences existed among the group scale scores. As appropriate for the analyses, effect sizes were also computed.

CERC. CERC data were analyzed by calculating frequency percentages showing whether the classroom attributes were present and whether the classroom resources were visible and used during the observations of Academy and control classrooms.

SPC. Data for each of the five SPC items were analyzed by calculating means for both the Academy and control groups. Means and standard deviations were calculated per SPC item, and independent *t* tests were computed for each item mean. The alpha level for these *t* tests was set at the .05 level. Effect sizes were computed, as appropriate.

Student Instruments

To compare the differences on the MASC and on the SASS between Academy students and control students, independent *t* tests were computed on each subscale mean for each instrument. The alpha level for these *t* tests was set at the .05 level, and effect sizes were computed, as appropriate.

Faculty Interviews

       Faculty interviews were audio-recorded, and transcripts and notes were produced. Interview transcripts and notes were coded and summarized according to general descriptive categories. Pattern coding (Fetterman, 1989; Yin, 2003) was used to discover patterns among individuals and descriptive categories. Patterns were searched for opposing or inconsistent data.

SECTION 4: FINDINGS FROM CHANGES IMPLEMENTATION

The following section presents the findings of analyses conducted on the various data collected throughout the CHANGES evaluation. Findings are presented by data collection instrument. Conclusions about the implementation of the CHANGES initiative are presented in the next section.

Teacher Implementation Logs

Academy teachers were asked to complete weekly implementation logs to provide quantitative and qualitative data regarding the Academy classes and activities. Over the course of the school year, teachers submitted a total of 172 implementation logs. Teachers' responses to the eight implementation log items analyzed for the evaluation are detailed.

Parent Contacts

Academy teachers made 541 contacts or attempted contacts with Academy students' parents or guardians during the school year. Contacts were in the form of telephone calls, parent-teacher conferences, e-mails, notes, and letters. Contacts were made to update parents on student progress, inform parents of behavioral problems, and provide parents with positive comments regarding student performance and/or improvement. Table 4 presents the number of parent contacts made by each teacher (designated by a letter), the total number of contacts, and the mean number of contacts per week.

Table 4: Parent Contacts made by CHANGES Teachers

Teacher	Number of Logs	Number of Contacts	Mean per Week
A	36	95	2.79
B	35	163	4.66
C	29	49	1.69
D	35	141	4.15
E	37	93	2.51
Total	172	541	3.15

Instructional Strategies

Academy teachers were asked to indicate which instructional strategies they used during the week and to rate the effectiveness of each strategy using a scale of 1 (*not at all effective*) to 5 (*extremely effective*). The ratings for each strategy were summed and divided by the number of

responses to each strategy to create a mean score ranging from 1 to 5. Table 5 provides descriptive statistical summaries for each strategy.

The most frequently used instructional strategy, according to implementation log responses, was "set goals or objectives for lessons," which was indicated in 168 of the 172 logs submitted (97.7%). The second most frequently cited strategies were "lessons and/or instruction were related to state learning standards" and "questioned or cued students to check for understanding," which were indicated in 165 (95.9%) and 164 (95.4%) logs, respectively. The least-used instructional strategy was "generated or tested hypotheses," which was indicated in only 53 logs. The most effective instructional strategy for Academy teachers was "active listening to student responses," which had a mean effectiveness rating of 4.75, very close to a rating of *extremely effective*. The least effective strategy was "homework and practice," which was indicated on 110 implementation logs and, with a mean rating of 3.71, was the only strategy to receive a mean rating of less than 4.00.

Table 5: Implementation Log Descriptive Statistics for Effectiveness of Instructional Strategies

Strategy	N	%	Mean	SD
Set goals or objectives for lessons	168	97.67	4.28	0.75
Lessons and/or instruction were related to state learning standards	165	95.93	4.68	0.52
Questioned or cued students to check for understanding	164	95.35	4.52	0.71
Reinforced and/or recognized student effort	162	94.19	4.52	0.7
Gave information and/or illustrated concepts with a variety of approaches/strategies	158	91.86	4.33	0.64
Active listening to student responses	157	91.28	4.75	0.54
Provided feedback to students about progress toward objectives	155	90.12	4.5	0.71
Connected new information to prior knowledge	153	88.95	4.13	0.83
Graphic organizers or non-linguistic representation	136	79.07	4.56	0.59
Scaffolds instruction	116	67.44	4.02	0.92
Learning groups/cooperative learning	114	66.28	4.17	0.89
Summarizing or note taking	112	65.12	4.04	0.87
Homework and practice	110	63.95	3.71	0.97
Asked students to compare, contrast, classify, or use analogies/metaphors	109	63.37	4.21	0.77
Generated or tested hypotheses	53	30.81	4.41	0.92

Comments About Instructional Strategies

The implementation log included an item asking Academy teachers to comment about the instructional strategies they used during the week. The purpose of the item was to probe more deeply into teachers' thoughts about the use and effectiveness of the various strategies. Some teachers included lengthy comments describing their classroom activities, and others provided shorter thoughts. In all, 252 comments were offered in response to this item. Edvantia evaluators categorized the comments by theme, and Table 6 presents the number of comments in each category, accompanied by representative quotes from the implementation logs. The teachers commented extensively about specific activities employed in the classroom, although they did

not always mention specific instructional strategies. They also commented a great deal on students' enthusiasm about, resistance to, or difficulties with the activities.

Table 6: Teacher Comments regarding Instructional Strategies
Used During the 2004-2005 School Year

Category	N	Representative Comments
Classroom activities (description)	63	• I gave them study guides for the test. • To review, we played a relay game working in four teams to answer questions related to the concepts covered in the unit. • Monday, we reviewed one last time for test taking questions and having students provide explanations. • This week was mainly a week for reviewing. • This week, we finished making our projects and then we had our competition.
Students doing well or working hard	46	• The students continued to work diligently on their projects. • We can see students scaffolding information on their own. • They worked well in groups together and were very efficient in turning in work this week. • They worked very well together and independently, taking a lot of pride in their work and completing it on time. • Students continued to succeed with the kinesthetic activity… • Most students worked very hard on their study guides.
Difficulties	32	• The students are having problems with nonlinguistic representations. • Difficult to individually instruct students, as others easily get off task. • Students were not eager to do this [work]. They would say, "Why do I have to do this, I'm going to the NBA" or they would research other interests. • They were … very distracted by the upcoming holiday this week. They were not very receptive to using their time wisely to finish necessary work and activities before the break.
Students engaged or enjoy activities	32	• For the most part, all of the students are very involved and excited. They enjoyed being able to create something. • They really enjoy using [white boards] to complete problems. • They enjoyed [an activity] and were teaching one another about the proper steps in solving equations. • They are very excited about creating and completing their … projects. • They love graphic organizers and work in pairs.
Effective strategies	18	• The students did an excellent job with the Marzano vocabulary this week. They made great nonlinguistic representations and they did help them remember the words. • As we worked the process step by step, I kept changing the markers on the board as well as on the transparency on the overhead when they took notes and copied several examples. They said it helped them recognize the changes in steps. • Writing to learn has been a great help because it allows me to come back the next day and review if needed. • The most effective strategies so far are the use of graphic

Category	N	Representative Comments
		organizers and comparison/contrast activities that make visual connections for the students and/or connect prior knowledge to current content.
Teacher excitement	10	• The students really impressed me this week. • This was so exciting to see that the implementation of this strategy really does work! • Students are really catching on … that is exciting.
Technology use	9	• The students were very excited about being able to use the computers. • The internet activity that I did this week worked well with a few classes and not so well with others.
Students improving	6	• Students are continually showing improvement in the cooperative learning setting. • They are beginning to feel safe enough to answer questions out loud.
Suggestions for changing activities	6	• They need to choose the material…trip to the library next time! • This would have gone much smoother as an independent activity.
Time-related concerns	5	• Labs are taking a long time to complete.
Grades	4	• Test results followed a general bell curve of mostly C's and D's with a few A's but still too may F's. • Scores were excellent on the post-test.
Student concerns	3	• Getting ready for the final – students are scared!
Productive work time	2	• This week was very productive.
Expectations of students	2	• Students are finally realizing that we are serious about grades and that they must be earned not received.
Other	14	• I was out for three days this week because of an illness, so I tried to plan activities that were very student centered. • Students were not as attentive this week. They were very hyper and with our new no tolerance policy on tardiness, they did make it on time to class, but complained a lot about the new policy. • … students had another alternative schedule because of a pep assembly at the end of the day. This once again cut classes short and made it difficult for students to do any work. • Students seem ready for the test.

Classroom Procedures and Classroom Management Strategies

Academy teachers reported whether any of six specific classroom procedures or classroom management strategies were used during the week. Teachers reported the use of clearly stated goals, objectives, and expectations most frequently ($n = 165$, 95.9%), with slightly less use of posted rules, schedules, procedures, and so on in their classrooms ($n = 162$, 94.2%). The least-used classroom procedure was displaying student work or homework in Academy classrooms ($n = 84$). Table 7 presents the frequency with which each strategy was employed, based on the 172 implementation logs that teachers submitted.

Table 7: Frequency of Use of Classroom Procedures and Management Strategies in CHANGES Classrooms

Procedure or Strategy	N	%
Clearly stated goals, objectives, and expectations	165	95.93
Rules, schedule, procedures, etc. posted in classroom	162	94.19
Built positive teacher-student relationships	151	87.79
Disciplinary interventions	109	63.37
Visible or posted rubrics and/or scoring guides	101	58.72
Displayed student work/homework in classroom	96	55.81
Other	1	0.58

Teachers were provided an opportunity to list other procedures or management strategies not included in the original list of six; only one other classroom procedure was mentioned ("daily sponge activity and word of the day"). However, that particular comment may more appropriately be called a classroom activity (see the following section).

Classroom Activities/Events

The implementation logs asked Academy teachers to indicate the occurrence of six specific activities or events in their classroom each week. Recognition for achievement was the most frequently cited event, being indicated in 146 of the 172 logs (84.9%). Discipline issues ($n = 121$, 70.4%) were also a frequent occurrence in Academy classrooms. All other activities and events were indicated in fewer than 100 of the 172 weeks worth of implementation log data. Table 8 presents the frequencies with which each activity was indicated on the teachers' implementation logs.

Table 8: Frequency of Events and Activities in CHANGES Classrooms

Event or Activity	N	%
Achievement recognitions	146	84.88
Discipline issues	121	70.35
Student presentation(s)	83	48.26
Technology time or activities	67	38.95
Speaker or outside presentation	23	13.37
Lab(s)	17	9.88
Other	9	5.23

The implementation logs provided an opportunity for teachers to indicate whether or not any other classroom activities or events occurred during the week. In addition to the activity listed in response to the classroom procedures item, nine other classroom activities were listed by Academy teachers. Teachers listed such activities as tests and quizzes ($n = 2$), nonlinguistic representations, work on class projects ($n = 2$), PowerPoint presentations, review games, and field trips ($n = 2$).

Events Potentially Impacting Students

Teachers were asked to provide information about events that occurred in the school that might have impacted students' ability to focus, learn, or interact appropriately with staff and other students. Teachers offered 245 thoughts in response to this item. Edvantia evaluators categorized the comments according to themes; Table 9 presents the number of comments in each category as well as representative quotes from the implementation logs. Most of the teachers' comments indicated that disruptions of the regular schedule (e.g., delays, major events in the school, assemblies) were the most frequent events that impacted students' concentration, behavior, and ability to focus on academic endeavors.

Table 9: Teachers' Comments Regarding Events That Potentially Impacted CHANGES Students During the 2004-2005 School Year

Event Category	N	Representative Comment
School Closings, Delays, or Altered Bell Schedule	58	• Monday – 2 hr. delay due to 3 degree temperature. • Students had an abbreviated week due to ISE day, Friday. • Wednesday was a Club Day. • Every Wednesday, we have some type of activity in the morning. This will always cause interruptions in the schedule. • … Staff Meeting Day on Wednesday, which makes for shorter class periods during the day as a result of school starting an hour later than usual. This is a difficult day because our students have a tendency to respond to abrupt changes in the routine with defiant and very hyperactive behavior.
Major School or Academy Events, Assemblies	50	• One pep assembly on Friday caused a lack of concentration during the final period of the day in anticipation of what the assembly would be like. • This was homecoming week, need I say more. • Behavior modification field trip to the Clay Center – students anxious, excited about going, disappointed about not going. • The only difficult day was Friday because of the Prom Fashion Show. • All ninth-grade students had to view a video by Dr. Phil on bullying … the kids were not very receptive to it and made fun of it as a whole. • Thursday field trip to Pittsburgh.
Holidays	23	• Election Day • No School Veteran's Day. • This is three days before holiday break – many students did not attend school on Wednesday. • The students were very excited about Christmas break.
Substitute Teachers	19	• Two teachers were out for a day or two. • I was … out with strep throat and the students had a substitute who was not qualified to teach them. • I was out of the building, and subs reported that behavior was not good in my classes.
Report Cards and Progress Reports	13	• The students received their progress reports from the entire school on Friday. • Grade Report

Event Category	N	Representative Comment
Report Cards and Progress Reports (con't)		• Report cards on Thursday definitely had an effect on students' behavior and attitude on academics.
Discipline Related	11	• Bells held for one class due to an altercation in the office (Code Blue situation). • Also, a fight did occur among students within our CHANGES group … It was handled quickly. • Several students have big issues with each other and it is truly creating a disturbance.
Testing/Exams	9	• Altered exam schedule allowing for 90 minute exams and shorter review periods. • Students were not happy having to take the Terra Nova test again.
School Timelines	9	• I believe the students' behavior is deteriorating because it is close to the end of school and some students feel the year is already done. • Perhaps they were anxious over the end of the first nine weeks on Thursday. • They had to get adjusted to being back to school after the break.
Weather	9	• The week was unexpectedly shortened due to inclement weather. • Rainy weather – behavior Wednesday.
Location Changes	6	• Our students were displaced from the regular classroom for two days so that our classrooms could be used for testing. • WESTEST – we were moved to different classrooms.
Student Schedule Changes (permanent)	6	• All of the students' schedules were changed, so some students were upset because they were no longer with their friends. • An abrupt change was made in our daily schedule to follow the school's regular bell schedule to eliminate tardies and help provide a transition for students to their sophomore year.
General Comments	4	• It was a very smooth week overall.
Other (including community)	28	• Students also have dealt with a murder in their neighborhood …. This devastated some students and definitely affected the climate of the school because the murder victim has a daughter that attends Capital High. • Tuesday – a student in the program moved to California. • Having two new students join our group which got the students' wound up again.

Reflections

Lastly, teachers were asked to provide reflections in the form of ideas, insights, suggestions, or changes. The purpose of the item was to elicit feedback about and suggestions for the CHANGES initiative, including teachers' thoughts and reflections about Academy structures and processes. The directions on the implementation log, however, were not explicit, and many of the comments in response to this item were general reflections or comments about activities, events, strategies, or other factors not specifically related to the CHANGES initiative. Of the 126 reflections offered in response to this item, 102 concerned general reflections about classroom activities, school events, or student behaviors that were not specifically related to the structures, functions, or processes of the Academy. Twenty-four comments, however, were more directly

related to Academy functions overall. Most of these reflections took the form of suggestions for changing or improving CHANGES. Table 10 presents representative comments.

Table 10: Teachers' Reflective Comments

Category	N	Representative Comment
Related to CHANGES	24	• … next time we take a field trip, the right to go should not be a behavior modification contingency for students. The students that were left behind were the very students that needed to have the opportunity to go and see what the Clay Center had to offer … behavior modification is a definite need with our program, yet it should not prohibit students from going on our special field trips …. • Open House was positive for parents … who attended. I believe we are all on the same train. • Moratorium on changes to program. • The students need a lot of positive feedback. Next year, we might not want to do the same activities throughout the first week of school. The kids were complaining about doing the same things in some of the classes and being bored. • My only concern about the field trip was that many students were left behind. They did not qualify for the trip. I hope that the next trip we have will include everyone. Many of the students left behind, in my opinion, are the kids we want to give experience to. They do not have people in their lives who take them to different places. • We need to find subs who are reliable and know what they are doing. • I really like the changes which have been made to the students' schedules. • I think every Wednesday should be a school bell schedule when Club Day starts. This would make all Wednesdays the same for our students. They seem to appreciate being like the rest of the student body some times, but enjoy extra activities other times. This way there would also be some consistency throughout the week and Wednesdays would have approximately 43 minute classes.
Other (not specifically related to CHANGES)	102	• Teaching them is getting easier, but there are still a few who haven't caught on yet. • They were confident about their computer skills after 2 days! • It was a pleasant week. • This unit was way too long. It would be more effective broken down into much smaller units and goals. • I'm anxious to finish grading the quizzes to check for understanding. • This week was very productive. The students had much better behavior than they have in the last couple of weeks. • I think this unit went very well. It was much shorter than others we have done. • Students still are struggling with group work because of their constant efforts to socialize, as opposed to doing work. Also, students are horrible about turning in homework assignments, which are hurting their grades tremendously. I am struggling with what to do to resolve this issue. • The next time, I will give options when we do a project. I only had three students who really did not enjoy this project. In order to make sure everyone participates, I will give two options.

Category	N	Representative Comment
Other (not specifically related to CHANGES) (con't)		• I thought this week went very smoothly. The students are very eager to study and do well on their final in my class. I was also excited by many of the answers I got from students. They were able to remember a lot of the information we have covered this semester. I was also happy with the amount of students who came to me asking for help on their time.

Other Comments

Although given an opportunity to provide other comments, Academy teachers seldom took that opportunity in completing their implementation logs. Only in 15 of the 172 implementation logs did teachers offer additional comments. The comments were general comments about the mood of the week, miscellaneous activities not previously addressed in the log, thanking other teachers for assistance, or relaying student thoughts or reactions. Of note were two particular comments about student reactions. In one comment, a teacher stated that "students will make an adjustment to CHANGES. [They] need reassurance that we are not dumbing down the curriculum, but they must work to achieve success." In another comment a teacher indicated that multiple instructors in one classroom "creates some confusion," and that "students have expressed dissatisfaction" with the arrangement.

Counselor Implementation Logs

Like the teachers in the Academy, the CHANGES counselor was asked to keep weekly implementation logs to document the number of students counseled, the reasons the students sought or were referred to counseling, referrals made for follow-up, the number of parents contacted, and so on (see Appendix B for a copy of the counselor implementation log). The CHANGES counselor submitted 35 logs over the course of the 2004-2005 school year, including one for a week during which she was absent and one for Spring Break week. Those two weeks were not included in tallies and averages; thus, the number of logs analyzed for this report was 33. The following section presents the information recorded on the counselor's implementation logs.

Number of Students Counseled

Over the course of the 2004-2005 school year, the CHANGES counselor had 1,159 meetings with students. Some students met with the counselor more than one time during the year. The number of students counseled each week ranged from a low of 0 to a high of 84. On average, about 35 Academy students were counseled each week.

Number of Parents Contacted

In all, the CHANGES counselor contacted parents 167 times throughout the school year. Contacts took the form of phone calls, conferences, or, in some cases, home visits. The number of parents contacted each week ranged from 0 to 15. The counselor contacted an average of 5 parents per week during the year.

Reasons Students Sought Counseling

The CHANGES counselor was asked to indicate why students sought or were referred to counseling each week, using a list of eight possible reasons. Students were most often in counseling for academic reasons ($n = 29$; indicated on 29 of the 33 logs) and home or family problems or concerns ($n = 28$). Students were least often counseled for psychological needs or teacher referrals ($n = 6$ each). Interestingly, counseling because students had conflicts with school staff ($n = 16$) tended to cluster around the end of each semester. Table 11 presents the frequencies for each counseling category.

Table 11: Frequency of Occurrence of Each Reason Students Sought Counseling

Reason	N	%*
Academic Counseling	29	87.88
Home or Family Problems	28	84.85
Social Problems or Issues Outside of School	26	78.79
Conflicts or Issues with School Staff	16	48.48
Career Counseling	15	45.45
Conflicts or Issues with Other Students	15	45.45
Psychological Needs	6	18.18
Teacher Referrals	6	18.18

* Percent of 33 logs.

The counselor log included an opportunity for the counselor to list other reasons students sought counseling. However, the counselor did not list any other reasons in response to that item.

Referrals Made

Because counselors make referrals to other school staff members, school programs, community programs, social workers, or other entities or officials, the implementation log asked the CHANGES counselor to indicate the individuals, programs, or other entities to which she referred students (or that she called in reference to students) throughout the year. Referrals were most often made to social workers or case managers ($n = 26$, indicated on 26 of the 33 logs) and to the school nurse ($n = 25$). No students were referred to Upward Bound throughout the school year. Referrals were made to three other individuals or entities not included in the list of seven specified on the implementation log. These referrals were to a consultant working with

CHANGES staff, the school principal, and In-School Suspension (ISS). Table 12 presents the number of weeks during which referrals were made to each of the various entities.

Table 12: Number of Referrals Made to Other Entities or Programs

Entity or Program	N	%*
Social Workers or Case Managers	26	78.79
School Nurse	25	75.76
Law Enforcement	7	21.21
Student Assistance Team	6	18.18
Mental Health or Psychological Services	4	12.12
Social Services or DCFS**	4	12.12
Other	3	9.09
Upward Bound	0	--

* Percent of 33 logs.
** DCFS = Department of Children and Family Services

Referrals to the school nurse and to social workers were evenly distributed throughout the school year. All referrals to the student assistance team, psychological services, and "other" entities were made during the first semester. Four of the seven referrals to law enforcement occurred in the weeks around the end of the first semester and beginning of the second semester.

Events Potentially Impacting Students

The counselor was asked to provide information about events or occurrences in the school that might have impacted students. The purpose of this question, like the identical question on the teachers' implementation log, was to discover any events that might disturb students' ability to focus on academic work. Of the 40 events noted by the counselor, the two most frequently cited categories were major school or Academy events (e.g., homecoming, assemblies, field trips; $n = 10$) and school delays or closures ($n = 8$). Most of the comments related to disruptions in the school or class schedules. Six comments, however, mentioned report cards or progress reports, and two other logs cited testing or exams as events that affected students. Table 13 presents the number of comments in each category and some representative quotes.

**Table 13: Counselor Comments Regarding Events That Potentially Impacted
CHANGES Students During the 2004-2005 School Year**

Event Category	N	Representative Comment
Major School or Academy Events	12	• Homecoming Week • Friday – Prom Fashion Show • CHANGES took students to Pittsburgh for the day 5 am – 10:30 pm. Wonderful experience for the students.
School Closings, Delays, or Altered Bell	8	• Early morning staff meeting – students start 1 hr. late.

Event Category	N	Representative Comment
Schedule		• 2 hr delay due to snow
Report Cards and Progress Reports	6	• Progress reports were distributed for the first time. Students were in an uproar concerning their grades.
Holidays	3	• Thanksgiving Break
Testing/Exams	2	• Final Exam Week
School Timelines	2	• End of 1st nine weeks
Discipline Related	2	• Severe behavior problems with some students. They are interfering with the learning of others.
Other	2	• Substitutes in two classes • Club Day
General Comments (not specific to events)	3	• ISS – In School Suspension (students refusing to go)

Consultations

Included on the counselor's implementation log was an item asking the counselor to describe consultations made during each week. For this item, the CHANGES counselor listed the people with whom she consulted. Of the 91 comments, the largest number (n = 20) concerned consultations with other faculty or staff members at CHS, excluding administrators. Consultations with administrators were noted 12 times, and consultations with parents were mentioned 11 times. In addition to indicating the roles or positions of people with whom she consulted, the counselor also noted that some consultations were about academic counseling (n = 3), scheduling (n = 3), discipline issues (n = 4), or career counseling (n = 5). Table 14 presents the number of comments made in each category and includes representative quotes.

Table 14: Counselor Comments Regarding Consultations Made for CHANGES During the 2004-2005 School Year

Category	N	Representative Comment
Faculty and Staff	20	• Other Counselors • Team meetings daily with teachers • Teachers during planning • Counselors re: scheduling for next year
Administrators	12	• Vice Principal • Administrators
Parents	11	• Parents were called in because of severe discipline problems. • Parent conferences by phone re: skipping by a few • Parents
Social Worker	9	• Social Worker re: referrals 5+ days absent • Social Worker
Other	9	• Patchwork • County Alternative Placement Committee • Mentors for teen in crisis
Nurse	8	• Nurse – ill students (asthma, hurt leg) • School nurse
Probation Officer	5	• Probation Officer
Career Counseling	5	• Career counseling with [teacher's] 8th period • Classroom career counseling sessions

Discipline Counseling	4	• Discussions centered around attendance problems…
Academic Counseling	3	• Group counseling with students – academic failure
Scheduling	3	• Students re: 2nd semester schedules
Consultant	2	• Consultant

Reflections

As in the teachers' implementation log, the counselor log included a reflective component intended to capture the counselor's impressions of the Academy effort, suggestions for improvement, changes needed in Academy structure or functioning, and so on. For the most part, comments offered in response to the "reflections" item were general comments not necessarily related specifically to the Academy. Seventeen of the 29 comments were reflections about specific events, student attitudes, and so on. However, 12 comments did relate, more or less, to the structures, functions, or activities of the Academy. Most of these reflections noted difficulties, successes, or suggestions for future implementations. For instance, the counselor reflected that students needed to be more organized, that some students felt like they were "in a hole" with their grades, that parents were being supportive of the Academy effort, and that CHANGES students should be encouraged to participate in more activities. Table 15 presents representative comments from each category of responses.

Table 15: Counselor Reflective Comments

Category	N	Representative Comment
Related to CHANGES	12	• Students appear to need to be organized. They have many problems because they don't complete homework. Many have not returned contracts or AEL slips. • We need to have a unit on social skills. • Next year, CHANGES students need to be encouraged to participate more in activities. • A behavior management plan is needed for the team. Students feel that rules are not enforced the same for all; some students do their ISS, and other complain and are not made to do it. Assistant principal of CHANGES is working on scheduling; time on discipline is not here.
Other (not specifically related to CHANGES)	17	• The first week of school went smoothly. • More acting out this week for some – Holiday season brings stress in teens. • Change of weather – Students ill with colds, flu. • Students are expressing negative attitudes. Their behavior says they think school is over. • Discipline problems continue.

Other Comments

The last item on the log provided an opportunity for the counselor to offer any other comments about the week. Sixteen comments were included on 11 logs. Most of the comments (*n* = 6) mentioned that various students had left the CHANGES program for various reasons

(e.g., transfers, suspensions). One comment mentioned that a new student joined the group. Other comments (*n* = 3) were personal in nature (e.g., "I was off [work] two days."), and some (*n* = 5) related to other work the counselor had done that week such as scheduling work, covering a class for another teacher, completing paperwork, and making a home visit. One additional comment mentioned that a student was sent home because of discipline problems.

SSOS-R Classroom Observations

A total of 60 classroom observations were completed during the 2004-2005 school year. For each teacher selected, data collectors completed 2 observations at three different time periods over the year (December 2004, February/March 2005, and May 2005), for a total of 6 observations per teacher.

There was a maximum of 56 minutes possible for the actual coding of classroom behaviors (seven 8-minute COF segments). The average number of minutes of classroom coding per observation was 50.7. The median number of minutes was 49, and the mode was 48. The classroom coding ranged from a low of 42 minutes (2%) to a high of the maximum 56 minutes (20%). A total of 3,039 classroom behavior minutes were coded. Adding 4 other minutes per observation (for initial cover sheet coding, QAIT, CERC, and SPC) and multiplying by 60 observations (240 minutes) brings the total number of observation minutes to 3,279 minutes or 55 hours (equivalent to roughly 7 full days of observations).

The number of adults (teachers or aides) in the classrooms ranged from 1 to 3; the average number was 1 for both Academy and control groups. The number of students per classroom ranged from 6 to 23; the average number was 11 for Academy classrooms (*SD* = 3) and 16 for control classrooms (*SD* = 4). Other demographic information for both groups is presented in Table 16. Of note are the observations that neither the Academy nor the control group included African American teachers, and the Academy group included no male teachers. Also, more African American students were selected as target students in Academy classrooms (*n* = 20), and more White students were selected as target students in control classrooms (*n* = 24).

Table 16: Demographic Information by Group for Classroom Observations

	Grouping			
	Academy		Control	
Demographic Variable	*N*	*%*	*N*	*%*
Teacher ethnicity:				
African American	0	0%	0	0%
White	30	100%	30	100%
Teacher gender:				
Female	30	100%	23	77%
Male	0	0%	7	23%

Demographic Variable	Grouping			
	Academy		Control	
	N	%	N	%
Target student ethnicity:				
African American	20	67%	5	17%
Biracial/Multiracial	2	7%	1	3%
White	8	27%	24	80%
Target student gender:				
Female	8	27%	23	73%
Male	22	73%	7	27%
Subjects:				
English	4	13%	10	33%
History	6	20%	6	20%
Mathematics	6	20%	6	20%
Reading	8	27%	2	7%
Science	6	20%	6	20%

The SSOS-R provides a "classroom snapshot" that looks at whole-class student engagement and grouping configurations every 8 minutes and "ongoing activities" of the teacher and a target student alternately for 7 or 8 consecutive minutes (depending on whether the snapshot coding took an entire minute). There was a maximum of seven 8-minute blocks; four of these were focused on the teacher and three were focused on the target student. During these blocks, 28 discrete activities could be coded in time segments of 1 to 8 minutes. As noted earlier, these blocks equaled a maximum of 56 minutes of the 60-minute observation; 2 minutes were dedicated to preliminary coding on the cover page at the beginning of the observation and 2 minutes were allocated to completing the QAIT, SPC, and CERC at the conclusion of the observation.

Classroom Snapshot: Student Engagement[1]

The four categories within student engagement included number of students on task, off task, out of the room, and waiting (e.g., for the next task, for assistance). The average number of students on task for the Academy classrooms was 57, with a standard deviation (*SD*) of 17; for the control classrooms, the average was 86, with an *SD* of 27. For students off task, the average for the Academy classrooms was 8 (*SD* = 5); for control classrooms, the average was 6 (*SD* = 7). For students out of the room, the Academy classroom average was 4 (*SD* = 4); the control classroom average was 2 (*SD* = 3). Finally, for the number of students waiting, the Academy classroom average was 5 (*SD* = 9); the control classroom average was 5 (*SD* = 7).

The percentage of students engaged in each category (on task, off task, out of the room, or waiting) was calculated by group (Academy, control). According to Stallings (1980), student

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[1] Note: Numbers for student engagement may seem high; however, the reader is reminded that observation data are collected for seven time segments throughout the class time. Engagement figures are calculated using the summed data from all seven segments, thereby causing an appearance of inflated figures.

engagement rates above 80% have been associated with high gains in student achievement. The percentage of students on task for the control classrooms was above 80%, and for the Academy classroom, the percentage was 77%. Table 17 provides descriptive statistics for the student engagement variables (on task, off task, out of room, and waiting) by group (Academy, control).

**Table 17: Descriptive Statistics for Number of Students in
SSOS-R Student Engagement by Group**

| Engagement Category | Grouping | | | | | |
| | Academy Classrooms | | | Control Classrooms | | |
	Mean	SD	%	Mean	SD	%
Students On Task	57	17	77%	86	27	87%
Students Off Task	8	5	11%	6	7	6%
Students Out of Room	4	4	5%	2	3	2%
Students Waiting	5	9	7%	5	7	5%

One-way ANOVAs were computed to determine whether statistically significant differences existed within these four variables (on task, off task, out of the room, and waiting) between groups (Academy, control). The two categories of on task and out of the room resulted in statistically significant differences. With one large effect size at 1.29 and one medium effect size at .65, these findings suggest that there was practical significance in favor of the control classrooms. This difference, however, may be a function of the greater number of students observed in control classrooms. See Table 18 for a summary of the results.

**Table 18: One-Way ANOVA Results for Number of
Students in SSOS-R Student Engagement**

Engagement Category	df	F	p	Effect size
Students On Task	1, 58	24.78	.000	1.29
Students Off Task	1, 58	0.99	.323	--
Students Out of Room	1, 58	4.66	.035	0.56
Students Waiting	1, 58	0.05	.828	--

Classroom Snapshot: Groups and Activities

This section of the COF focused on the teacher, aide, or student groups, as well as the activity taking place (interaction, working alone, management, or social/uninvolved). Table 19 provides descriptive statistics for the groups and activities variables (teacher, aide, or student groups and interaction, working alone, management, or social/uninvolved activities) by group (Academy, control). A few points are worth noting: no teachers in either group were coded as working alone or social/uninvolved, neither group had students engaged in management activities, and more students were coded as social/uninvolved in control classrooms.

**Table 19: Descriptive Statistics for Number of Students in
SSOS-R Groups and Activities by Group**

| Variables | Grouping | | | |
| | Academy | | Control | |
	Mean	SD	Mean	SD
Teacher Interaction	32.33	16.55	57.55	36.73
Teacher Working Alone	--	--	--	--
Teacher Management	9.67	13.14	36.12	39.81
Teacher Social/Uninvolved	--	--	--	--
Aide Interaction	52.00	--	--	--
Aide Working Alone	--	--	--	--
Aide Management	0.33	0.58	--	--
Aide Social/Uninvolved	--	--	--	--
Student Interaction	16.00	8.49	47.00	--
Student Working Alone	32.24	15.54	43.93	30.40
Student Management	--	--	--	--
Student Social/Uninvolved	13.62	10.85	15.47	8.38

One-way ANOVAs were generated to determine whether statistically significant differences existed within these 12 variables (interaction, working alone, management, or social/uninvolved for teacher, aide, and student groups) by group (Academy, control). Two of the 12 ANOVAs did identify significant differences between groups. Teacher interaction resulted in a significant difference by group: the control classrooms had significantly more students interacting with teachers. However, the control classrooms also had significantly more students involved in teacher management activities than the Academy classrooms. Both effect sizes were large (.89 each), indicating there was practical significance in favor of the control classrooms. This difference, however, may be a function of the greater number of students observed in control classrooms. See Table 20 for a summary of these results.

**Table 20: One-Way ANOVA Results for Numbers of
Students in SSOS-R Groups and Activities**

Groups and Activities Category	df	F	p	Effect size
Teacher Interaction	1, 44	9.27	.004	0.89
Teacher Management	1, 21	5.68	.027	0.89
Student Interaction	1, 1	8.90	.206	--
Student Working Alone	1, 30	1.95	.173	--
Student Social/Uninvolved	1, 41	0.37	.544	--

Ongoing Activities

This section of the SSOS-R included two components that alternately focused on the teacher (four 8-minute blocks) and a target student (three 8-minute blocks). The first component was to indicate which of 28 discrete activities was being observed during that particular time period (see Table 21 for a complete listing of all 28 activities, along with a brief description of each). The second component was to indicate how many minutes were spent engaged in a particular activity. The smallest time increment was 1 minute; the largest was 8 minutes (each page was an 8-minute block). The maximum number of teacher-focused activity minutes per observation was 32; for student-focused activity minutes, the maximum number was 24.

Table 21: SSOS-R Individual Activities and Descriptions

Activity	Description
A. Teacher presentation of Content	Presenting academic content to whole class. Includes lecture, demonstration, and explanation of academic content. May include questioning or comments from students, but mainly to inform students, introduce/explain materials, including previously introduced material.
B. Recitation or discussion	Providing students practice of skills/review of materials. Includes questioning of students, short written tasks, or content-oriented game/board work, interactive review, or reviewing textbook exercises.
C. Directions for assignments	Teacher is explaining to class exact procedures for doing an assignment, seatwork activity, or homework. Can include headings, numbering, or any information about form in which the assignment is to be done.
D. Small-group instruction	Teacher works with group of two or more students.
E. Tests	Students work independently on a test, quiz, readiness test, or assessment; teacher may read questions aloud, as in a spelling test.
F. Checking	The teacher and students are going over seatwork problems, a quiz, or assignment for the purpose of checking/grading it in class. Little/no teacher explanation or review is entailed.
G. Procedural or behavioral presentation	Presents/reviews class/school rules/procedures. Should be used when instituting/explaining class procedures/rules governing student behavior or when giving class feedback on behavior, discussing problems relating to behavior, or following class procedures.
H. Administrative routines	Teacher or student is checking attendance, making announcements, opening or closing routines without academic content, discussing grades, distributing graded papers, recording grades, or changing seating.
I. Transitions	The teacher and students are involved in activities that entail changing from one activity to another, i.e., moving between small groups, getting supplies or materials for a different activity, or passing papers.
J. Nonacademic activity	Teacher involved with students in activities such as games, discussions, or television that are not related to content of the class.
K. Discipline	Students are involved in some discipline for misbehavior, i.e., putting their heads down on desks for a period of time for misbehavior.
L. Praising class	The teacher is praising one or more students for work or tests completed, for behavior, etc.
M. Monitoring	The teacher is moving around the room giving feedback to individual students or groups, or is providing feedback during individual or group student presentations.
N. Not occupied	Teacher or students are not engaged in academic learning, neither are they involved in any type of nonacademic activity, i.e., just sitting at desk, etc.

Activity	Description
O. Off task	Teacher is involved in a nonacademic activity, i.e., talking to another teacher, talking on the phone, etc. Students are not doing whatever they were instructed to do, i.e., they are "goofing off," talking to a classmate, "doodling," etc.
P. Out of room	Teacher or students have left the room for some reason, such as going to restroom, going to some type of pull-out program, going home sick, etc.
Q. Individual instruction	Teacher works with an individual student on content-related material.
R. Waiting time	Students have no assigned task. Either they are finished and have no other assignment or they are just waiting for the next activity.
S. Individual seatwork	Students are working at desks individually. This code includes activities that are content-centered. Brief directions for seatwork or short teacher interruptions to explain or clarify directions would be left in seatwork time unless they last more than one minute.
T. Individual seatwork at computer	Students are working at computers individually. This code includes activities that are content-centered. Brief directions or short teacher interruptions to explain or clarify directions would be coded unless they last more than one minute.
U. Pairs or group seatwork	Students are involved in content-centered student- or teacher-initiated group projects or small-group tasks.
V. Pairs or group seatwork at computer	Students are grouped in pairs or groups at computers and are performing content-centered activities.
W. Sustained writing or composition	Students are involved in sustained writing.
X. Sustained reading	Students are involved in sustained reading.
Y. Hands-on learning	Individual students or groups are using manipulatives to enhance learning, including experiments.
Z. Independent inquiry or research	Students are working individually or in groups to conduct research for a unique product.
#. Student-initiated questions	Individual students generate in-depth (higher order) questions for the teacher.
!. Student presentations	Students are involved individually or as a group delivering content to the class.

The 28 activities were grouped into four main categories: teacher led, management/organization, student led, and off task. Table 22 provides the classification of each activity into one of these four categories.

Table 22: Classroom Observation Individual Activities by Main Category

Main Categories	Individual Activities
Teacher Led	A. Teacher presentation of content B. Recitation or discussion C. Directions for assignments D. Small-group instruction E. Tests F. Checking L. Praising class Q. Individual instruction
Management/Organization	G. Procedural or behavioral presentation H. Administrative routines I. Transitions M. Monitoring

Main Categories	Individual Activities
Student Led	S. Individual seatwork
	T. Individual seatwork at computer
	U. Pairs or group seatwork
	V. Pairs or group seatwork at computer
	W. Sustained writing or composition
	X. Sustained reading
	Y. Hands-on learning
	Z. Independent inquiry or research
	#. Student-initiated questions
	!. Student presentations
Off Task	J. Teacher nonacademic activity
	K. Discipline
	N. Not occupied
	O. Off task
	P. Out of room
	R. Waiting time

On a global level, the average number of minutes spent on teacher-led activities when the focus was the target student was 11.58 with a standard deviation (*SD*) of 6.31; for the teacher focus, the average was 15.02 with an *SD* of 6.05. The average number of minutes spent on target student-focused management/organization activities was 2.50 with an *SD* of 1.98; for the teacher focus, the average was 11.73 with an *SD* of 5.77. For target student-focused, student-led activities, the average number of minutes was 8.24 with an *SD* of 5.13; for the teacher focus, the average was 3.00 with an *SD* of 0.00. For target student-focused, off-task activities, the average was 5.82 with an *SD* of 4.25; for the teacher focus, the average was 2.87 with an *SD* of 3.47. Table 23 provides descriptive statistics for the main activity categories (teacher led, management/organization, student led, and off task) by teacher focus or target student focus and by group (Academy, control). In general, the teacher-led activities were most prevalent for both target student and teacher focus across both groups.

Table 23: Descriptive Statistics for Mean Number of Minutes in SSOS-R Main Activity Categories by Teacher or Target Student Focus by Group

	Grouping			
	Academy		Control	
Activity Category	Mean	*SD*	Mean	*SD*
Teacher Focus				
Teacher Led	16.80	5.60	13.23	6.04
Management/Organization	13.63	5.04	9.76	5.88
Student Led	--	--	3.00	--
Off Task	1.75	0.97	4.09	4.72
Target Student Focus				
Teacher Led	9.07	6.05	14.38	5.43
Management/Organization	2.87	2.34	2.13	1.54

	Grouping			
	Academy		Control	
Activity Category	Mean	*SD*	Mean	*SD*
Student Led	8.38	5.53	8.10	4.75
Off Task	5.81	4.29	5.83	4.29

One-way ANOVAs were computed to determine whether statistically significant differences existed within these eight variables (teacher led, management/organization, student led, and off task by either target student or teacher focus) by group (Academy, control). Three of the eight ANOVAs did identify significant differences by group. For teacher focus, the categories of teacher led and management/organization were statistically significant by group. For target student-focus, the category of teacher led resulted in a statistically significant difference by group. With two moderate (.61 and .71) and one large (.92) effect sizes, these findings indicate that there was practical significance. See Table 24 for a summary of results.

Table 24: One-Way ANOVA Results for Mean Number of Minutes in SSOS-R Main Activity Categories by Teacher or Target Student Focus

Category	*df*	*F*	*p*	Effect size	Favor
Teacher Focus					
Teacher Led	1, 58	5.62	.021	0.61	Academy
Management/Organization	1, 57	7.40	.009	0.71	Academy
Student Led	--	--	--	--	--
Off Task	1, 21	2.83	.107	--	--
Target Student Focus					
Teacher Led	1, 53	11.65	.001	0.92	Control
Management/Organization	1, 30	1.15	.292	--	--
Student Led	1, 43	0.03	.858	--	--
Off Task	1, 48	0.00	.993	--	--

QAIT

The QAIT assessment of classroom instrument measured four features of the classroom: quality of instruction, appropriate level of instruction, incentives for learning, and use of time. Forty specific features were rated on a 1 to 5 Likert-type scale (1 = *unlike this class* to 5 = *like this class*). A QAIT form was completed for each of the 60 classroom observations.

The Academy group scored highest on the teacher using effective management (mean of 4.00, *SD* of 0.83), on necessary time being allocated for instruction (mean of 3.90, *SD* of 0.80), and on teachers using an appropriate pace to cover content (mean of 3.93, *SD* of 0.91). Both groups scored lowest on the teacher using academic incentives such as small groups with individual incentives (mean of 1.23 each, *SD*s of 0.43 and 0.63, respectively). Table 25 provides descriptive statistical information for each QAIT item by group (Academy, control).

Table 25: Descriptive Statistics of SSOS-R QAIT Items by Group

QAIT Items	Academy Mean	Academy SD	Control Mean	Control SD
Quality of Instruction				
1. Lesson makes sense to students. The teacher:				
1a. Organizes information in an orderly way.	3.83	0.91	3.80	1.00
1b. Notes transitions to new topics.	3.33	1.30	3.27	1.34
1c. Uses many vivid images and examples.	3.43	1.22	2.57	1.36
1d. Frequently restates essential principles.	3.73	0.94	3.67	1.16
2. Lessons relate to students' background. The teacher:				
2a. Uses devices such as advanced organizers.	2.70	1.32	1.90	1.03
2b. Reminds students of previously learned materials.	4.03	0.96	3.63	1.13
3. The teacher exhibits enthusiasm.	3.97	0.96	3.37	0.96
4. The teacher shows a sense of humor.	3.03	1.19	2.73	1.41
5. Lesson objectives are clearly specified. The teacher:				
5a. States lesson objectives orally or in writing.	3.17	1.12	2.93	1.11
5b. Conducts formal and/or informal assessment.	3.87	1.11	3.87	0.78
5c. Provides immediate and corrective feedback.	4.37	0.72	4.07	0.83
6. Teachers use an appropriate pace to cover content.	3.93	0.91	3.30	1.06
Appropriate Level of Instruction				
7. Instructional strategies match students' abilities. The teacher:				
7a. Accommodates students' levels of prior knowledge.	3.53	1.01	3.17	1.02
7b. Accommodates students' different learning rates.	3.40	0.86	2.57	0.97
8. Grouping strategies enable students to work together or alone. The teacher:				
8a. Uses in-class ability grouping.	1.40	0.86	1.33	0.84
8b. Has a class that is homogeneous in ability.	2.90	1.09	3.33	0.92
8c. Uses cooperative learning arrangements.	1.43	0.68	1.40	0.89
8d. Bases individual instruction on mastery of skills and/or concepts.	2.37	1.33	1.80	1.13
8e. Uses individualized instruction.	2.47	1.48	1.80	1.06
Incentives for Learning				
9. The teacher arouses students' curiosity by:				
9a. Presenting surprising demonstrations.	1.80	1.06	1.43	0.77
9b. Relating topics to students' lives.	3.60	1.30	2.80	1.54
9c. Allowing students to discover information.	2.93	1.17	2.27	1.17
9d. Presenting intrinsically interesting material.	2.93	1.17	2.83	1.21
10. The teacher uses extrinsic academic incentives such as:				
10a. Praise and feedback.	4.17	1.18	3.53	1.17
10b. Accountability	3.90	0.89	3.43	1.07
10c. Homework checks.	3.33	1.42	3.47	1.25
10d. Waiting for responses.	3.80	0.89	3.43	1.14
10e. Guiding partial responses.	4.10	0.85	3.60	0.97
10f. Tokens and rewards.	1.87	1.36	1.47	1.04
10g. Communicating high expectations.	3.80	0.89	3.07	1.02

QAIT Items	Grouping			
	Academy		Control	
	Mean	*SD*	Mean	*SD*
10h. Small groups with individual incentives.	1.23	0.43	1.23	0.63
10i. Students encourage one another to achieve.	1.77	0.82	1.90	1.03
10j. Group contingencies.	1.33	0.71	1.33	0.66
11. The teacher uses extrinsic behavioral incentives such as:				
11a. Praise.	3.20	1.45	2.60	1.22
11b. Tokens and rewards for improvement.	1.47	0.86	1.47	0.94
11c. Group contingencies.	1.37	0.72	1.33	0.71
12. The teacher provides instruction that is appropriate for students' abilities: Efforts by the student lead to success.	3.33	1.40	2.80	1.06
Use of Time				
13. Allocated time: Necessary time is allocated for instruction.	3.90	0.80	3.80	0.71
14. Engaged rates:				
14a. The teacher uses effective management.	4.00	0.83	3.80	0.61
14b. Students attend to lessons.	3.50	0.73	4.03	0.49

The 40 items were grouped into the four main features of the QAIT: quality of instruction, appropriate level of instruction, incentives for learning, and use of time. Table 26 provides descriptive statistical information for each of the four subscales by group (Academy, control).

Table 26: Descriptive Statistics for SSOS-R QAIT Categories by Group

QAIT Category	Group			
	Academy		Control	
	Mean	*SD*	Mean	*SD*
Quality of Instruction	3.62	0.65	3.26	0.77
Appropriate Level of Instruction	2.50	0.74	2.20	0.54
Incentives for Learning	2.77	0.43	2.44	0.46
Use of Time	3.80	0.63	3.88	0.42

One-way ANOVAs were computed to determine whether statistically significant differences existed within these subscale variables (quality of instruction, appropriate level of instruction, incentives for learning, and use of time) by group (Academy, control). One of the four ANOVAs did identify a significant difference by group. With a moderate effect size of .74, the statistical significance was accompanied by practical significance. See Table 27 for a summary of these results.

Table 27: One-Way ANOVA Results for SSOS-R QAIT Categories

Category	df	F	p	Effect size	Favor
Quality of Instruction	1, 58	3.80	.056	0.50	Academy
Appropriate Level of Instruction	1, 58	3.22	.078	--	--
Incentives for Learning	1, 58	8.29	.006	0.74	Academy
Use of Time	1, 58	0.32	.574	--	--

CERC

The Classroom Environment and Resources Checklist (CERC) assesses the presence or absence of indicators of good classroom environments, as well as the visibility and use of a variety of instructional resources. A CERC form was completed at the end of each of the 60 classroom observations. Table 28 presents the percentages for the presence of 16 environmental indicators by group (Academy, control). For the Academy group, comfortable ventilation/temperature (100%); open, risk-free environment (100%); and adequate lighting (97%) were the most frequently seen environmental indicators. Least seen was distinct activity centers (3%). For the control group, comfortable ventilation/temperature (100%), adequate lighting (97%), and posted assignments (93%) were most frequently seen; least seen was distinct activity centers (0%).

Table 28: Numbers and Percentages for Presence of SSOS-R
CERC Environmental Indicators by Group

	Grouping			
	Academy		Control	
Environmental Indicators	N	%	N	%
Culturally mediated instruction	9	30%	5	17%
Student-controlled classroom discourse	7	23%	4	13%
Use of multiracial materials	8	27%	6	20%
Use of nonsexist materials	8	27%	10	33%
Posted classroom rules	24	80%	26	87%
Posted assignments	22	73%	28	93%
Cheerful and inviting classroom	28	93%	19	63%
Distinct activity centers	1	3%	0	--
Adequate lighting	29	97%	29	97%
Comfortable ventilation/temperature	30	100%	30	100%
Student work displayed	26	87%	17	57%
No distracting internal noises/interruptions	20	67%	24	80%
No distracting external noises/interruptions	20	67%	23	77%
Open, risk-free environment	30	100%	26	87%

Table 29 presents the percentages depicting the visibility and use of 18 environmental resources by group (Academy, control). For both groups, the resources most often seen in the

classrooms were a chalkboard and computer (100% for each). For the Academy group, the least often seen resource was games and/or puzzles (3%); for the control group, the least often seen was student manipulatives/hands-on materials at 3%. For both groups, the most often used resource was the classroom chalkboard (73% and 80%, respectively). The Academy group used workbooks/activity books, classroom library, map and/or globe, television, and video resources least often (0% each); the control group used games and/or puzzles, instructional aids/props, student-used equipment, and audio resources least often (0% each).

**Table 29: Numbers and Percentages for Visibility and
Use of SSOS-R CERC Instructional Resources by Group**

	Grouping							
	Academy				Control			
	Visibility		Use		Visibility		Use	
Instructional Resources	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Textbooks	28	93%	10	33%	30	100%	20	67%
Workbooks/activity books	4	13%	0	--	8	27%	4	13%
Worksheets/activity sheets	13	43%	11	37%	7	23%	7	23%
Journals/learning logs	12	40%	7	23%	13	43%	10	33%
Classroom library	18	60%	0	--	15	50%	2	7%
Reference materials	25	83%	1	3%	30	100%	2	7%
Map and/or globe	14	47%	0	--	11	37%	1	3%
Games and/or puzzles	1	3%	1	3%	4	13%	0	--
Instructional aids/props	11	37%	5	17%	10	33%	0	--
Science/lab table(s)	6	20%	1	3%	6	20%	1	3%
Classroom chalkboard	30	100%	22	73%	30	100%	24	80%
Student-used equipment	6	20%	5	17%	4	13%	0	--
Overhead projector	19	63%	7	23%	26	87%	7	23%
Television	27	90%	0	--	28	93%	8	27%
Computer	30	100%	5	17%	30	100%	7	23%
Student manipulatives/ hands-on materials	3	10%	3	10%	1	3%	1	3%
Audio resources	6	20%	3	10%	1	3%	0	--
Video resources	7	23%	0	--	17	57%	3	10%

SPC

The SPC measured five standards of effective pedagogy: joint productive activity, language and literacy development, contextualization, challenging activities, and instructional conversation. Each standard was rated on a 0 to 4 Likert-type scale (0 = *not observed,* 1 = *emerging,* 2 = *developing,* 3 = *enacting,* and 4 = *integrating*). An SPC form was completed for each of the 60 classroom observations.

Academy classrooms demonstrated the highest levels of use for contextualization (mean = 1.70, SD = 1.02). The standard found to have the highest level of enactment in the control classrooms was challenging activities (mean = 1.07, SD = 0.45). Both groups demonstrated lowest levels of enactment/integration for the standard of joint productive activity (means of 0.77 for Academy classrooms and 0.30 for control classrooms with SDs of 0.90 and 0.60, respectively). Table 30 provides descriptive and comparative statistical information for each item by classroom group (Academy, control).

**Table 30: SSOS-R SPC Category Descriptive Statistics
and Differences by Classroom Group**

	Academy			Control			Comparative Statistics				
SPC Category	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	**df**	**t**	**p**	**Dif.**	**d**
Joint Productive Activity	30	0.77	0.90	30	0.30	0.60	58	2.37	.021	0.47	0.62
Language & Literacy Development	30	1.53	0.94	30	1.03	0.56	58	2.51	.015	0.50	0.66
Contextualization	30	1.70	1.02	30	1.00	0.98	57.91	2.70	.009	0.70	0.71
Challenging Activities	30	1.53	0.78	30	1.07	0.45	58	2.85	.006	0.47	0.75
Instructional Conversation	30	1.50	0.78	30	0.93	0.64	58	3.08	.003	0.57	0.81

Table 30 also displays the results of t-tests that were computed to compare Academy teachers' and control group teachers' mean scores on the SPC items. Significant differences favoring Academy classrooms were found in each SPC category. Medium to large effect sizes, indicating practical meaningfulness in addition to statistical significance, were also found for every comparison.

Measure of Academic Supportiveness and Climate (MASC)

The four MASC subscales contain 19 (Student Belonging), 6 (Family Expectations), 7 (Student Academic Efficacy), and 7 (Family/School/Student Involvement) items, which respondents rated using a scale ranging from 1 to 5 (*not at all true* to *always true*). The ratings for each subscale were added together and divided by the number of items in each subscale to create a mean score for that subscale ranging from 1 to 5. Table 31 provides descriptive statistical summaries for the four subscales for the Academy and control students. Control students had higher subscale mean scores across all of the scales than did the Academy students. Standard deviations were fairly low to moderate for the control students, while the standard deviations for the Academy students were fairly moderate to high across the subscales, indicating greater dispersion within the scores for this group.

A statistically significant difference was found on one of the four subscales (Family Expectations). The difference favored the control students and had a large effect size (Cohen d column on Table 31), indicating practical meaningfulness. The remaining subscale differences were not significant.

Table 31: MASC Subscale Descriptive Statistics and Differences by Student Type

Subscale Name	Academy Students			Control Students			Comparative Statistics				
	N	Mean	SD	N	Mean	SD	df	t	p	Dif.	d
Student Belonging	12	3.47	0.80	12	3.62	0.68	22	0.48	.64	-0.14	--
Family Expectations	12	4.28	0.59	12	4.71	0.30	16.38	2.24	.04	-0.43	1.11
Student Academic Efficacy	12	3.75	0.57	12	3.76	0.65	22	0.05	.96	-0.01	--
Family/School/ Student Involvement	12	3.59	1.10	12	3.84	0.78	22	0.64	.53	-0.25	--

Student Attitudes Toward Self and School (SASS)

The four SASS subscales contain differing numbers of items: Teacher-Centric consists of nine items, Self-Efficacy contains 11, Leadership has 10, and Like School is composed of nine. Respondents rated SASS items using a scale ranging from 1 to 5 (*strongly disagree* to *strongly agree*). The ratings for each subscale were summed and divided by the number of items in each subscale to create a mean score for that subscale ranging from 1 to 5. Table 32 provides descriptive and comparative statistical summaries for the four subscales for Academy and control students. Academy students had a slightly higher mean than control students on one scale (Teacher-Centric), and the comparison sample of students had slightly higher means on two scales. The groups' means on the fourth scale, Like School, were fairly equivalent. Standard deviations were fairly moderate to high across all of the subscales, indicating greater dispersion within the scores for both groups. No statistically significant differences were found on any of the four subscales.

Table 32: SASS Subscale Descriptive Statistics and Differences by Student Type

Subscale Name	Academy Students			Control Students			Comparative Statistics				
	N	Mean	SD	N	Mean	SD	df	t	p	Dif.	d
Teacher-Centric	12	3.66	0.95	12	3.36	0.93	22	0.78	.44	0.30	--
Self-Efficacy	12	3.88	0.82	12	4.06	0.47	22	0.67	.51	-0.18	--
Leadership	12	3.36	0.81	12	3.78	0.66	22	1.39	.18	-0.42	--
Like School	12	2.99	1.15	12	2.93	0.87	22	0.16	.88	0.06	--

Faculty Interviews

Professional Development

The faculty interviews explored faculty members' perceptions of the nature and effectiveness of the professional development activities in which they participated. During the summer of 2004, faculty received special professional development about such topics as culturally responsive instructional strategies, assertive discipline, classroom management, and

various technology-related skills. According to the original CHANGES proposal, professional development for the teachers was to take place two weeks before the start of school and focus on Reading Across the Curriculum, Writing to Learn Across the Curriculum, Culturally Relevant Instructional Strategies (CRIS), Embedded Study Skills, and Graphic Organizers. While the teachers did recall focusing on these skills, they also explained that their professional development experience covered many other skills and concepts.

In particular, the faculty described working on "Marzano strategies" (see, for instance, Marzano, 1998, 2000, 2003; Marzano, Gaddy, & Dean, 2000; Marzano, Pickering, & Pollock, 2001). At least two faculty members, including the support teacher, traveled to St. Louis to learn Marzano strategies, and the support teacher facilitated the CHANGES professional development on these strategies on her return. Other professional development topics teachers remembered addressing included developing parent involvement skills, reviewing the expectations and goals of the program, learning how to make students comfortable, learning how to garner community involvement, honing classroom management skills, and reading research to enhance instruction. The faculty members agreed that professional development extended beyond their summer work. Specifically, they referred to their common planning time (described further in the next section), which occurred everyday, as a type of ongoing professional development. In addition to their daily common planning time, they also met one Saturday a month from 9 a.m. to 3 p.m. to review and refine their teaching skills.

Most of the faculty members believed that their professional development prior to the opening of school was effective and useful. They explained that the skills acquired directly affected their instruction, helped them grow as teachers, and provided necessary motivation for initiating a new program. However, the faculty expressed mixed feeling about the common planning time and Saturday meetings. They held that it was often useful but that some meetings or activities could have been eliminated. Ultimately, most of the teachers interviewed (4 out of the 5) had positive experiences with professional development both before and during the school year.

Curriculum and Instruction

According to the initial proposal, the curriculum for CHANGES was intended to consist of the required core courses and appropriate elective offerings. Study skills were to be embedded in the core courses, and some of the curriculum was to be interdisciplinary. During the interviews, when the teachers discussed and described the CHANGES curriculum, they often referred to more than the course offerings. They most often defined the purposes, content, activities, and organization of the CHANGES program (Walker & Soltis, 1997). As a result, while the courses offered in the Academy were largely the same types of courses taught in the regular high school, most of the teachers perceived the curriculum to be much different.

All of the teachers interviewed believed that the Academy curriculum was more rigorous than that of the rest of the school because the CHANGES students were held to higher standards. The goal of the program, according to one teacher, was to move students from average to above average performance. Most teachers perceived that mathematics was the most rigorous subject.

In addition to curricular rigor, some teachers also pointed to instructional strategies as being significantly different in CHANGES. One teacher perceived that their "curriculum was implemented by four teachers in core classes using best methods." In Capital High School, she held, some teachers used best methods; however, most did not. Additionally, the teachers believed that flexibility in scheduling made the curriculum different. It allowed for field trips, presentations, and other special activities.

Another fundamental aspect of the Academy curriculum and instruction mentioned by all of the teachers was the common planning time. Most teachers referred to it both as a type of professional development and as an aspect of the curriculum. Five days a week, the entire CHANGES faculty met for 45 minutes for lesson study, research, discussion, and other planning activities. The primary focus was lesson study, a Marzano strategy in which one teacher presents a lesson and the other teachers provide evaluation and critique. On some days, the CHANGES faculty looked at articles, reviewed test score data, or discussed particular students' progress and difficulties. On Wednesdays, they maintained parent contact by writing good-news cards and making phone calls. Most of the teachers said they enjoyed the process. However, some teachers perceived that some of the more experienced teachers did not always like it. One of the more experienced teachers confirmed that notion, claiming that "the common planning time did become redundant after a while . . . it could be more effective if they did it less often, especially at the end of the year."

Curricular rigor and instructional strategies, as noted above, aligned the Academy curriculum with the goals of CHANGES, according to all of the faculty members. However, some courses were believed to be more aligned with the goals than others. Mathematics classes were considered to be less aligned than the other classes, as were reading classes. However, reading may have been less aligned because the Academy did not get the reading program that program planners initially wanted.

Alternative Schedule

The alternative schedule was a marked difference between CHANGES and the rest of the school. The CHANGES students had 70-minute and 30-minute classes on an alternating schedule. All of the class changes were managed without a bell to alert teachers and students to the beginning or end of classes and breaks. According to one teacher, the modified block was intended to be used in the following manner: the 70-minute time was to be a "lab," during which teachers could facilitate cooperative learning activities and teach skills or concepts in depth. The 30-minute class was primarily for revisiting skills or conducting mini-lessons.

While most teachers believed that the alternative schedule was an effective teaching tool, some believed that it was not used effectively in all courses. Teacher B felt that some of the "older, more experienced teachers had difficulty with the 30 minutes because they tried to complete full lessons." Similarly, she observed that some teachers treated the 70 minutes as if it were a regular period, which resulted in the loss of students' interest. One reason, aside from those pointed out by Teacher B, that teachers may have used their time this way is related to how

a teacher perceives her course. Some teachers, for example, felt that their classes were not suited for labs and that the 30-minute class did not permit enough time to revisit skills. In contrast, other teachers thought that the 70-minute lab created a perfect environment to work on skills and concepts as a group, and to provide immediate feedback for students' skill development. These teachers may also have reserved the 30-minute classes to work on mini-lessons.

Regardless of the teachers' personal opinions about the alternative schedule, they all agreed that the students did not like the schedule. The teachers perceived that the students often did not get to see their friends and occasionally missed opportunities to participate in extra-curricula activities because of their schedule. Consequently, as Teacher D explained, "Students felt they were different, and they didn't like being separated from the others."

One commonly held belief was that the schedule disgruntled students and ultimately contributed to students' tardiness. Certainly, the teachers each acknowledged that the lack of a bell exacerbated the problem, but they perceived that students' dislike of the schedule was the main factor. Therefore, to accommodate the students and to create an atmosphere more conducive to teaching and learning, the teachers changed the schedule in the spring. CHANGES staff maintained the block schedule but matched the students' break time with that of other students in the school. Additionally, students had homeroom at the same time as the rest of the school; therefore, they could hear announcements about extracurricular activities and watch the closed circuit television program that all other students watched during homeroom. All of the teachers believed that the revision to the schedule created a better working and learning climate, diminished tardiness, and increased students' trust of teachers.

Parental Involvement

Parental involvement was planned to be a critical aspect of CHANGES. Academy staff were to work and communicate directly with parents to inform them of their children's progress and difficulties, and to encourage parents' to influence their children to work to high standards and stay focused on school work. Academy faculty seemed dedicated to achieving this goal. Before the school year began, the CHANGES faculty organized a picnic for the students and their families. To ensure a good turnout, they provided transportation to and from the picnic. When they organized a similar event in October, they had much less participation. One teacher concluded that involvement in activities was best when transportation was provided. In addition to events, teachers used their common planning time every Wednesday to contact parents by phone and mail. Some teachers were moderately successful with reaching parents by phone. However, some had difficulty because, as they perceived, parents often moved or changed phone numbers.

All of the teachers believed that the level of parental involvement and support that resulted from traditional encouragement activities (e.g., phone calls) was almost the same as the level of involvement of parents whose children were not enrolled in the Academy. However, they also believed that CHANGES garnered a greater degree of parental involvement through "nontraditional" activities. Teacher A explained:

> Parents came to school whenever their children were having problems with grades or teachers. They sought for their children—psychological help, anger management programs, and health information whenever the counselor suggested it. They followed through on all of the "extra" things the students needed.

Ultimately, the teachers agreed that parents were supportive when they were contacted. The parents came to the school when they were asked, even the parents of students who often had discipline problems. However, some thought that the level of parental involvement was not sufficient.

Challenges for the CHANGES Faculty

Virtually all of the teachers interviewed expressed pride in the accomplishments of the CHANGES program. However, they also described some of the more challenging aspects of teaching in the program. Teachers offered insights into the difficulties in their classrooms, as well as their thoughts on problems that resulted from an early shift in leadership roles in the program.

Teachers reported a variety of challenges. One teacher, for example, explained that garnering complete teacher buy-in was a significant challenge early in the year because veteran teachers did not want to change. Other teachers felt that the students' perceptions of the program posed a challenge. (Some students thought that CHANGES was a special education program and resented being associated with it.) Yet most often, and most adamantly, faculty members cited classroom management and behavioral problems as the most challenging aspect of CHANGES.

The behavioral problems ranged from extreme tardiness to tremendous disrespect toward teachers. Ultimately, at least 14 students (out of 70) were removed from the program because of poor behavior, and of those, 8 were sent to night school by the county board of education. Some teachers attributed their problems managing the students, in part, to the following:

- Teachers had difficulty communicating across cultures with a highly diverse student population. This suggests that their professional development on culturally responsive instructional techniques was not always effective.
- Teachers perceived the alternative schedule to cause tardiness and create a feeling of separateness among the Academy students.
- Selection of students for the program was inappropriate. According to the proposal, students were to be selected to participate in the Academy based on their seventh- or eighth-grade achievement test scores. The academy was to be composed of 60 to 75 new freshmen students whose achievement test scores fell between the 35th and 49th percentile. However, the teachers believed that the program selected several students whose scores fell below the 35th percentile, as well as students who had major behavioral problems, at least two of whom were on parole.

Although teachers believed that each of these factors may have played a role in their challenges, most of the teachers agreed that the behavioral problems were a direct result of problematic leadership.

As described previously, early in the year, the Academy administrator left CHS for administrative reasons. Therefore, according to Teacher C, the Academy program developed a shared leadership model, in which "all teachers had some voice," and in which the guiding teacher and the counselor were usually at the helm. While all of the teachers perceived that their leaders did a decent job, most felt that "they had too much responsibility to be very effective." By the second semester, a retired vice principal joined the staff to replace the administrator who left the program. He was there, according the teachers, no more than 3 days a week because, as a retired educator, he was only permitted to work a certain number of hours. Despite these attempts to compensate, some teachers reported that the program never fully recovered from the early change in leadership. According to Teacher D, had they had a vice principal from the onset, "it would have been a better program because as it stood, teachers didn't have the authority to properly discipline the students." Additionally, some teachers perceived that the new vice principal was not very effective. Teacher D continued, "Kids knew when he was there and used that knowledge to their advantage. Usually kids did not respond well to the teachers' discipline. This grew worse throughout the year." Leadership, according to the Academy faculty, is critical for maintaining a manageable school climate, and strong leadership was somewhat lacking in CHANGES.

SECTION 5: CONCLUSIONS AND RECOMMENDATIONS

      The following section presents discussion of conclusions regarding the implementation of the CHANGES initiative during the 2004-2005 school year. Each study theme is addressed in turn. Further, recommendations for future implementation of this or similar initiatives are outlined, as are recommendations for future evaluations.

Conclusions

Strategies and Processes Employed in Academy Classrooms

      Academy classes made use of a variety of instructional strategies and classroom processes throughout the school year. Teachers' implementation logs and classroom observations both revealed that setting and clearly stating goals and objectives for lessons was the most frequently used strategy. Teaching lessons based on state learning standards was the second most frequently employed strategy and was thought by teachers to be very effective. Given state and local curricula and requirements, we would expect that teachers would make great use of standards-based instruction and goal setting for lessons. Thus, this finding was not unexpected.

      CHANGES faculty reported that they made great use of instructional strategies that involved interaction with students. Strategies such as questioning or cueing students to check for understanding, active listening, giving feedback about student progress, and recognizing student effort were all reported in more than 90% of teachers' implementation logs. Active listening, the fifth most frequently used instructional strategy, was rated as the most effective, with very little variation among the teachers, as evidenced by the relatively small standard deviation. The other instructional strategies were also given fairly high ratings for effectiveness. Thus, CHANGES teachers felt that interacting with students through such methods was well received by the students and had a positive influence on classroom teaching and learning.

      Recognizing and reinforcing student achievements and efforts in the classroom was both a frequent instructional strategy and a frequent classroom activity. Achievement recognition activities occurred in 85% of the weeks reported in teachers' implementation logs. Reinforcement and recognition as an instructional strategy was noted in 94% of teachers' logs. In a related observation, Academy teachers frequently used incentives for student learning such as praise and feedback. Teachers' comments and reflections indicated that when students performed well academically (e.g., high grades on report cards), they seemed very proud of themselves and bragged about their accomplishments. Teacher praise and recognition of achievement may have added to students' sense of pride in their academic success.

      One way in which teachers might have recognized student effort and achievement was by posting or displaying student work. In 56% of their implementation logs, teachers noted that they had displayed student work during the week. However, student work displays were observed in 87% of classrooms during observations. The discrepancy in the rate with which teachers

acknowledged posting student work and the rate with which it was observed in their classrooms is probably inconsequential. Perhaps teachers posted student work for display for long periods of time, or perhaps their posting of student work coincided with the classroom observation schedule.

CHANGES teachers reported that they used a variety of strategies and approaches to illustrate concepts. Use of graphic organizers and nonlinguistic representations of concepts, reported in 79% of implementation logs, was frequently mentioned in teachers' comments and reflections. Comments indicated that students generally responded well to the nonlinguistic representations and graphic organizers. Although some students may have had difficulty with them at first, the majority of teacher comments indicated that the students liked these strategies for learning. The success of these instructional strategies may depend on students becoming accustomed to the different ways to represent concepts and organize information.

Another strategy frequently mentioned in teacher comments and reflections was cooperative learning groups. Although not observed frequently during classroom observations, teachers reported using cooperative learning arrangements in 66% of weeks reported in implementation logs. They were rated as an effective strategy, although the standard deviation of 0.89 indicates that there was quite a bit of variability in effectiveness across the logs. Teachers often commented on the success or difficulties they saw when using student learning groups. Occasionally, teachers noted that students did not work well with other group members because of personal conflicts, or that they spent a great deal of time socializing rather than focusing on the learning task. Teachers also frequently mentioned, however, that students were eager to work in groups, worked very well together (even when the members of the groups were not friends), and helped each other learn and understand concepts. Thus, cooperative learning arrangements were greeted with mixed results in Academy classrooms. Effective implementation of this strategy may depend on careful selection of group membership, cooperatively established classroom norms for group work, or close teacher or aide supervision to ensure that group time is spent on task.

Discipline issues were frequently mentioned in teacher comments and were noted as frequent events in CHANGES classrooms (70% of teacher logs). Teacher comments indicated that students were frequently tardy or acted out in response to changes in schedules (e.g., delayed schedules, holiday breaks). Disciplinary interventions, however, were the fourth most frequently used classroom management strategy (noted in 63% of logs). It is not clear, based on available data, what management strategies other than disciplinary interventions were used to address discipline issues in CHANGES classrooms. In their implementation logs, some teachers mentioned the need for consistent disciplinary interventions both in classrooms and throughout the Academy in general. Although classroom observers noted that Academy teachers used effective management strategies, it may be important to revisit the issue of discipline and establish consistent guidelines both for student behavior in the classroom and in the Academy.

Instructional strategies that were used least often in the Academy were minimally interactive practices such as note taking or summarizing and homework and practice. Homework and practice, when used, was rated least effective of all instructional strategies. Teacher comments indicated that students often did not complete homework assignments, thus hindering

the effectiveness and utility of such a strategy. The two strategies used least often were asking students to compare, contrast, classify, or use analogies or metaphors, and generating or testing hypotheses. These strategies, despite their infrequent use, were rated highly in terms of effectiveness. Teachers in all subject areas employed the strategy of comparing/contrasting with fairly equal frequency. Of the 53 instances of generating or testing hypotheses, however, 46 occurrences were noted in the areas of mathematics and science. When teachers in other areas used this strategy, they consistently rated it as effective. It is not clear why teachers in the non-math/science subject areas did not make more frequent use of hypothesis generation or testing. It could be that teachers in these areas (e.g., English, history) perceive that this strategy is most effective for subject areas or topics other than their own.

Differences Between Academy and Control Classrooms

Academy and control classrooms were fairly similar for many factors measured during classroom observations. However, one important difference between the Academy and the rest of Capital High School's ninth-grade program is the subjects taught. In the Academy, students take a reading course as part of their required course work, but ninth-grade students at CHS are not required to take a reading class. Thus, eight reading classes were observed in the Academy, and only two reading classes were observed in the control group.

In terms of student engagement, there were fairly similar rates of behavior across both groups. Students in the control group, however, were on task significantly more often than their peers in the Academy. Most CHANGES students were on task (77%), but the rate was not comparable to the control group (87%). It is important to remember that in observations using the SSOS-R, students who are not on task may be classified as being waiting (e.g., for the next task, for assistance), out of the room, or off task (e.g., specifically engaged in some off-task behavior). Off-task behavior and the number of students waiting did not differ between the two groups. The Academy, however, experienced a significantly higher rate of students being out of the room. This observation could be attributed to the "bell schedule" of the Academy, which did not have bells to sound the beginning and end of classes. Rather, students relied on classroom clocks or their watches to get to class on time. The lack of bells sounding could have contributed to students' tardiness (frequently mentioned in teacher and counselor implementation logs), which would have been revealed as students being out of the room during SSOS-R observations.

SSOS-R observations permit evaluators to examine the groupings and activities of students and teachers in the classroom. Teachers, aides, and students can be involved in interactions, working alone, performing management activities, or engaging in social activities (or in other ways be uninvolved in the activities of the class). Academy and control classrooms were comparable in the number of students involved in interactions with other students, students working alone, and students being social or uninvolved (i.e., there were no differences between the groups). In the control group, however, teachers were involved in interactions and management activities with significantly more students than teachers in the Academy. Thus, more students were working interactively with teachers in control classrooms. This could indicate that teachers in Academy classrooms were more often working with individuals or small groups of students rather than providing instruction or lecture to the class as a whole.

The COF instrument of the SSOS-R permits observers to record the number of minutes spent per observation period in each of 28 discrete activities. The 28 activities can then be grouped into four categories (teacher led, student led, management/organization, and off task; see Table 22), and a mean number of minutes spent on each activity category can be computed. In this evaluation, observers focused alternately on the teacher and on a target student. When the focus of the observation was the target student (i.e., the observer was recording the number of minutes the student spent engaged in activities), only one significant difference emerged. Students in control classrooms spent more time on teacher-led activities during the student focus of observations. When the focus of the observation was the teacher, Academy classrooms spent significantly more time on teacher-led activities and on management or organization.

The difference between the classroom groups in minutes of teacher off-task behavior was noticeable, but not significant, in that Academy teachers spent 1.75 minutes per hour off task and control group teachers spent slightly more than 4 minutes an hour off task. Combining the mean number of teacher and student minutes spent off task reveals that Academy classrooms spent 2.36 fewer minutes per hour engaged in off-task activities than did their control classroom peers (7.56 minutes versus 9.92 minutes, respectively). The difference can be attributed to Academy teachers' low number of off-task minutes. This finding indicates that Academy teachers were very successful at staying focused on appropriate tasks during class time, even more so than their control group peers.

Despite the slight differences in the number of minutes teachers spent off task, observers rated both Academy and control group classrooms equally well in terms of use of classroom time. Teachers in CHANGES classrooms, however, were rated significantly higher than those in control classrooms in terms of the use of incentives for learning. CHANGES teachers were rated almost significantly better than their peers in terms of quality of instruction (the *p* value for the test was .056, just higher than the established alpha level of .05; see Table 27). Academy classrooms were also rated slightly better in terms of appropriate level of instruction. These findings indicate that Academy teachers were more successful than their control group peers in delivering high-quality instruction and providing appropriate motivation and encouragement for their students to learn. They were also slightly more successful at gauging student learning needs and providing instruction that suited those levels.

CHANGES faculty were also more successful than their control group peers in creating classroom environments that demonstrated equity as well as sensitivity and responsiveness to students' cultures. In comparison to their control group peers, Academy teachers used more culturally mediated instruction, more student-controlled discourse, and more materials that were multiracial. Additionally, Academy classrooms were much more likely to be cheerful and inviting and to have student work displayed around the room; all of them demonstrated open and risk-free environments. These findings all indicate that, to a much greater degree than control group teachers, CHANGES faculty were successful in creating equitable, inviting, and safe learning environments for students.

Another indicator of Academy teachers' success in creating culturally responsive teaching and learning environments is evidenced by observation data collected using the SPC.

The five criteria that compose the SPC are markers of effective pedagogy and, according to Tharp and colleagues (2000), are extremely effective strategies for teaching students who are culturally, linguistically, and economically diverse and who may not be as successful in school as some of their peers. Academy teachers enacted the criteria of the SPC significantly more than their control group peers. That is, to a much greater degree than teachers in other CHS classrooms, CHANGES teachers worked closely with their students (e.g., via joint productive activities) to achieve challenging learning goals. Academy teachers were more successful in making their content relevant to students' lives and experiences (contextualization) and in engaging students in instructional conversations that, in part, could help students' develop better language skills. This greater implementation of effective pedagogy in CHANGES classrooms is promising and may have helped students learn more than they might have, had they not participated in CHANGES. Further, the close relationships between teacher and student that these teaching strategies may have engendered may have helped students feel that they were important to their teachers and that their teachers had high expectations of them (see the discussion of student attitudes below).

Given that Academy teachers noted a high degree of tardiness among their students, and given that class movement bells for the regular school population rang during Academy class time, one might expect that there would be a higher level of internal and external distractions and interruptions in Academy classrooms. This expectation was confirmed by classroom observation data. Control classrooms were more likely than CHANGES classrooms to have no distracting noises or interruptions, either external or internal. Thus, Academy classrooms had a greater prevalence of distractions and interruptions.

Differences in the rate with which Academy and control teacher used various resources may further indicate instructional differences. Academy teachers were observed to make much less use of textbooks, workbooks, television, and video resources and much greater use of activity sheets, games, props or other instructional aids, and student manipulatives or hands-on materials. These differences could indicate that Academy teachers relied less on the traditional methods of presenting material (e.g., textbook readings, movies) and made greater use of games and other hands-on methods for engaging students in the presentation of instruction.

CHANGES was designed to encourage teachers to use a variety of instructional strategies and methods of presenting material to the students. The purpose of encouraging teachers to use a variety of strategies, presumably, was to increase the likelihood that most or all students would respond to some method of presentation; become engaged in the learning; and, consequently, learn more in the CHANGES classroom. The findings of this evaluation indicate that Academy teachers did use a variety of strategies and that, in some ways, those strategies were different from those used in the regular CHS ninth-grade classrooms. However, because Edvantia evaluation staff did not have access to student academic outcome data, no conclusions can be made about the effectiveness of those strategies in comparison to those used in other CHS classrooms.

Differences Between Academy and Control Students' Attitudes and Perceptions

Edvantia staff assessed the attitudes and perceptions of both Academy and control students. In general, there were no differences between CHANGES and control students in terms of their perceptions about their school and families' supportiveness and climate for learning. One notable exception relates to familial expectations. CHANGES students reported that they felt like their families had lower expectations of them in their academic endeavors than control students reported. The difference was very strong. These students also reported slightly lower perceptions that their families and schools were working together with them in their education. In teacher and counselor implementation logs, comments often hinted that students might have little support at home. It may be worth noting, however, that CHANGES students generally rated "Family Expectations" higher than the other three scales addressing students' perceptions (MASC). Therefore, it may be reasonable to conclude that students in the Academy did think that their families had high expectations; they just did not perceive those expectations to be as high as expectations perceived by their control group peers.

It may also be important to note that there were no differences between control and CHANGES students in terms of perceptions of academic self-efficacy and belongingness to their schools. Therefore, we can conclude that Academy students felt as confident as their control group peers about their ability to do well academically. This finding is meaningful because teachers stated that some students resented being in the CHANGES program because they thought it was a special education program. If students believed that they were being placed into a program for "special students," or that their school or administration did not have confidence in their ability to do well in school, it could have become a self-fulfilling prophecy in which students "lived down" to the low expectations they thought their school had for them. The finding of no difference on this scale, then, indicates that the students did not believe that they could not succeed in school. The lack of a difference could indicate a kind of defiance in Academy students (e.g., "You placed me in this program because you think I can't do well, but I know that I can do well."). It could also indicate that CHANGES teachers were effective in expressing high expectations for their students and communicating that they believed students in the Academy were capable of doing well.

Students in the Academy and control group also did not differ in their attitudes toward themselves and school. Control students had slightly more confidence in their ability to identify problems and take action; further, they had a slightly better perception of themselves as leaders. Academy students had a slightly more positive perception of their teachers' supportiveness and attitudes toward students. That is, in comparison to the control group students, Academy students felt more like their teachers had positive attitudes toward them and supported their academic endeavors. This finding suggests that Academy teachers were somewhat successful in demonstrating that they cared about how well their students performed in school. These differences were not significant, however. Further, Academy and control group students did not differ in terms of how much they enjoyed learning or took ownership of their learning; neither group seemed to have a high degree of liking for school. Therefore, we can conclude that Academy and control students were not very different from one another in terms of their

perceptions and attitudes about themselves and school. The only exception is their perceptions of their families' expectations of them, discussed above.

Summary

The purpose of this study was to examine the implementation of CHANGES. Evaluators discovered that, consistent with the intentions of the initiative, CHANGES faculty made use of a variety of instructional practices. All teachers and the counselor had regular contact with parents of CHANGES students. Teachers seemed to express a greater degree of comfort interacting with culturally diverse students in their classrooms than with culturally diverse parents. CHANGES teachers' classroom practices were of higher quality and were significantly more culturally responsive than those of their counterparts in regular classrooms. However, students in regular classrooms were more often on task. Discipline issues were frequent concerns of Academy faculty; inconsistent procedures and lack of a central administrator devoted solely to CHANGES may have exacerbated discipline disruptions. At the end of their freshman year, CHANGES students were remarkably similar to their control group peers in terms of perceptions and attitudes about themselves and their educational experiences. Further, CHANGES students felt slightly more like their teachers had positive attitudes toward them and supported their academic endeavors. Although this study had methodological challenges, findings suggest that the CHANGES initiative was successful in promoting a positive ninth-grade classroom experience for the students involved in the program. Further study is needed, however, to assess the impact and effectiveness of the Academy on student academic outcomes.

Recommendations

Based on the findings of the implementation study, and based on the conclusions drawn from those findings, several recommendations are offered both for future implementation of CHANGES or similar initiatives and for future evaluations. Recommendations are presented first for future implementations of the CHANGES program. Recommendations for future evaluations of similar programs follow.

Recommendations for Future Implementation

First, and perhaps most importantly, the Academy needs to have a full-time administrator. The removal of the first administrator early in the year impacted the entire implementation. Although CHANGES faculty tried to cope with the change and a part-time administrator was employed during the second semester, the absence of a full-time administrator who was completely devoted to CHANGES most likely affected both students and teachers in ways we may not be able to measure. A full-time administrator would be able to monitor and deal with Academy-wide discipline issues, support teachers' classroom management policies, and follow up on contacts with parents about both positive and negative occurrences in school. Further, the administrator would be able to handle both routine and special requests (e.g., from

the evaluators), thereby allowing the Academy counselor and support teacher to devote their time to their stated responsibilities.

Although a full-time administrator will resolve some of the discipline concerns expressed by CHANGES faculty during the 2004-2005 school year, the Academy should establish a discipline or behavior management plan from the outset. Responses to teacher and counselor implementation logs indicated that discipline issues were handled as they arose and that there might not have been consistency throughout the Academy or over time. A specific plan for dealing with discipline issues consistently should be in place at the outset of future implementations. Such a plan may also eliminate the strategy of using field trips as behavioral rewards; that strategy was a concern for many teachers because often, those students who were not eligible for them may have benefited the most from them. Rather, field trips might be planned to include all students, regardless of past behaviors.

CHANGES faculty and staff need continued support for culturally responsive instruction and interactions with students and their parents. Findings indicate that teachers were successful in using culturally responsive instructional strategies and creating responsive learning environments for their students. Teachers' interview comments, however, suggest that they still felt like there were difficulties in communicating with the parents of such a diverse student population. Therefore, resource teachers or consultants should continue to provide support for culturally responsive instruction; further, their responsibilities should be broadened to include the provision of support for culturally responsive interactions with the parents of diverse students.

To the extent possible, CHANGES and CHS faculty should encourage family involvement in students' schooling. Attempts were made to involve parents during the 2004-2005 school year, and those efforts were met with mixed success. However, because CHANGES students felt a slightly lower sense that their families and schools were involved in their schooling and a significantly lower sense that their families had high expectations of them (when compared to similar control students), it is important to try to foster as much familial involvement and investment as possible. Perhaps one way to achieve this goal is to provide regular and frequent updates to parents about their child's performance. Teacher implementation logs indicated that updates to parents seemed to motivate some students to apply themselves more to their academic work. Future implementations could build on this strategy and provide regular updates to parents about students academic work, behavioral performance, school activities, and so on. Included with these updates could be explicit invitations to attend field trips, presentations, classes, or other special school activities.

Teachers should also continue to use interactive instructional strategies. Teacher comments indicated that students, for the most part, enjoyed the interactive activities and were very engaged in those activities. Excitement about the activities was often mentioned. Teachers, then, can use interactive strategies to capitalize on Academy students' senses of excitement and curiosity.

In the future, CHANGES staff should be mindful that changes or alterations in students' regular schedules or Academy policies can have a great impact on students. Students were often noted to be "hyperactive," defiant, or generally wound up when there were changes in their

regular schedules (e.g., changes to the bell schedule, delays for clubs or assemblies). Although schools have no control over some schedule changes (e.g., weather delays or closings), every attempt should be made to avoid unnecessary alterations, especially dramatic changes midterm or midyear. Expectations should be established at the beginning of the year and adhered to with minimal modification.

Finally, CHANGES and CHS faculty should encourage students to participate in school and Academy activities and provide ample opportunity for students to interact with their fellow freshmen. Several teacher comments indicated concern that CHANGES students felt separate from the rest of the school, and although the differences were not significant, CHANGES students did feel slightly less like they belonged to the school than did their control group peers. Effort should be made to minimize students' feelings of isolation from the school community by encouraging participation in school clubs, events, and activities. Midway through the 2004-2005 school year, CHANGES staff attempted to provide opportunities for Academy students to interact with students in the general CHS population by changing the bell schedule to align students' break times. Such strategies should be employed from the start of the year in future implementations.

Recommendations for Future Evaluations

Future implementations of CHANGES or similar initiatives should be evaluated by an independent third party. The following recommendations are supplied to help future evaluators conduct the most effective evaluation possible.

First, evaluators and Academy staff need to establish written expectations for both the evaluators and CHANGES staff. A memorandum of understanding would suffice to provide all parties with written agreements about who is responsible for what activities. The agreement should include expectations, timelines, and procedures for timely communication. Further, the agreement should provide appropriate guidelines for recourse of action should the parties not fulfill their agreed-upon obligations.

Establishing timely communication will be key for future implementation and will be greatly aided by the addition of a full-time Academy administrator. In the current year's evaluation, the removal of the administrator contributed to difficulties in communication. Evaluators, for instance, were not notified when the Academy bell schedule changed midyear, and often, evaluators' requests, phone calls, and e-mails were not returned in a timely manner. Much of the communication difficulties can be attributed to the lack of a central staff member solely devoted to CHANGES administration.

Evaluators and CHANGES staff also need to establish a more effective strategy for obtaining parental consent for participation in evaluation activities. The evaluation was greatly impacted by difficulties in obtaining consent from parents both of CHANGES and control students. Because of these difficulties, the evaluation had to be redesigned midyear, thereby eliminating the proposed pretest and weakening evaluators' ability to draw strong conclusions about the impact of the CHANGES initiative on students' attitudes, perceptions, and skills.

Parental consent must be obtained for all minor students who will participate in research and evaluation activities. This important requirement will not change, and all stakeholders in evaluation must work together to establish an effective, efficient mechanism for obtaining the return of signed informed-consent forms.

Data collection instruments used in this evaluation were sufficient for answering research questions and could be used in future evaluations. Minor changes to the implementation logs for teachers and counselors should be made, however, to ensure that instructions are explicit and clear. The inclusion of specific instructions will ensure that evaluators and faculty completing the instruments have a shared understanding of what is expected and what the instruments are intended to accomplish in terms of the evaluation. Classroom observations completed with the SSOS-R instruments were extremely useful in examining classroom practices and resources used in the Academy. Further, they helped explicate similarities and differences between Academy classroom instruction and that occurring in regular CHS classrooms, particularly with respect to culturally responsive classroom practices (as measured by the SPC). Evaluators encourage the use of the SSOS-R in future evaluations of this type.

Future evaluations should explicitly examine student academic outcomes. Although CHS faculty planned to examine student outcomes, such as GPA and student performance on the Terra Nova exam, the evaluation would be strengthened by explicit examination of such outcomes. At a minimum, student GPAs should be examined for each reporting period. Continued administration of a standardized test such as the Terra Nova would be beneficial. Preferably, in addition to GPA and academic testing, other student outcomes, such as disciplinary referrals, tardies, and absences, will also be tracked as part of the evaluation. Future evaluations should also employ a pretest/posttest design, as originally proposed for this evaluation. Of course, such a design is predicated on the presumption that parental consent can be obtained for all students in a timely manner.

CHS and CHANGES faculty may wish to examine the academic outcomes for CHANGES participants throughout their time in high school, as consistent with the stated goals for the program (e.g., increasing the number of low-performing students enrolling in advanced placement and honors courses during their junior and senior years). If this is the case, CHS and CHANGES administrators should collaborate with evaluators to establish a long-term evaluation plan for data collection, analysis, and reporting.

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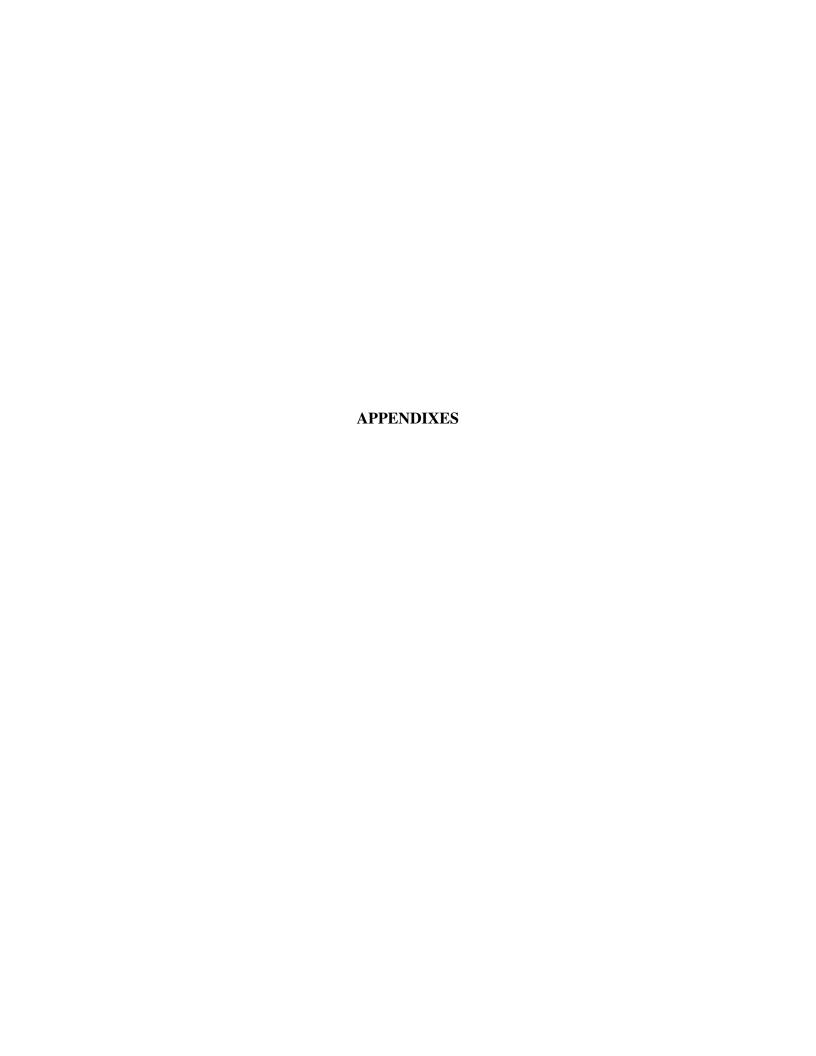
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APPENDIXES

Appendix A:

CHANGES Teacher Implementation Log

AEL CHANGES Teacher Implementation Log

Week: _____   **Teacher ID:** _____

This week's learning goals were:	How will I know that students learned this week?

Number of parent contacts made during the past week:

*Please check the box to the left of the instructional strategies used during the past week. Please indicate the effectiveness of each instructional strategy checked (at left) by **bolding** or <mark>highlighting</mark> one number from 1 to 5 (at right).*

Instructional strategies used during the past week:	Not at all Effective				Extremely Effective
Set goals or objectives for lessons	1	2	3	4	5
Lessons and/or instruction were related to state learning standards	1	2	3	4	5
Gave information and/or illustrated concepts with a variety of approaches/strategies	1	2	3	4	5
Questioned or cued students to check for understanding	1	2	3	4	5
Asked students to compare, contrast, classify, or use analogies/metaphors	1	2	3	4	5
Connected new information to prior knowledge	1	2	3	4	5
Active listening to student responses	1	2	3	4	5
Summarizing or note taking	1	2	3	4	5
Graphic organizers or non-linguistic representation	1	2	3	4	5
Learning groups/cooperative learning	1	2	3	4	5
Scaffolds instruction	1	2	3	4	5
Generated or tested hypotheses	1	2	3	4	5
Provided feedback to students about progress toward objectives	1	2	3	4	5
Reinforced and/or recognized student effort	1	2	3	4	5
Homework and practice	1	2	3	4	5

Comments/Reflections about instructional strategies used during the past week:

AEL CHANGES Teacher Implementation Log

Classroom procedures and classroom management strategies used during the past week:	Activities/events that occurred in the <u>classroom</u> during the past week:
__Rules, schedule, procedures, etc. posted in classroom __Clearly stated goals, objectives, and expectations __Visible/posted Rubrics and/or scoring guides __Displayed student work/homework in classroom __Built positive teacher-student relationships __Disciplinary interventions __Other (*please describe*):	__Discipline issues: __Achievement recognitions __Speaker or outside presentation __Student presentation(s) __Technology time/activities __Lab(s) __Other (*please describe*):

What events (if any) happened in the <u>school</u> that might affect students (in terms of concentration, achievement, emotions, etc.)?

Reflection: Ideas, insights, suggestions, changes needed:

Other comments (if any):

Thank you!

Appendix B:

CHANGES Counselor Implementation Log

AEL CHANGES Counselor Log

Week: _____   **Counselor ID:** _____

Number of students seen this week:	Number of parents contacted this week:

Reasons students sought counseling this week:	Referrals made this week:
__Academic counseling __Career counseling __Home/family issues __Social problems/issues outside of school __Conflicts/issues with school staff __Conflicts/issues with other students __Other psychological needs __Teacher referrals __Other (*please describe*):	__Student assistance team __School nurse __Mental health/psychological services __Law enforcement __Social services/DCFS __Social workers/case managers __Upward Bound __Other (*please describe*):

What events (if any) happened in the <u>school</u> that might affect students (in terms of concentration, achievement, emotions, etc.)?

Consultation:

Reflection: Ideas, insights, suggestions, changes needed:

Other comments (if any):

Thank you!

Appendix C:

Parental Consent Information and Form

August 26, 2004

Dear Parent,

Capital High School continually looks for new and better ways to improve teaching
and schooling practices to make sure that all students will have the opportunity to meet their full
potential. This year, teachers at Capital will be implementing a variety of instructional practices
aimed at helping ninth graders succeed during their first year in high school. It is important to
research these practices to find out what works best for the students.

AEL, a research organization in Charleston, will research the teaching strategies and schooling
practices used with freshmen at Capital High School during this school year. The purpose of the
research is to find out what effects various teaching practices have on students' attitudes and
achievement during their freshman year.

Your child has been selected to participate in this important research study. AEL researchers will
ask your child to complete questionnaires about their attitudes and experiences in the school and
will observe instruction in your child's classroom a few times during the year. AEL researchers
may also look at your child's academic record for this school year. There are no known risks
associated with this project that are greater than those ordinarily encountered in daily life, and no
participants (students, faculty, or administrators) will receive direct compensation for this study.
Information gathered in this project, however, will be analyzed and shared with Capital High
School faculty to inform instructional and administrative practices that can benefit your child.

All information and data gathered during this project will be held in the strictest of confidence.
Data will be stored in secure locations at the AEL offices in Charleston. Only authorized AEL
staff members (such as the lead researcher and the research assistant) will have access to the
information. Data will be kept at the AEL office for a length of time in accordance with industry
standards (usually about five years). AEL researchers value participants' confidentiality and will
take all reasonable precautions to protect your child's identity and confidentiality.

Results of this research will be reported to administrators at Capital High School and the
Kanawha County school board. No information that could identify your child will ever be
released to the public, and your child will never be identified by name or role in any reports that
are written about the research.

Please sign and return the enclosed permission form to allow your child to participate in this
important research. Your child's input will be essential to help us discover what strategies are
most helpful for high school freshmen.

If you have any questions about this research, please contact Georgia Hughes at AEL (347-0413 or hughesg@ael.org). You may also contact Merrill Meehan, Chair of AEL's Institutional Review Board (347-0432 or meehanm@ael.org), which is charged with protecting the rights of our research participants. Please keep this letter for your records when you return the enclosed permission form.

Thank you very much for your time and for allowing your child to participate in this important research.

Sincerely,

Georgia Hughes
Research & Evaluation Specialist

Phone: 347-0413
E-mail: hughesg@ael.org

Capital High School - AEL
Informed Consent Form
CHANGES Evaluation

   I understand that my child has been selected for participation in a study to examine how various instructional strategies affect new freshmen at Capital High School. I understand that AEL researchers will visit my child's classroom periodically during the school year and observe instruction. I also understand that individual children will be surveyed occasionally by AEL researchers, and that the researchers will review student information such as achievement test scores, grade point average, and other relevant records (such as classroom grades). Findings of the study will be shared with policymakers, researchers, educators, parents, and other interested persons through various means, such as periodic AEL newsletters, conference papers, journal articles, books, and presentations. Names and identifying characteristics will not be used in any publication of study findings, and AEL will maintain my child's confidentiality. I will be given the opportunity to review any information that is unique to my child (for instance, direct quotation) prior to its publication.

   Information provided for the study will be held in strictest confidence, with the exception that if the researcher obtains clear evidence of unlawful behavior that could result in physical or mental damage to a minor, the researcher is required by statute to report such evidence to the appropriate authorities.

   I understand that I am free to withdraw permission for my child's participation in the study at any time by notifying the teacher, and that there will be no negative consequences from AEL as a result of this withdrawal. My signature on this consent form indicates my willingness for my child to participate in the study. The researcher's signature on this form indicates that the researcher has given me information about the study.

Child's Name: _____

Parent or Guardian: _____

Signature: _____

Date: _____

AEL Researcher: _____

Date: _____

Appendix D:

Interview Protocol for Faculty Interviews

CHANGES Faculty Interview Protocol

The purpose of the interview is two-fold: to assess the extent to which each of the major components of the CHANGES program was implemented; and to gauge the degree to which the implementation of the project was consistent with the original objectives.

INTRODUCTORY COMMENTS & QUESTIONS

How did you become involved with CHANGES?

How many years of teaching experience do you have?

How many years have you been at Capitol?

PROFESSIONAL DEVELOPMENT

How often did you participate in professional development?

In what kinds of PD activities did you participate?

CURRICULUM & INSTRUCTION

How does the curriculum of the academy differ from that of Capitol High School?

Consider the goals of CHANGES. In what areas is the curriculum aligned with the goals and where is alignment was lacking?

What, in your opinion, are the biggest challenges of teaching in the academy?

How did you use the common planning time?

SCHEDULE

What did you do differently with the 70-minute period than you did with the 30-minute period?

What was the rationale for changing the bell schedule?

PARENTAL INVOLVEMENT

What kind of support, if any, did you receive from parents?

LEADERSHIP

Tell me about the leadership for CHANGES.

Contacts:
Georgia Hughes, AEL Research & Evaluation Specialist I (304-347-0413; hughesg@ael.org)

Appalachia Educational Laboratory, Inc. (AEL) in Charleston is collaborating with Capital High School to evaluate the Capital High Academy for Ninth Graders Exceeding Standards (CHANGES). As part of the evaluation, we are conducting interviews with CHANGES faculty such as yourself to find out more about how the program functioned and what impact it had on teachers and students.

We are asking that you give us your honest feedback and opinions about various aspects of CHANGES. The interview should require about 30 minutes of your time. Participating in this interview should involve no risks to you that are any greater than those you experience in your daily life. Your participation in this survey is voluntary; you may discontinue your involvement at any time without any reprisal or penalty.

AEL staff will take every reasonable precaution to protect your confidentiality throughout this project[2]. The information that you provide will be combined with information from other CHANGES faculty and reported all together. Your individual responses will not be singled out and you will never be identified by name or role in any report(s). Only your interviewer (Aaron Baker) and Georgia Hughes will have access to your responses.

Taking part in this interview will allow you to provide important and useful feedback to CHS and the CHANGES program, which will use the results of this research to inform future implementation of CHANGES or similar initiatives. Although you will not be compensated directly for your participation, your thoughts and suggestions will help CHS and CHANGES administrators make important decisions about how they can best serve the needs of CHS students and faculty.

Your participation in the interview indicates your consent. If you have any questions or concerns about this interview, including its purpose or expectations of you as a participant, please contact Georgia Hughes (304-347-0413 or hughesg@ael.org). If you have any questions or concerns about your rights as a participant in this research, you may contact Dr. Merrill Meehan, AEL Institutional Review Board (IRB) Chair (304-347-0432 or meehanm@ael.org).

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[2] Data collected for research purposes are stored in compliance with ISO 17799 requirements for access, security, and redundancy. Data are stored in an encrypted format in a centralized, electronically and physically secure server at AEL for a period not to exceed five years. All electronic data of a personal nature are safeguarded and available only to those project leaders, staff, and technologists having a need to know within the specific criteria as set forth in the approved project plan. The AEL Institutional Review Board (IRB) has the authority to inspect consent records and data files only to assure compliance with approved procedures.

Appendix E:

Administration Instructions for Student Instruments

Instructions for Administering the AEL MASC and AEL SASS

1. The two questionnaires are placed inside the large envelopes and collated in bundles of 10. Contact the CHANGES counseling office for additional copies of each if necessary.

2. Administer the questionnaires to students **during the arranged time period.** **Completion of the questionnaires should take approximately** 20-30 minutes and should be given without interruption.

3. Students should be instructed not to discuss their responses with others during the administration or thereafter.

4. Please ask students to fill in the bubbles completely and not to use checkmarks or Xs to respond. Also, please instruct them to fill in **only one bubble per question**.

5. Students can use either a pencil or a pen to complete the survey. Please ask them to use a pen with blue or black ink only, no colors such as red, green, etc.

6. If a student wants to change an answer and is using a pencil to fill out the survey, please instruct him or her to erase completely the incorrect response. If a student is using a pen, instruct him or her to put an X through the incorrect response. If a student makes more than one mistake and would like a new copy of the survey, feel free to give him or her one. Collect and destroy all incomplete surveys.

7. Tell students not to make any additional marks on the survey. This is a scannable document and additional marks can cause problems in the scanning process.

8. If a student has a question about the meaning of a word contained in a question, you may define the word. However, we ask you not to explain or rephrase the entire question. In addition, please do not instruct students about how to respond to particular questions.

9. Instruct the students that they are to place their completed surveys back inside the large envelopes and seal them. When all students have completed the questionnaires, please collect the sealed envelopes and them and place them in one of the large white envelopes provided. Write whether the group of students was "Academy" or "non-Academy," and return the envelopes to the CHANGES counseling office. Return any blank survey forms in the envelope with the completed surveys.

A report of compiled survey results will be sent to the principal when the analysis is completed. You may want to reassure students that no students or teachers will be identified by name in the report and that no one will see their answers except for the researchers.

Appendix F:

Student Assent Information

AEL
P.O. Box 1348
Charleston, WV 25325-1348
Phone: 304-347-0400
Fax: 304-347-0467

AEL & Capital High School
2005 CHANGES Student Survey

Capital High School is looking for ways to help freshmen students. We need to find out how freshmen like you feel about school and what you think about things at your school. A company here in Charleston called AEL is doing the study, and a woman named Georgia Hughes is the head researcher. Your parents have been told about this study, and they have said that it is alright for you to participate **if you _want_ to do so**.

Today we are asking you to answer some questions about yourself and what you think and feel about your school. There are no right or wrong answers. You do not have to answer the questions, but we hope that you will. Your grades will not be affected at all whether you decide to answer the questions or not, and you will not get rewarded or disciplined either way. Your answers will be combined with other kids' answers. Your answers will be used just for this research project and will never be given to your teachers, your parents, or anyone other than the researchers. The researchers will keep your questionnaires in a secure place where no one else can see them. A report will be written about the findings of this study, but your name will never be reported. If you do not want to answer a question, you may leave it blank.

There are two questionnaires for this survey: a green one that is two (2) pages long and a yellow one that is three (3) pages long. When you have finished answering the questions on both questionnaires, please place them both back in the large envelope and seal it. Your teachers have been instructed to leave the envelopes sealed so they cannot look at your answers.

If you do not understand some of the directions or questions, please ask your teacher for help. If you have any questions about this project, you can call Georgia at AEL. Her phone number is 347-0413, and her e-mail is hughesg@ael.org.

Thank you for taking the time to fill out these questionnaires!
We really appreciate your help with this important research!

Appendix G:

Evaluation Standards Checklist

Checklist for Applying the Program Evaluation Standards

To interpret the information provided on this form, the reader needs to refer to the full text of the standards as they appear in Joint Committee on Standards for Educational Evaluation, *The Program Evaluation Standards* (1994), Thousand Oaks, CA, Sage.

The Standards were consulted and used as indicated in the table below (check as appropriate):

Standard & Descriptor	The Standard was addressed	The Standard was partially addressed	The Standard was not addressed	The Standard was not applicable
U1　Stakeholder Identification	✓			
U2　Evaluation Credibility	✓			
U3　Information Scope and Selection	✓			
U4　Values Identification	✓			
U5　Report Clarity	✓			
U6　Report Timeliness and Dissemination	✓			
U7　Evaluation Impact	✓			
F1　Practical Procedures	✓			
F2　Political Viability	✓			
F3　Cost Effectiveness	✓			
P1　Service Orientation	✓			
P2　Formal Agreements		✓		
P3　Rights of Human Subjects	✓			
P4　Human Interactions	✓			
P5　Complete and Fair Assessment	✓			
P6　Disclosure of Findings	✓			
P7　Conflict of Interest	✓			
P8　Fiscal Responsibility	✓			
A1　Program Documentation	✓			
A2　Context Analysis	✓			
A3　Described Purposes and Procedures	✓			
A4　Defensible Information Sources	✓			
A5　Valid Information	✓			
A6　Reliable Information	✓			
A7　Systematic Information	✓			
A8　Analysis of Quantitative Information	✓			
A9　Analysis of Qualitative Information	✓			
A10　Justified Conclusions	✓			
A11　Impartial Reporting	✓			
A12　Metaevaluation				✓May be metaevaluated at a later time.

The Program Evaluation Standards (1994, Sage) guided the development of this (check one):

- ☐ Request for evaluation plan/design/proposal   ☑ Evaluation report
- ☐ Evaluation plan/design/proposal   ☐ Other: _____
- ☐ Evaluation contract

Name: _____Georgia K. Hughes_____   Date: _September 6, 2005_____
           (typed)

_____
           (signature)

Position or Title: _Research & Evaluation Specialist I_____

Agency: _____Edvantia, Inc., Institute for the Advancement of Research in Education_____

Address: _____P.O. Box 1348_____
        Charleston, WV 25325-1348_____

Relationship to Document: _Author_____
    (e.g., author of document, evaluation team leader, external auditor, internal auditor)