

Affect of School Wide Compensatory Programs
on Adolescent Literacy Acquisition

A Special Project

Presented to

Dr. Jack McPherson

Heritage University

In Partial Fulfillment
of the Requirement for the Degree of
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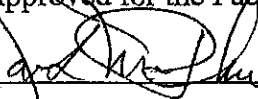
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FACULTY APPROVAL

Affect of School Wide Compensatory Programs
on Adolescent Literacy Acquisition

Approved for the Faculty

A handwritten signature in dark ink, appearing to read "Jack McPherson", written over a horizontal line.

, Dr. Jack McPherson

ABSTRACT

The purpose of this experimental study was to examine the effects GEAR UP participation and non-participation had on literacy rates for students in grades seven and eight at Harrison Middle School. The study established the relationship between GEAR UP participation and sustained reading growth at Harrison Middle School for students in grades seven and eight.

To accomplish this purpose, MAP assessment data from October, 2003, and February, 2004 was considered to measure literacy acquisition for study participants. A review of literature included: (a) GEAR UP initiative; (b) knowledge acquisition for middle school students; (c) MAP reading assessment; (d) youth mentoring; and (e) the importance and characteristics of effective adolescent literacy intervention.

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CHAPTER 1

Introduction

Background for the Project

The No Child Left Behind (NCLB) legislation after its enactment had an echoing affect on the American public education system. The NCLB legislation was a bipartisan attempt to increase institutional accountability, provide parent choice, and define state academic standards. Since NCLB's inception, state and local education policy have been impacted by the legislative intent of NCLB.

The NCLB legislation mandated to all states the responsibility to create, implement, and monitor a valid academic assessment tool. An essential function of the assessment tool selected was its capacity to provide a reliable measurement of annual yearly progress (AYP) toward Washington academic learning benchmarks. For that reason, the Washington State Office of Superintendent of Public Instruction (OSPI) created the Washington Assessment of Student Learning (WASL).

Cynics contended the WASL assessed the comprehension of information rather than the possessed knowledge of each student. Hence, students who were illiterate or monolingual Spanish speakers typically did not meet state defined academic learning benchmarks. This was particularly disturbing when the following statistics appeared in a published report by the National Institute for Literacy (2002): (a) thirty six percent of eighth graders read below grade level; (b) twenty percent of adult Americans read below fifth grade level; and (c) illiterate

citizens represent seventy five percent of the unemployed. These statistics corresponded to a lowered quality of life standard in communities that had high percentages of illiterate citizens.

Responsibly, school districts have delivered and monitored compensatory programs that were intended to supplement the educational needs of all students including those that necessitated literacy remediation. Effective and efficient school districts were those who responsively adapted compensatory programming to parallel the developmental needs of all students' in their pursuit of Washington academic learning benchmarks.

The NCLB legislation has obligated school districts to improve academic performance for all students, even those who were illiterate or in the lowest performance quartile. Assorted instructional interventions comprised of compensatory programs, remediation, and traditional instruction had initiated adequate performance gains in only a small portion of students. Minimal performance gains meant school districts continued to fall short of AYP benchmarks, thus given the label of a school in improvement by the OSPI. School districts that had high literacy rates or the capacity to implement effective supplemental programming; enjoyed predictable academic performance gains from students in the lowest performance quartile.

Statement of the Problem

Valid and reliable appraisal of compensatory programs mitigated public scrutiny and criticism of supplemental instructional interventions. As sub par

WASL performance was accompanied by innovative compensatory programs, school districts were less likely to provide evidence that compensatory programs fostered an educational climate that fostered academic growth for all students.

The problem which framed the present study sought to address the following question:

What effect did the Harrison Middle School GEAR UP Program have on the literacy rates of seventh and eighth grade participants?

Purpose of the Project

The purpose of this experimental study was to examine the effects GEAR UP participation and non-participation had on literacy rates for students in grades seven and eight at Harrison Middle School. The study established the relationship between GEAR UP participation and sustained reading growth at Harrison Middle School for students in grades seven and eight.

Delimitations

The study considered students in grades seven and eight at Harrison Middle School in Sunnyside, Washington. Monitored growth for all participants began Fall Quarter, 2003, and ended Spring Quarter, 2004. All participants were full time students in the Sunnyside School District during the Fall Quarter, 2003, and Spring Quarter, 2004, academic terms. Participants selected represented a cross section of gender and ethnicity in grades seven and eight.

MAP reading scores were taken Fall Quarter, 2003, and Spring Quarter, 2004, for all participants. Harrison Middle School attendance records were referenced for Fall Quarter, 2003, and Spring Quarter, 2004.

Assumptions

The researcher assumed all participants desired to improve their reading rate. The researcher assumed all participants were willing participants of GEAR UP and attended voluntarily of their own accord. It can be assumed that the GEAR UP program design was appropriate for students in grades seven and eight at Harrison Middle School.

The researcher assumed that the MAP assessment was a valid and reliable measurement of student achievement for selected participants. The assumption was made that Harrison Middle School testing protocol remained the same throughout the 2003 – 2004 academic year. The researcher assumed individuals who facilitated the MAP assessment received proper training, support, and guidance from trained professionals. The assumption was made that assessment conditions such as location, ambiance, facilitation, and timed sections were constant for all students.

The study assumed Harrison Middle School and GEAR UP student records were accurate and dependable. It was further assumed GEAR UP had the necessary human and fiscal resources to administer program objectives.

Hypothesis

Reading at grade level was a critical determinant of a students' capacity to meet state defined academic learning benchmarks. Harrison Middle School students' who participated in the GEAR UP program demonstrated reading rate gains.

Null Hypothesis

No significant difference of MAP reading performance existed between GEAR UP and non GEAR UP participants at Harrison Middle School. Significance was determined for $p > .05$, $.01$, and $.001$.

Significance of the Project

A large percent of the Harrison Middle School student body read below grade level during the 2003 -2004 academic year. Students' who read below grade level were less likely to meet or exceed Washington academic learning benchmarks.

The student illiteracy rate had a significant influence on Harrison Middle Schools failure to meet AYP on the WASL three consecutive years. As a result, Harrison Middle School has become a school in improvement. The failure of Harrison Middle School to meet AYP has resulted in further sanctions from OSPI.

A benefit of the school in improvement status has been the introspective concern for basic education, leveled expectations, curriculum, and compensatory programming at Harrison Middle School. Collaborative partnerships have grown among staff, students and parents who were interested in the continued improvement of literacy and academic achievement for all students. The

thoughtful consideration of how compensatory programming affected literacy rates for students at Harrison Middle School, provided administrators with critical information about the responsive and effectiveness of intervention programming.

Procedure

An experimental research design was utilized to measure the difference in reading rates between GEAR UP and non GEAR UP participants. The study analyzed the comparative growth of Harrison Middle School GEAR UP and non GEAR UP students' in grades seven and eight during the 2003-2004 academic year.

Permission to conduct research in the Sunnyside School District was secured from the following individuals: (a) Executive Director of Community Relations; (b) Harrison Middle School Vice-Principal; and (c) GEAR UP Program Director. To maintain the dependability of information, participants were selected for treatment and control groups based on their cumulative grade point averages the semester prior to the Fall MAP Assessment. Careful consideration was given to the selection of participants that were an accurate representation of the gender and ethnic profile at Harrison Middle School.

Information on the reading rate of individual students was taken from MAP Assessment data reports. The reading rate growth for all participants was calculated utilizing Measures of Academic Progress (MAP) scores referenced to the Rasch Unit (RIT) Scale.

Treatment and control groups were monitored between October, 2003, and February, 2004, for continuous enrollment in the Sunnyside School District. All participants took a primary MAP reading assessment October, 2003. All participants took a secondary MAP reading assessment February, 2004. The information acquired from the primary MAP reading assessment taken October, 2002, was comparatively analyzed with the results of the secondary MAP reading assessment that was taken February, 2004. Assurances were made to consider only participants who between October, 2003, and February, 2004, were enrolled without interruption and took two MAP reading assessments at the same intervals during the same the same time period.

Definition of Terms

compensatory program. Any program or resource received or delivered to/from the Sunnyside School District for a focused intent and/or result.

control group. The group in a research study that either receives a different treatment than the experimental group or is treated as usual.

experimental research. Research in which at least one independent variable is manipulated, other relevant variables are controlled, and the effect on one or more dependent variables is observed.

GEAR UP participant. Student who received a minimum of thirty hours of cumulative GEAR UP Program service during the 2003 – 2004 academic year.

non GEAR UP participant. Student who received less than fifteen hours of cumulative GEAR UP Program service during the 2003 – 2004 academic year.

Acronyms

GEAR UP. Gaining Early Awareness and Readiness for Undergraduate Program

MAP. Measure of Academic Progress

NCLB. No Child Left Behind

NWREL. Northwest Educational Research Laboratory

OSPI. Office of Superintendent of Public Instruction

WASL. Washington Assessment of Student Learning

CHAPTER 2

Review of Selected Literature

Introduction

The literature reviewed in Chapter 2 referenced studies and research related to the impact GEAR UP had on the reading rate of Harrison Middle School students' in grades seven and eight. Literature subsets addressed the following areas: (a) GEAR UP initiative; (b) knowledge acquisition for middle school students; (c) MAP reading assessment; (d) youth mentoring; and (e) the importance and characteristics of effective adolescent literacy intervention. A summary of literature reviewed in Chapter 2 has also been provided.

GEAR UP Initiative

The GEAR UP program has provided concentrated services to participants in the following areas: (a) youth mentoring; (b) tutoring; and (c) personal enrichment. GEAR UP programming was intended to supplement the basic instruction of at-risk students' who voluntarily participated in GEAR UP functions and activities (GEAR UP Informational Flyer).

The GEAR UP program was committed to developing community partnerships that provided many opportunities and experiences for all at-risk students in the Sunnyside School District between the sixth and tenth grades. GEAR UP participants were more likely and better prepared to succeed in post-secondary education than their peers who did not participate in the GEAR UP program at Harrison Middle School (GEAR UP Informational Flyer, 2001).

Services provided by the GEAR UP Program to parents, community, and students were centered on the following eight objectives: (a) increase academic performance and attendance, (b) increase preparation for post-secondary, (c) increase graduation rate, (d) increase post-secondary participation for low-income and at-risk students, (e) increase educational student expectations, (f) increase family expectations and participation, (g) increase staff expectations of their students, (h) increase community awareness and participation (GEAR UP Proposal, 2001).

The Northwest Educational Research Laboratory (NWREL), in a published training manual recognized the importance of creating a balanced and equitable educational experience for all students'. The Planning for Youth Success Training Manual (2001) stated the following:

"It is imperative that educational environments responded to the needs of every student within the limitations of classroom instruction, school building climate, compensatory programming, parental inclusion, and community partnerships. Each part of our ecosystem has a vital role to play, and each is dependent on the other parts for its health. This is true of our youth: It takes healthy schools, families, and communities to help ensure youth success.

Weakness in any part of the system puts our youth at risk. Each part requires the support and collaboration of the others to be effective. (p. 52)

The GEAR UP program had become a critical partner in the education of at-risk and low-income students at Harrison Middle School, a noteworthy partner in

their work with at-risk and low-income students was a parent advocacy group. The parent advocacy group was facilitated by two local service agencies committed to supporting parents' to become engaged partners in their child's educational experience. The parent advocacy group provided the following benefits for participating parents: (a) access to information, (b) refined communication, parenting, and technology skills, (c) opportunity to volunteer, (d) meet and support other parents', and (e) make a difference for their children (Parent Club Information Flyer, 2002).

In research study conducted by Henderson and Berla (1994), there authorities stated:

"...that regardless of the economic, racial, or cultural background of the family, when parents are partners in their children's education, the results are improved student achievement, better school attendance, reduced dropout rates, and decreased delinquency". (p. 8)

Knowledge Acquisition for Middle School Students

According to a research study conducted by Irvin (1998):

"The transitional period students endured as they moved from elementary school and then into middle school, was magnified by the elemental change in how curriculum is taught and learned. New opportunities afforded in a Middle School educational system combined with the diverse expectations of curriculum created multifaceted challenges to students, staff, and administration." (p. 67)

Irvin observed content area courses such as social studies, science, language arts, math, music, art, and technology are likely to require that students read and understand texts in each academic area. This researcher stated:

"The texts were primarily expository and often complex and filled with difficult vocabulary. The reading demands of middle school students were quite different than those that were assigned from the majority of elementary school reading text". (p. 10).

According to Finders (1997), during early adolescence, middle grade students were involved in the process of forming emotional, physical, and mental identities. In a three-year ethnographic study focused on the literacy development of nine adolescents in their language arts class, Finders found that "... rather than mastering a set of discrete, decontextualized skills, students engaged in a complex array of social practices that defined and developed their identities as readers, writers, and language users" (p. 26).

Burgeois and Rakic (1993) explained how educational systems and programming benefited from the research that united how the brain worked and how adolescents are taught. These authorities contended that the internal workings of the brain was the synapse, which was the point of contact between dendrites and axons. In fact, the occurrence of synapse was considered a measurement of brain activity. Supporting research by Volkmar and Greenough (1972) found that young animals raised in enriched environments developed complex neurons with a higher than normal density of synapses. The general

consensus of why this phenomenon occurred was best described, as a period of synapse refinement, which eliminated unused connections, while strengthening the most frequently used connections. Wilson and Horch (2002) affirmed that middle school students must use information they learned or risk losing all or partial amounts of acquired knowledge.

Davis and Kolb (2002) concluded that the area of the brain most affected during puberty development, is the prefrontal cortex. The prefrontal cortex controlled planning, working memory, organization, and mood modulation; which explained why middle school students were generally disorganized and moody. The authorities agreed that the way to hold attention in young adolescents was through sensorimotor experience. The developmental stages of brain maturity emphasized with certainty that selected instructional strategies and diversified educational opportunities have had a significant influence on knowledge acquisition for adolescent students.

MAP Reading Assessment

The United State Department of Education (2002) affirmed that the MAP assessment system met the legislative challenges and mandates of NCLB in the following three contexts: (a) the law required that the same assessments be used to measure the performance of all children, (b) the law required that standardized assessments be aligned with state agreed upon content and student academic achievement standards, and (c) the law required all state educational agencies to

provide evidence that utilized test are valid and reliable measurements of academic progress.

The MAP assessment system electronically administered and scored achievement tests designed to measure growth for individual students in the reading, math, and science subject areas. Information extracted from the MAP administrative handbook (2003) stated:

“... the features and benefits of norm-referenced, criterion-referenced, and computerized tests offered more benefits and higher quality growth data than traditionally utilized assessments”.

Research conducted by Woodfield and Lewis (2003) concluded, “The MAP assessment system differed from other assessments in four primary areas:

1. MAP appropriately challenged ninety-seven percent to ninety-nine percent of students, including those in special education.
2. MAP measured individual student achievement.
3. MAP provided data that was compared and analyzed across a full spectrum of learning.
4. MAP more closely engaged stakeholders in the education process.

Woodfield and Lewis, strong proponents of assessment standards, stated that MAP test items were referenced to the Rasch Unit (RIT) Scale. The RIT scale was an equal interval scale that measured a students’ academic growth similar to the way a yardstick measured physical growth. The RIT scale allowed school districts to format scoring profiles according to individuals, classrooms, or

building. The flexibility of assessment results enabled educators to share with parents the longitudinal performance of students in comparative scenarios. Most significant was the capacity for MAP results to be clustered into categorical subgroups such as gender, ethnicity, classrooms, etc.

Youth Mentoring

Planned mentoring programs have increasingly become an effective method of addressing the needs of at-risk adolescents. Kazdin (1993) defined an at-risk adolescent as a subject that had an increased likelihood over base rates in the population, to experience negative outcomes.

Research conducted by Dryfoos (1990) reported the following statistics:

1. Ten percent of American adolescents were very high risk.
2. Fifteen percent of American adolescents were high risk.
3. Twenty-five percent of American adolescents were at moderate risk.
4. Fifty percent of American adolescents were at low or no risk.

Dubois & Halloway (2002) stressed the only way to design an effective program is to understand what day-to-day operating procedures have been shown to work. As the youth mentoring in educational systems had increased; so had the generalization that all was cured after the implementation of a mentoring program. Rhodes (2002) cautioned administrators that, "... mentoring alone did not have a positive impact on every child and it cannot overcome every risk factor in a child's life" (p. 5).

In their discussion Grossman & Rhodes (2002) stated:

"It is increasingly clear from research that youth are negatively affected by placement in poorly designed program or the inaccurate match with a poorly prepared or inappropriate mentor. Not only can a mentoring program fail a child, in some instances it made circumstances worse" (p. 13).

According to Fox & Newman (1998), "... school hours had become increasingly dangerous for many of our nation's adolescents; violent adolescent crimes peaked in the afternoon hours between three o'clock and eight o'clock"(p.27). Studies conducted by the U.S. Department of Education (1998) confirmed, school-age children and teens who were unsupervised during after-school hours were far more likely to use alcohol, drugs, and tobacco, engaged in criminal and other high-risk behaviors, received poor grades, and dropped out of school, than children who had the opportunity to benefit from constructive activities supervised by responsible adults.

The Importance and Characteristics of Effective Adolescent Literacy Programs

According to researchers Moore, Readence, and Brickman - adolescent literacy theory was based on cognitive psychology research during the 1970's and 1980's, which provided insight into the relationship between a reader's background knowledge of a topic and the reader's ability to make sense of a text addressing that topic. As early as the 1930's, there was an emphasis on the different reading demands of various subjects and on improving the reading abilities of high school.

Research conducted by Asche (1989) noted, adolescent literacy theory as an urgent challenge for the American educational system, illiteracy had become the most significant factor contributing to the increased percentage of adolescent drop outs. Peck, Law, and Mills (1987) noted the following in a research study about the impact drop out rates had on socio economic conditions:

“Increasingly, it was recognized that the issues of dropping out and dropout prevention could not be separated from issues affecting our total economic and social structure. These issues included poverty, unemployment, discrimination, the role of the family, social values, the welfare cycle, child abuse, and drug abuse” (p. 3).

Survey research conducted by Cziko and Allen (2000) concluded that instructional strategies aimed at increasing reading comprehension have been encumbered by educators who felt they lacked the expertise to teach reading effectively. Furthermore, McCombs and Barton (1998) strongly suggested:

“...school and classroom cultures played a large role in terms of supporting or undermining adolescents to develop positive literacy identities. School districts that addressed the social and emotional needs of adolescents; were more likely to establish programmatic interventions that connected with adolescent motivations to build literacy competencies” (p. 54).

Davidson and Koppenhauer (2000) noted, “those who had experienced repeated failure at reading were most reluctant to become participants as readers and writers. School and classroom cultures that successfully promoted adolescent

literacy skills; were characterized by interaction and responsiveness that led to student engagement” (p. 11). As further justification for the use of a schoolwide literacy intervention strategy, Grady (2001) noted in research the increasing evidence that school wide literacy programs have been the most effective conduits for increased literacy performance at the secondary level.

Summary

The review of literature presented in Chapter 2 covered a wide array of illustrations of how adolescents acquire knowledge, compensatory programming, and literacy attainment. Cited literature supported the following research themes:

1. The GEAR UP compensatory program fostered a learning community comprised of parents, educators, and students at Harrison Middle School in the Sunnyside School District.
2. Compensatory programs that were compatible with attention and memory were most likely to induce incremental gains in the lowest achieving students’.
3. Cited authorities spoke conclusively about the validity and applicability of MAP measurement data in public education.
4. Anecdotal evidence illustrated the evidentiary assertion that in many instances it was the supplemental interventions that proved the difference for at risk student populations.
5. The increasing complexities of adolescent literacy have had increasing implications on resolving the complex challenges of adolescent literacy

affirming the notion of literacy being the most pressing issue facing middle schools and high schools across America.

CHAPTER 3

Methodology and Treatment of Data

Introduction

The purpose of this experimental study was to determine whether participation in the GEAR UP compensatory education program at Harrison Middle School improved student literacy rates for middle school students at Harrison Middle School in the Sunnyside School District. Chapter three has detailed the following items in the present study: methodology; participants; instruments; procedure, treatment of the data, and summary.

Methodology

An experimental research method was used to gather and analyze data to produce the strongest evidence addressing the impact participation or non-participation in the GEAR UP compensatory program had on student literacy rates between October 2003 and February 2004. The researcher determined that GEAR UP compensatory program participants would compromise the treatment group and non-participants of the GEAR UP compensatory program would compromise the control group.

Data collection commenced for the treatment and control groups with the MAP assessment conducted October 2003, of which provided a literacy rate baseline. Student literacy rates were later examined in the form of a post-test administered February 2004, after the treatment group had received specified

services in the GEAR UP compensatory program. The researcher tabulated, analyzed, and compared data from the pre-test and post-test using STATPACK (Gay & Airsian, 2000) to strengthen the statistical comparison between the treatment and control groups.

Participants

The treatment and control groups for this study were comprised of Harrison Middle School student in the grades seven and eight. The treatment group was comprised of students in grades seven and eight that participated in the Harrison Middle School GEAR UP compensatory program. The control group was compromised of students in grades seven and eight that had not participated in the Harrison Middle School GEAR UP compensatory program. Both groups, with comparative grade point averages and varying learning competencies, represented a share of the student population at Harrison Middle School in the Sunnyside School District.

Instruments

The measure of academic progress (MAP) was utilized for the pre-test and post-test of both treatment and control groups. The pre-test was administered October, 2003, and the post-test was administered February, 2004. The MAP assessment is commonly used in school districts across Washington State as a measurement of academic progress for students in multiple disciplines. The validity of the MAP assessment exceeds the Federal Department of Education requirements for valid and reliable measurements of academic progress.

Design

Effects of GEAR UP Compensatory Program on student literacy rates at Harrison Middle School have been presented in Table 1.

Table 1. Experimental design

Group	Assignment	n	Treatment	Pre-test	Post-test
GEAR UP Compensatory Program Participants (Treatment)	Convenient	25	GEAR UP Compensatory Program Participation	MAP Assessment	MAP Assessment
GEAR UP Compensatory Program Non-participants (Control)	Convenient	25	GEAR UP Compensatory Program Non-participation	MAP Assessment	MAP Assessment

A static-experimental design was used to test the effects the GEAR UP compensatory program participation had on student literacy rates for students in grades seven and eight at Harrison Middle School in the Sunnyside School District. (Figure 1). The static-experimental design was selected because it provided control for the most sources of invalidity. Mortality did not come into question in this study, since no students dropped from either the control or treatment group for the duration of the study.

Treatment and control groups were administered a pre-test at the onset of the present study, utilizing grade point averages and GEAR UP compensatory participation as the baseline measurement to establish equity and balance among all research participants. For the duration of this research study, the treatment group participated in GEAR UP compensatory programming, while the control

group was compiled of non-participants in GEAR UP compensatory programming. The post-test was administered at the culminating stage to both control and treatment groups.

A convenient sample method was used to select participants for this research study. This method was selected as the most appropriate, because of the diversity among eligible students and their varying levels of academic achievement as evidenced by their culminative grade point averages. The sample method enabled the researcher to gather a representative group of students that were equivalent on all relevant variables, except for MAP assessment levels.

Procedure

For the purpose of this research study the following procedures were followed:

1. During the shaping stages of this research study, the studies goals and objectives were discussed with Sunnyside School District administration at Harrison Middle School and central office.
2. Central office administration discussed the importance and magnitude of the study with an emphasis placed on the scope and value of the GEAR UP compensatory program.
3. The researcher agreed with the Sunnyside School District administration as to the benefit of utilizing the MAP assessment as the measurement of academic progress.

4. October, 2003, both control and treatment groups were administered a pre-test that provided a literacy baseline for all research participants.
5. February, 2004, both the control and treatment group were administered a post-test that provided a statistical measurement of literacy rate increases or decreases for each respective participant. For the duration of the study, the treatment group received specified services via the GEAR UP compensatory program at Harrison Middle School. Comparatively, for the duration of the study, the control group received no additional services beyond traditional instructional strategies afforded to all students in grades seven and eight at Harrison Middle School.
6. Data was tabulated and comparatively analyzed using an independent *t*-test.

Treatment of Data

The researcher explored varying resources on theories and practicum related to the effective teaching and learning of adolescent students'. Focus and emphasis was given to the acquisition and sustained improvement of student literacy rates via compensatory programming. Utilizing the knowledge of credited theorists in the area of compensatory programming and adolescent knowledge acquisition, the researcher sought to offer an analyses of the effects GEAR UP compensatory programming had on the literacy rates of students in grades seven and eight at Harrison Middle School in the Sunnyside School District.

Literacy rates derived from MAP assessment measurements were analyzed and statistically compared using the STATPACK. The mean, median, and mode for control and treatment groups were analyzed and interpreted. The independent *t*-test conducted on the treatment and control group determined whether a significant difference existed between the treatment and control group. The Pearson *r* correlation coefficient was used to appropriately measure the relationship between the literacy rates of GEAR UP compensatory program participants and GEAR UP compensatory program non-participants.

Summary

The cited literature considered in this study clearly outlined definitive research related to the adolescent literacy acquisition of compensatory program participants and non-participants. The cited authoritative authors coupled, with the valid and reliable MAP assessment, had provided the necessary balance to affirm the significant or insignificant relationship between literacy rates and GEAR UP compensatory program participation and non-participation.

This research study subscribed all participants to a pre-test, applied the treatment, and then administered a post-test of which was exactly the same as the pre-test taken by all the same individuals. The pre-test, treatment, and post-test enabled this researcher to affirm the conclusions that were mentioned in the subsequent chapter. By the affirmation of noted conclusions, this researcher intended to foster a greater understanding of adolescent knowledge acquisition and the implications of GEAR UP compensatory program participation or non-

CHAPTER 4

Analysis of the Data

Introduction

The undeniable motivation in this study for the researcher was the opportunity to consider the relationship between GEAR UP compensatory program participation and reading level increases. This study was undertaken to evaluate the impact compensatory program participation maintained by a far-reaching collection of scholarly work in the area of compensatory program characteristics.

This chapter provided a short, yet thorough assessment of the data in several ways. First, it offered an explanation of the environment, resources, materials, and other items used throughout the study. Secondly, it offered an itemized account of the findings that were calculated with valid and reliable process.

Description of Environment

The Harrison Middle School in the Sunnyside School District was the location of study for all participants selected. At the time of the study, there were eight hundred and twelve students in enrolled, fifty one percent of which were female. The ethnic make up of the student were predominately Hispanic (seventy seven percent) and Caucasian (twenty one percent), eighty two percent of the total student body were qualified recipients of free or reduced school lunches. The

Harrison Middle School at the time of the study had forty three teachers with an average of twelve years of teaching experience.

All of the study participants attended a class schedule of five days per week with general operating hours of 8:00 A.M. to 2:45 P.M, totaling approximately twenty seven hours of instruction time. The hours of operation for the GEAR UP compensatory program were 3:00 P.M. to 5:00 P.M., four days per week (Monday, Tuesday, Wednesday, and Thursday), totaling approximately eight hours of supplemental interaction with compensatory program participants. Consideration was given to holiday school breaks, after-school activities, and competing student obligations that in each case had a significant influence on GEAR UP compensatory program participation.

At the time of the study, classroom facilities were spacious and equipped with appropriate technology for student interaction and instruction. The facilities utilized by all participants were furnished and monitored by the Sunnyside School District. School infrastructure exceeded minimum state expectations and requirements for square footage per student.

The individuals used as resources in this study were the principal and vice-principle at Harrison Middle School, GEAR UP compensatory program site director, GEAR UP compensatory program administrative assistant and school building support staff. The data used in this study was extrapolated from district wide databases that maintain valid and reliable student data for the 2003-2004

academic year. The study relied heavily on institutional data management systems utilized by Harrison Middle School administration and educators.

Hypothesis/Research Question

For the purpose of this study the following hypothesis was examined to determine whether data would support the following statement:

Harrison Middle School students who participated in the GEAR UP compensatory program during the period of October 2003 to February 2004 demonstrated reading rate gains at a higher rate than Harrison Middle School students who did not participate in the GEAR UP compensatory program during the period of October 2003 to February 2004.

Null Hypothesis

For the purpose of this study the following hypothesis was examined to determine whether data would support the following statement:

No significant difference of MAP reading performance existed between GEAR UP and non GEAR UP participants at Harrison Middle School. Significance was determined for $p > .05$, $.01$, and $.001$.

The results of this study determined the null hypothesis was true and the researcher concluded that it is correct. Consequently, there was no significant difference in the reading rates between GEAR UP compensatory program participants and GEAR UP compensatory program non-participants.

The hypothesis and null hypothesis were tested for significance using the *t*-test to determine whether the means for both groups were significantly different

at the selected probability levels .05, .01, and .001 with forty eight degrees of freedom and an r value of 0.21. Table 2 illustrates the results for the null hypothesis and the hypothesis for $p \geq .05$, .01, and .001.

Table 2. Null hypothesis and Hypothesis significance test.

df=48	.05= (0.212/.2732)	.01 = (0.212/.3541)	.001 = (0.212/.4433)
Null Hypothesis	Approved	Approved	Approved
Hypothesis	Not Supported	Not Supported	Not Supported

Results of Study

Examination of the *t*-test for independent samples revealed the following:

- Pretest means (Table 3) indicated an eighteen point difference between the groups at the beginning of the study (treatment = 196.60 / control = 214.32). This data relationship opposes the notion of initial group equivalency.
- Posttest means (Table 3) indicated essentially the same point variance of the pre-test mean (treatment = 205.40 / control = 224.12).
- Both sets of posttest scores were computed to illustrate the relationship between the two variables. The data indicated a weak relationship between GEAR UP compensatory program participation and GEAR UP compensatory program non-participation delivering a 0.212 Pearson r Correlation.

- Both the control and treatment group posted relatively similar performance gains (treatment = 8.80 / control = 9.80).

Table 3. Pre and Post Test Scores Statistical Comparison

Treatment Group (GEAR UP Participants)					Control Group (GEAR UP non-Participants)				
Student	Pre-Test	Post-Test	Pt. Increase	% Inc/Dec	Student	Pre-Test	Post-Test	Pt. Increase	% Inc/Dec
A	190	213	23	26%	A	234	233	-1	-1%
B	217	216	-1	-1%	B	236	234	-2	-2%
C	207	207	0	0%	C	226	233	7	7%
D	173	170	-3	-3%	D	194	215	21	23%
E	185	186	1	1%	E	194	239	45	55%
F	187	197	10	11%	F	204	222	18	20%
G	194	204	10	11%	G	216	218	2	2%
H	209	215	6	6%	H	206	227	21	23%
I	182	205	23	26%	I	204	218	14	15%
J	197	213	16	17%	J	231	224	-7	-7%
K	185	193	8	8%	K	206	207	1	1%
L	189	212	23	26%	L	226	237	11	12%
M	229	214	-15	-14%	M	224	232	8	8%
N	210	205	-5	-5%	N	196	200	4	4%
O	170	182	12	13%	O	222	229	7	7%
P	193	192	-1	-1%	P	225	223	-2	-2%
Q	202	212	10	10%	Q	204	214	10	10%
R	209	207	-2	-2%	R	236	241	5	5%
S	201	208	7	7%	S	170	216	46	58%
T	200	209	9	9%	T	202	211	9	9%
U	227	223	-4	-4%	U	214	225	11	12%
V	193	212	19	21%	V	215	220	5	5%
W	178	205	27	31%	W	213	220	7	7%
X	173	215	42	52%	X	217	226	9	9%
Y	215	220	5	5%	Y	243	239	-4	-4%
Mean	196.60	205.40	8.80	10%	Mean	214.32	224.12	9.80	12%
Median	194	208	8	8%	Median	215	224	7	7%
Mode	173	205	23		Mode	204	233	7	
Stand. Dev.	14.97	100.06			Stand. Dev.	14.69	108.87		
Pearson <i>r</i> for both groups =				0.212					

Findings

Among the significant conclusions delivered as a result of the study were the following:

- Research confirmed that GEAR UP compensatory program participation had no significant relationship to Harrison Middle School student literacy gains as measured by MAP performance indicators.
- The GEAR UP compensatory program at Harrison Middle School in the Sunnyside School District does not have a significant positive or negative impact on student literacy rates in adolescent youth.

Discussion

The researcher recommends the following findings and conclusions as items that merit further discussion:

- Consideration should be given to the appropriateness of the sample method and its relative reliability. Participants were selected based on an initial criterion (school attendance rate) and a delineated by a second criterion (GEAR UP compensatory program participation). The reliability and use of the aforementioned criterion should be discussed prior to further research.
- The GEAR UP compensatory program was designed to attract and serve students with at-risk behaviors and characteristics. No controls were in place to measure the impact of at-risk behaviors and characteristics on student literacy rates.

- Further research to examine the productiveness of the GEAR UP compensatory program as a viable and significant tool to improve student literacy rates at the Harrison Middle School in the Sunnyside School District.

Summary

Inspection of the *t*-test data for independent samples employed in this study affirms the GEAR UP compensatory program had no significant relationship to student literacy rates at Harrison Middle School in the Sunnyside School District.

The tests conducted to affirm the null-hypothesis and hypothesis asserted there was no significant difference between GEAR UP compensatory program participants and GEAR UP compensatory program non-participants. As a result, the null-hypothesis was approved; there was no significant difference of MAP reading performance between GEAR UP and non GEAR UP participants at Harrison Middle School.

The hypothesis tested in this study was not-supported, Harrison Middle School students' who participated in the GEAR UP compensatory program did not demonstrate higher reading rate gains than their peers who were non-participants in the GEAR UP compensatory program. The GEAR UP compensatory program was not an effective supplemental instructional strategy to improve student literacy at Harrison Middle School in the Sunnyside School District.

CHAPTER 5

Summary, Conclusions, and Recommendations

Introduction

The purpose of this experimental study was to examine the effects GEAR UP participation and non-participation had on literacy rates for students in grades seven and eight at Harrison Middle School in the Sunnyside School District, Sunnyside, Washington. The study established the relationship between GEAR UP participation and sustained reading growth at Harrison Middle School for students in grades seven and eight in the Sunnyside School District.

A summary of this study including conclusions and recommendations have been provided in this chapter.

Summary

In this study, Chapter 1 provided a detailed description of the background, purpose, procedure, significance, and delimitations of the study. Chapter 2 presented a review of selected literature. The research was organized to illustrate important aspect of the following: (a) GEAR UP initiative; (b) knowledge acquisition for middle school students; (c) MAP reading assessment; (d) youth mentoring; and (e) the importance and characteristics of effective adolescent literacy intervention. This chapter fostered an awareness of critical concepts, themes, and obstacles to literacy acquisition for adolescent youth. Chapter 3 offered a comprehensive description of the study methodology, participants, instruments, design, procedure, and treatment of the data. This chapter enabled

the researcher to gain a better understanding of the application, practice, and implication of research methods and analysis. Chapter 4 revealed the results of the study and defined what relationship existed between the GEAR UP compensatory program and student literacy rates at Harrison Middle School in the Sunnyside School District.

Conclusions

The following noteworthy findings and conclusions delivered as a result of this study:

- Compensatory programming as an effective method of supplementing basic instruction for adolescent literacy acquisition was significantly more difficult to achieve than previously thought.
- The literacy rate for Harrison Middle School students in grades seven and eight was not impacted by their participation or non-participation in the GEAR UP compensatory program.
- GEAR UP compensatory program participants and non – participants made relatively similar literacy gains as measured by pre-test and post-test data.
- Compensatory programming as a supplement to basic instruction clearly had the potential to maximize student learning.
- The operation of the GEAR UP compensatory program at Harrison Middle School in the Sunnyside School District had no relationship to institutional literacy acquisition objectives for students in grades seven and eight.

Recommendations

Based on the aforementioned conclusions, the following recommendations have been suggested:

- Those involved in the education of adolescent youth may wish to seek out collaborative discussions with compensatory programs to enhance and supplement basic instruction strategies.
- Annual review of academic learning gains should be accompanied with the annual review of compensatory program performance and objectives.
- Basic instruction and compensatory strategies should become active components in the creation of responsive appropriate learning environments.
- An extension of this study should further consider the relationship between compensatory programming and measured academic performance. Attention should be given to the criterion used to select a participant sample.
- Expand this study by applying the treatment for a longer duration, to only one grade level, and in at least two consecutive academic years.
- Enlarge this study by considering math and science performance data in addition to literacy performance.

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participation. In summary, the intended purpose of this chapter was to offer a comprehensive and definitive analysis of the treatment of all the data derived from the pre and post tests.