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# Enhancement and the Launch of Odyssey

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ENHANCEMENT AND THE LAUNCH OF ODYSSEY


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# Dissertation Organization Statement

This document is organized to meet the three-part dissertation requirement of the National Louis University (NLU) Educational Leadership (EDL) Doctoral Program. The National Louis Educational Leadership EdD is a professional practice degree program (Shulman et al., 2006). For the dissertation requirement, doctoral candidates are required to plan, research, and implement three major projects, one each year, within their school or district with a focus on professional practice. The three projects are:

- Program Evaluation
- Change Leadership Plan
- Policy Advocacy Document

For the **Program Evaluation** candidates are required to identify and evaluate a program or practice within their school or district. The "program" can be a current initiative; a grant project; a common practice; or a movement. Focused on utilization, the evaluation can be formative, summative, or developmental (Patton, 2008). The candidate must demonstrate how the evaluation directly relates to student learning.

In the **Change Leadership Plan** candidates develop a plan that considers organizational possibilities for renewal. The plan for organizational change may be at the building or district level. It must be related to an area in need of improvement with a clear target in mind. The candidate must be able to identify noticeable and feasible differences that should exist as a result of the change plan (Wagner, et al., 2006).

In the **Policy Advocacy Document** candidates develop and advocate for a policy at the local, state or national level using reflective practice and research as a means for supporting and promoting reforms in education. Policy advocacy dissertations use critical theory to address moral and ethical issues of policy formation and administrative decision making (i.e., what ought to be). The purpose is to develop reflective, humane and social critics, moral leaders, and competent professionals, guided by a critical practical rational model (Browder, 1995).

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Abstract

This Change Leadership Plan utilizes student data garnered from the Program
Evaluation to assist in the creation and implementation of the 'Enhancement' program.
The Enhancement program is a research-based in-school student intervention
developed in response to over two-thirds of Brooks Middle School students falling
short of district College and Career Readiness (CCR) benchmarks. College and Career
Readiness at Brooks Middle School is based on student outcomes from the fall, winter
and spring MAP® assessments. The vision behind the Enhancement program is to
lessen the achievement gap while utilizing student results to assign individual learning
paths and curriculum to specific students falling below CCR benchmarks.

Preface

        This Change Leadership Plan provided Brooks administrators the opportunity to develop and nurture a cohesive group vision paired with concise short-term goals that will hopefully lead to long-term student success. The administrative goal behind this Change Leadership Plan was to lessen the achievement gap between races while increasing the percentage of students College and Career Ready. These goals would be realized by the formation of a teacher-led computer-assisted program aligned to Common Core State Standards (CCSS).

        This Change Leadership Plan was designed by the Brooks Middle School administrative team with support from teacher-leaders. This steering group assisted in the development and implementation of the Enhancement program. Although some teacher-leaders were involved from the start, others were not involved in the process at all. This failure to involve all stakeholders in the Enhancement program implementation was evident when reviewing teacher survey results. Teachers shared their thoughts and voiced their displeasure that administrators did not adequately prepare them to teach the Enhancement class.

        In the future, when an urgent need to change is exposed I will approach the process in a more collaborative and transparent manner that increases staff buy-in.  I will not stop my forward thinking approach, but I will learn to incorporate the thoughts and concerns of my team when initially planning a school or district-wide initiative.

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SECTION ONE: INTRODUCTION

Statement of the Problem

After a careful analysis of the Program Evaluation data, it became obvious in

2012 that aligning the curriculum in content and format to high stake assessments was

not the intervention required to meet the academic needs of the Brooks Middle School

students. In 2012, over two-thirds of the student population was performing at a lower-

than-acceptable level, accompanied by a sizable achievement gap among subgroups.

The purpose of this Change Leadership Plan was to provide appropriate academic

enhancement for students at Brooks Middle School who were not considered to be

College and Career Ready (CCR), as evidenced by the fall, winter and spring

Measures of Academic Progress (MAP®) assessment results.  In 2012, Brooks

Middle School failed to achieve Adequate Yearly Progress (AYP) for the second time

in four years and was designated with an Illinois Academic Early Warning status.  The

performance of the aggregate of middle school students on the Illinois Standards

Achievement Test (ISAT) was the primary reason for the underperforming

designation.  Although Brooks Middle School scores were  above district averages on

local district summative assessments and were on par with state averages on ISAT, the

school was not meeting state benchmarks as defined and required by the No Child Left

Behind Act of 2001 (NCLB). The primary objectives for the Change Leadership Plan

and the vision behind the implementation of the computer-based classroom

intervention were to increase academic achievement of students below the 50th

percentile on MAP® and lessen the achievement gap among subgroups.

Included in this introduction and initial process section of the Change

Leadership Plan are key definitions for terms used throughout the paper.  A general

understanding of the American College Testing (ACT) definition of College and

Career Ready (CCR), Measures of Academic Progress (MAP®), Northwest

Evaluation Association (NWEA), Illinois Interactive Report Card (IIRC) and Illinois

Standards Test (ISAT) is required to understand the full scope of the Change

Leadership Plan.

*NWEA and MAP Testing*

Beginning with the 2011-2012 school year, the Valley View School District

reached out to the NWEA in hopes of utilizing the MAP® assessment to measure

student progress. Based on 30 years of research and refinement, MAP® testing is fully

aligned with state standards and delivers testing on a computer-based platform.

The MAP® assessments were created by the Northwest Evaluation

Association, a non-for-profit organization committed to helping schools improve

learning for all students. MAP® is a computerized adaptive assessment that measures

students' knowledge in reading and mathematics. All students are asked the same

number of questions, but the difficulty of each question is based on how well students

have answered prior questions. When students take the adaptive MAP® tests, they are

presented with test questions at different levels of difficulty that adjust subsequent

content based on individual responses. As learners take tests in real time, the future

content is formulated based on individuals' responses and assessed to produce scores

that reflects an accurate differential level of achievement. This individualized, adaptive mode of assessment identifies with precision the full range of an individual student's ability.

Students are assessed three times annually. The initial fall assessment serves as the baseline Rasch Unit (RIT), which is the score used by MAP® to designate a student's academic growth over time. The score, ranging between 140 and 300 at the middle school level, is unrelated to the age of the students, but reflects the point-in-time instructional level based on individuals' performance on the MAP® test. At the end of each testing event, students instantly receive an overall RIT score, which indicates the precise level at which the computer-based instruction will be given. The RIT score is the starting point for growth norms, or in the Valley View School District, the establishment of the first data point to measure "typical growth". Growth norms are based on kindergarten thru 11th grade nationwide samples of a minimum of 20,000 students per grade level. The 2011 norms allow districts to make interpretations of both current status and growth over time by taking the number of student instructional weeks into account. According to NWEA, the norms may be used to locate a student's status (expressed as a percentile rank) for any specified instructional week of the school year. Similarly, typical growth may be determined for any number of instructional weeks separating two testing occasions within a 12-month period. This flexibility allows educators to test students at times that make the most sense in view of their own informational needs. And, regardless of when they conduct

testing, classroom teachers and test administrators can make norm-referenced interpretations of test results that are consistent with their chosen testing schedule.

As additional reference points, the norms can provide the percentile rank corresponding to a student's observed gain for a given instructional interval. This analysis helps educators move beyond the simple conclusion that a student has either "made typical (target) growth" or has not. In the area of, mathematics, for example, a student with a starting RIT of 192.3 on the MAP® assessment would have been expected to increase his or her RIT by 11 points in order to meet typical growth expectations for the 2012 school year. Similarly, a student with a starting RIT of 219.6 would have been expected to increase by 5 points in order to meet typical growth expectations. These nationwide scoring norms also allow school-grade level performance for one school to be compared to other schools in the same state that operate under a similar set of conditions. Building level and district administrators are thus able to use the norms to make "apples to apples" comparisons between their schools and schools from the same district and state.

According to NWEA, the mathematics MAP® assessment consists of four domains. The first section, *Algebra Functions and Equations*, provides a measure of students' ability to use expressions and properties of operations, solve problems and equations, use inequalities, and use functions to model relationships. A second domain, *Real and Complex Number Systems*, reflects students' ability to solve ratios and proportional relationships, perform operations, and extend and use properties. In the third domain of *Geometry*, students' ability to understand measurement,

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dimension, congruence, similarity, transformations, and trigonometry is assessed. *Statistics and Probability* is the fourth domain in which students are assessed; this section includes categorical and quantitative data, as well as the use of sampling and probability to make decisions.

The reading portion of the MAP® assessment consists of items that measure thirty-two College and Career Readiness Standards. The thirty-two standards are directly aligned to the common core state standards and address reading for literature, reading for informational text, reading for foundational skills, writing, speaking and listening and language.

*Valley View School District College and Career Ready (CCR) definition*

The Valley View School District will ensure that ALL students in Grades 6-8 progress towards the standards of College and Career Readiness, which simply put means that they demonstrate acceptable proficiency in reading, writing, mathematics and communication skills that are crucial for success in life after high school. For the purpose of this study and considering the resource capacity of the district, the Valley View School District defines College and Career Readiness for the middle school level as achievement at or above the 50th percentile on the MAP® assessment in both mathematics and reading.  According to NWEA, only students above the 65th percentile nationally were considered to have met this CCR standard. In addition, according to American College Testing (ACT), students above the 65th percentile

nationally, typically are at or above grade level and without the need for remedial assistance.

*Illinois Standards Achievement Test (ISAT)*

As stated by the Illinois State Board of Education (ISBE), "The Illinois State Achievement Test (ISAT) measures the achievement of students in reading and mathematics in grades 3-8" (website, http://www.isbe.net/assessment/isat.htm), relative to the Illinois Learning Standards.  Results of this testing are used to calculate schools' performance ratings to comply with federal regulations mandated by the No Child Left Behind Act of 2001. In determining "Adequate Yearly Progress", only the results of reading and mathematics tests are included in the calculation for AYP status of a given school or school district.

*Illinois Interactive Report Card (IIRC)*

The Illinois Interactive Report Card site provides test results as well as improvement plans and demographics for all Illinois schools. The IIRC displays individual student ISAT scores and disaggregates student performance by the demographics of race/ethnicity – of particular importance for this study are the subgroups of Black, Hispanic, White, and Students with Disabilities.

The challenge at Brooks Middle School was to find an academic intervention to raise student performance on measures associated with college and career readiness. Secondly, the process of increasing all students' achievement level must include

attention to narrowing the achievement gap. The anticipated outcomes of the program

design were the selection of an intervention program, the identification of students in

need of additional intervention and the allocation of resources to provide a platform

for change.

<p style="text-align:center">*Rationale*</p>

The apparent changes needed for Brooks Middle School are typical in that they

are multi-faceted. Substantive internal changes at Brooks Middle School and increased

pressure from the Bolingbrook community led to the proposed Change Leadership

Plan.

In the three-year period spanning from 2005 to 2008, the district's staff

turnover and parental involvement had become quite unpredictable.  The high faculty

turnover rate prior to 2008 was attributed to teachers relocating to new schools or

changing professions. In 2007, for example, Brooks Middle School replaced thirty-

three classroom teachers, which represented a turnover rate of 40.7 percent. This

instability made it difficult to develop and sustain professional relationships among

staff members.  Since that time, faculty turnover has stabilized, due in large measure

to state and district layoffs for budgetary reasons. Compared with the neighboring

districts of Naperville, Plainfield, Downers Grove and Lisle, the Valley View School

District 365U also has a relatively high student mobility rate (13.9% in 2008, 13.6% in

2009, 16% in 2010).

In order to increase the level of parent participation and improve the quality of

school-home relationships, the superintendent focused each school on community

outreach. As a result, administrators were charged with growing the quality of parental partnerships as support for an increase in the number of students prepared for college and careers.  Brooks Middle School organized parent math nights, hotdog cookouts and rescheduled conferences to coincide with the distribution of progress reports, a move made to heighten parents' awareness of their students' progress before final grades were given.

In this Change Leadership Plan, ISAT is one data source used to evaluate whether or not a student meets the required performance level to be considered college and career ready.  It is important to note, however, that ISAT scores in the Valley View School District 365U are at best a weak indicator of College and Career Readiness as defined by NWEA. For example, a student earning a "meets" designation on the ISAT assessment may or may not meet the CCR guideline. This discrepancy in scores and performance level designations can be attributed in part to the lack of alignment between ISBE's ISAT and NWEA's College and Career Ready standards. In addition, score ranges associated with standards have been routinely adjusted by the state of Illinois, resulting in, as a consequence, an upward shift in the bottom threshold for the 'meets' category from the 23rd to the 25th percentile on MAP®. This lack of alignment and adjustment of score bands between ISAT and MAP® often means that students who have "met" standards on ISAT have not met the criterion currently associated with college and career readiness, leaving parents and students with a false sense of preparation for college and careers.  Table 1 displays the comparison of scoring information and comparative interpretation between ISAT and MAP®. The

table clearly indicates that only 16 percent of the 609 students in ISAT's "meets" category are college and career ready according to NWEA. Such contradictory labels create confusion for parents who once thought that their students were college and career ready based on ISAT results, but whom, by standards set forth by NWEA and ACT were falling below the threshold of college and career readiness standards.

Table 1

*Brooks Middle School 2012-2013 MAP® and ISAT Discrepancy in Measurement*

| MAP® and ISAT 2012-2013 Discrepancy | Number of BMS tested for ISAT | Percentage of BMS students CCR according to MAP® | Average National MAP® Percentile Rank |
|---|---|---|---|
| Meets Standard on ISAT | 609 | 16% | 43rd |
| Exceeds Standard on ISAT | 219 | 90% | 79th |

While it should be noted that an impressive 90 percent of Brooks Middle School students who exceeded standards on ISAT reached the standard for college and career readiness, there were a number of students in the "exceeds" category on ISAT who actually fell below the 65th national percentile on MAP®, two students as low as the 36th national percentile. This ISAT measure of success or lack thereof should be viewed with caution, as it alone is not enough to serve as an accurate measure of college and career readiness.

In 2012, Brooks Middle School evaluated the achievement gap among African American, Hispanic and Caucasian students and completed a comprehensive review of

curriculum and class offerings that had been in place 2006 to 2012.  Since 2006,

Brooks Middle School has provided 88-minute daily classes for students in language

arts --but not for mathematics due to declining local and state funding.  In 2009,

Brooks Middle School implemented an after-school math club, an after-school Ready

to Read program, an after-school tutoring program for mathematics, and an after-

school homework and tutoring center for all content areas staffed by certified teachers.

These interventions were designed to increase student achievement on ISAT, on

MAP®, and on district common summative assessments.  The results from the internal

review in 2012 highlighted the ineffectiveness of the after-school programs and

classes at Brooks Middle School. While researching the data and effects of after-

school programs as opposed to in-school interventions, administrators discovered that

a number of academic interventions designed to bridge the gap at BMS had no

significant impact on overall student performance on high stake assessments. Despite

the promising inception of the intervention programs listed above, subgroups

continued to see significant gaps in achievement on ISAT. As a result of the limited

success on overall achievement, ISAT scores have remained stagnant with a slight

overall decrease in the number of students meeting or exceeding standards in 2011-12.

## Goals

The Change Leadership Plan was designed with two goals in mind.

1. Develop a framework for identifying and placing students in an appropriate intervention addressing College and Career Readiness standards across all school populations.

2. Implement an in-school intervention program at Brooks Middle School that addresses individual student deficiencies in English/Language Arts and Mathematics through face-to-face and computer-assisted instruction.

Demographics

Brooks Middle School (BMS) is located in Bolingbrook, Illinois-- 30 miles southwest of Chicago. The population of Bolingbrook is 73,366 and is predominantly Black, Hispanic and White (http://quickfacts.census.gov/qfd/states/17/1707133.html). According to the city of Lockport planning department, Bolingbrook would be considered a middle class community based on median household income, employment rate and number of single-family homes.

Brooks Middle School is one of five middle schools in the Valley View School District. In addition, there are two high schools, an alternative high school, a secondary transition experience program, twelve elementary schools, and an early childhood program. The Valley View School District encompasses five cities with the majority of our 17,691students residing in Bolingbrook and Romeoville, Illinois. A three-year overview of demographics specific to Brooks Middle School is presented in Table 2.

Table 2

*Brooks Middle School Demographic Information*

|  | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|
| Demographics | | | |
| #Total Enrollment | 1243 | 1256 | 1273 |
| Male | 622 | 622 | 634 |
| Female | 621 | 621 | 622 |
| School Attendance Rate | 95.3% | 95.4% | 95.3% |
| School Promotion Rate | 100% | 100% | 100% |
| School Graduation Rate | 100% | 100% | 100% |
| School Drop Out Rate | 0% | 0% | 0% |
| School Free/Reduced | 45.3% | 46.7% | 52.4% |
| Mobility Rate | NA | NA | NA |
| % Special Populations | | | |
| ELL Students | 4.7% | 4.5% | 4.9% |
| IEP Students | 9.8% | 11.2% | 10.6% |
| Honors Students | 18.2% | 16.9% | 16.2% |
| % Student Ethnicity | | | |
| American Indian | 0.1% | 0.2% | 0.5% |
| Asian | 6.1% | 7.2% | 7.7% |
| Black | 32.9% | 31.4% | 29.4% |
| Hispanic | 27% | 27.8% | 32% |
| White | 31.7% | 32.9% | 27% |
| # Student Discipline | | | |
| Expulsions | 1 | 0 | 1 |
| Suspensions | | | |

Brooks Middle School is the largest middle school in the Valley View School District 365U. Of the 1273 students, 314 (24.6%) are White, 374 (29.3%) are Black, 416 (32.6%) are Hispanic and the remaining 168 (13.1%) represent various other ethnicities. ISAT performance has fluctuated from 76 percent of the students meeting or exceeding state standards in 2006-2007 to 80 percent in 2008-2010. After calculating ISAT results from the 2012 school year, 78 percent of students 'met and exceeded' standards. Brooks Middle School has been the highest performing middle

school in the district for four of the past five years on ISAT. In addition to the current

level of 78 percent of BMS students meeting or exceeding standards overall, a full 90

percent of the general education student population met this standard. The highest

performing subgroup at Brooks Middle School in 2012 was Asian, with nearly 98

percent of those students meeting or exceeding standards. The schools lowest

performing subgroup, with only 43 percent of the students meeting or exceeding

standards, was the category of special needs students with Individualized Education

Programs (IEP).

SECTION TWO: ASSESSING THE FOUR CS

In addressing the needs of nearly two-thirds of Brooks Middle School students who fall short of College and Career Readiness benchmarks, a completely new vision and student intervention system needed to be-created. *Change Leadership*, by Tony Wagner and Robert Kegan, familiarized our National Louis University Ed.D. cohort to the Four Cs. The 4 Cs model concentrates on improving teaching and learning through a framework based on understanding the interrelated parts or elements of the change process (Wagner, 2006). Tony Wagner's book, *Change Leadership*, and the 4 Cs, provided direction to guide the Brooks Middle School change plan.

The "new view" within the Valley View School district, altered the emphasis from grade-level deficiency to students progressing towards college and career readiness.  Increasing teacher efficacy to improve student learning and providing the necessary classroom interventions were required to accelerate the learning of students falling below grade level. An additional challenge resulted from a significant achievement gap between subgroups of students existing at Brooks Middle School. The Brooks Middle School administration was fully aware that current plans and curriculum were not closing this gap. White students were performing at 90% 'meets and exceeds' in mathematics on ISAT, while only 75% of Black and Hispanic subgroups were meeting and exceeding standards. The achievement gap was a concern for the administration and the community.

In the previous year's Program Evaluation, traditional classrooms were assessed and initial data were collected to determine whether "teaching to the test" or intentional teaching of practice problems aligned to high stake assessments would impact student achievement. Initial analysis of the research provided insight from which to evaluate current teaching practices and in-school interventions. The findings provided somewhat conflicting results and suggested the need for further investigation. Rather than continuing with curriculum alignment and test preparation, intervention for specific groups of students--rather than whole-school change--would be the focus. It would be the responsibility of the administrative team to assess culture, community issues impacting instruction, the conditions within the building and individual staff competencies while carrying out the Change Leadership Plan (Wagner, 2008).

## Competencies

Tony Wagner defined competencies as the repertoire of skills and knowledge influencing student learning (Wagner, 2008). During the 2010-2011 school year, professional learning teams (PLT) composed of building teacher leaders and administrators identified areas of concern. Utilizing spring MAP® results, professional learning teams discovered nearly two-thirds of the student population was performing at a lower-than-acceptable level, accompanied by a sizable achievement gap among subgroups. Traditionally, administrators and teachers were aware of the achievement gap between subgroups and appeared focused on closing the achievement gap. At the same time, teachers did not have the knowledge, tools or system to close

the gap, thus creating a professional dilemma requiring a response by the Brooks

Middle School administration. Relevant and intentional professional development in

the areas of culturally relevant teaching as well as professional development in the

discipline of data analysis was deficient. As indicated in initial PLT conversations, the

majority of teachers perceived that they were ill equipped to address the achievement

gap. Considering the limited number of language arts and mathematics teachers

certified to teach $6^{th}$-$12^{th}$ grade, teacher survey results were not surprising.

### Conditions

The administration's first step in the change process was to assess the current

conditions concerning the appropriate utilization of staff, classrooms and academic

interventions.  Conditions are defined as the external architecture surrounding student

learning; the tangible arrangements of time, space and resources (Wagner, 2008).

During the 2010-11 school year, teachers utilized an RtI model developed by the

district in conjunction with state regulations. While meeting, PLTs realized that the

district RtI model of identifying students as struggling learners and moving students to

a secondary support team was not positively impacting student achievement.

Secondary intervention teams lacked the resources, the menu of academic

interventions and experience implementing RtI to impact academic change.  .

Teachers and administrators required specific expectations regarding their roles and

responsibilities related to assessing students and implementing RtI.  Ready-to-

implement RtI interventions are virtually unknown, as districts who have successfully

implemented RtI have developed their programs in house. Brooks Middle School

administrators began the search for a program to support students falling below the 50th national percentile on the MAP® assessments.

Brooks Middle School was lacking appropriate academic interventions and a clear understanding of which students required specific levels of intervention. Prior to 2012, the district RtI model had not focused on culturally relevant teaching or closing the achievement gap amongst subgroups. Assumptions were made about specific students and expectations for students in poverty had been lowered. This was evidenced by the discrepancy between students meeting typical growth on MAP® assessments as well as the students earning a "below" standards distinction on ISAT.

## Culture

Wagner defines culture as the shared values, beliefs, assumptions, expectations, and behaviors related to students and learning, teachers and teaching, instructional leadership, and the quality of relationships within and beyond the school (Wagner, 2008). Reshaping staff beliefs of students' abilities and more importantly staff beliefs regarding the ability of students falling below the 50th percentile to learn was an urgent priority. To provide more effective instruction, teachers needed to minimize menial student tasks such as memorizing and recalling factual information as they increased attention to students' application of new strategies to solve complex problems. Additionally, administrators had to acknowledge but not be thwarted by the uncontrollable factors such as poverty, race, home life, and lower socio-economic status. If the school team believed that students could make the necessary growth while enrolled at Brooks Middle School, the "new view" could be realized.

A common impression among faculty members was that students who were behaving well were achieving academically. Within Brooks Middle School, addressing, changing and challenging the culture of labeling "good" and well-behaved students as those in line for college and career readiness would be a challenge. The district established clear guidelines for determining students' grades for report cards, eliminating   extra credit and basing the evaluation of what students actually know and can do. Ninety percent of students' grades would be based on their summative assessment scores with only 10 percent attached to compliance areas such as homework. As administrators, the challenge was to support teachers, while slowly altering beliefs through meaningful and engaged conversations and professional development. The Brooks Middle School administration and staff, collectively, would have the same high expectations for every student.

<div align="center">Contexts</div>

According to Wagner and Kegan, contexts refer to the "skill demands" that all students must meet in order to succeed as providers, learners, and citizens and the particular aspirations, needs, and concerns of the families and community that the school or district serves. In addition to this definition, the author highlights the larger organizational systems within which school systems run. In order to successfully implement Odyssey and the Enhancement class, administrators were tasked with creating a more collaborative culture and an increased focus on the practices responsible for student outcomes.

Initially, two issues were exposed to the Board of Education (BOE) and district Senior Leadership. Each proposal could have potentially impacted the schools' status negatively and brought into question the district direction. Exposing Senior Leadership to current programming at Brooks Middle School that was not successfully preparing two-thirds of BMS students for college or career readiness would require a delicate delivery. In addition to potentially revealing curriculums as substandard, administrators would be requesting additional monies to support the Enhancement intervention, thus, enlightening the Board of Education that current educational practices were not positively impacting student achievement. With the Valley View School District operating with a 90-plus million dollar fund balance, money would not be the issue, but the perception of inadequate classroom instruction would be.

SECTION THREE: PERSONAL IMMUNITIES TO CHANGE

Brooks Middle School administrators assessed curriculum, reviewed traditional elective classes and started the process to challenge standard staffing allocations with a commitment to create a more focused RtI structure. Based on data from the Program Evaluation, initial plans were to provide a research-based classroom intervention to address students falling below the $50^{th}$ percentile nationally on the MAP® assessment by NWEA. In the search process, many competing commitments and personal fears to whole-school change surfaced. The BMS administrative team discovered Odyssey by Compass Learning, a computer-based platform centered on Common Core State Standards and directly aligned to individual student growth and progress. Initially, the administrative team was intrigued by the program and approach towards program delivery but was concerned about teacher perception and buy-in to a computer-based program. In addition to staffing concerns, the physical building would need significant renovation, which would impact the capital outlay budget. The Enhancement program, as we would name it, required converting multiple classrooms to computer labs. Students in the program would require daily access to a computer for proper implementation.

As the school administrative team decided to purchase Odyssey, excitement consumed our day-to-day thoughts. We were just a few key decisions away from launching a state-of-the-art program, during the school day, focused solely on reading

and mathematics deficiencies for our lowest achieving students.  These feelings of

excitement were quickly replaced with thoughts of fear and discomfort as we met with

our district leadership team. Prior to the launch of the Enhancement program, we

shared the plan to our district senior leadership team. Initial reactions and discussions

centered on the resources required to launch the program. With only six months before

the start of the 2011-2012 school year, the program implementation would require

swift action and a plan. Following our meeting with Senior Leadership, our team was

left to make a decision. Would we continue to commit our building budget to our

planned intervention for struggling learners or succumb to our fears of challenging the

status quo in fear of failing?

In Chapter 5 of *Change Leadership* (Wagner, 2008, p. 90) the authors states,

"If you can see how and why you are preventing yourself from changing, you will

have a better chance to change".  Commitment by all stakeholders to the Enhancement

class and the Odyssey program was critical, but buy-in was not guaranteed.  In

addition, administrators would need to utilize staff development time to introduce and

promote the program. At the same time, the administrative team did not have the

computer and technology background to trouble shoot the Odyssey program or

understand the required infrastructure.  Moving the initiative forward without creating

staff resistance concerned the Brooks Middle School administrative team.  Tony

Wagner and Robert Kegan write about hidden and competing commitments to change

(*Change Leadership*, p. 91).  Wagner identifies an all-too-common perspective of the

individual school administrator and one we shared at BMS:

I fear that others would find out that I do not know what I am doing. I

fear that I would lead the organization down the wrong path. I fear this

effort would not go as planned, but I am committed to not let others

discover I am uncertain about how we will accomplish our goals. I am

committed to keeping others from finding out that I'm not always sure

of the next step. I am committed to not moving the district one step

further until I can be absolutely sure I know how to successfully

complete the journey. (p. 125)

In addressing these competing commitments and transforming the school I was

part of, the urgency of the achievement issues was real, as well as the fear of facing

our own personal immunities to change. Addressing initial fears in an attempt to

realize the goal, building administrators started the process of researching the

available data within the Enhancement, computer based program. Not only were we

considering a whole-school change to our curriculum, but we were challenging our

own leadership abilities.

SECTION FOUR: RESEARCH METHODOLOGY

Research Design

In August of 2012, Brooks Middle School lacked an in-school intervention

class and curricular focus on students falling below the 50th percentile on MAP® or in

the 'below' and 'meets' categories on ISAT.  Students below the 50th percentile and

'meeting' minimum proficiency on ISAT received no additional academic supports.

The 2012 preliminary data confirmed that over 64 percent of Brooks Middle School

students scored below the 50th percentile on reading and/or mathematics.  In attempt to

reduce the number of students falling below the 50th percentile in mathematics,

administrators developed an in-school computer based intervention program

(Enhancement). The preliminary school data exposed the urgency for change as well

as provided a foundation to assist the administrative team in understanding the

immediate need to adjust current programing. "To generate the much needed

momentum and urgency for change, people need to fully understand the why behind

the journey they are beginning" (Wagner, 2009, p. 138).

Included in Section Four is an overview of gathered data, descriptions of the

study participants, and the setting of the study. Data was collected utilizing survey

instruments, including an attitudinal teacher questionnaire measuring teachers'

perceived preparation to teach the Enhancement class and informal conversations with

teachers regarding the Enhancement class implementation.  The attitudinal teacher

survey was to be introduced and administered during the Change Leadership Plan.

Results from the teacher survey would then be analyzed and shared in the year three

Policy Advocacy Proposal. In addition to the qualitative components, data collected from the year one Program Evaluation will be explained, providing a foundation for this Change Leadership plan.

Initially, in the first Enhancement meeting, teachers were introduced to the purpose of the optional teacher survey. Teachers completing the anonymous survey were informed that responses would be used solely to drive the Enhancement program changes for the 2012-2013 school year.  Fourteen of the sixteen teachers completed at least 75 percent of the surveys.

<center>Participants</center>

*Teachers*

Of the sixteen Enhancement teachers, five taught a full schedule of six sections of Enhancement, whereas eleven taught Enhancement for one or two periods per day along with a core academic workload. Participating teachers held an Illinois Type 03 or Type 09 certificate. Teacher certification and qualifications varied for teachers of mathematics, elementary education, and Family and Consumer Sciences, creating a major limitation for the study. Each lead teacher received a cover letter with instructions, participated in monthly Enhancement meetings, and was provided Odyssey specific professional development throughout the year. Teachers were selected to complete the survey based on the 2011-2012 teaching schedule, which included one or more Enhancement classes.

*Students*

Although the initial participants for the Program Evaluation consisted of 178 students in two 7th grade classrooms the population was reduced to sixty-eight students. Of the sixty-eight students participating in the study, thirty-two were female and thirty-six were male. Twenty-five African American (38%) and twenty-four Hispanic (35%) students comprised the majority of the student sample. Also included in the study were fourteen Caucasian (21%), two Asian (3%), one multi race (1.5%) and one other (1.5%).

Participation in the Program Evaluation was based on students having met all of the following criteria: students were required to have two consecutive years of ISAT data, were considered to be fluent English speakers, had been students in the Valley View School district for three years, received instruction in a general education placement for more than 80 percent of the day and had the permission of a parent to participate.

Data Collection Techniques

To design this Change Leadership Plan, MAP® and ISAT student scores from the Program Evaluation were analyzed, classroom implementation was evaluated, and a teacher survey was created to measure teacher perceptions of the Enhancement program. Included in the teacher survey--and a focal point for the Change Leadership Plan--was the perceived level of professional development and preparation to teach the Enhancement class. The quantitative portion for the Change Leadership Plan is comprised of MAP® and ISAT data from the year one Program Evaluation. Student data reports from the Program Evaluation are displayed in Section Six of the current

plan. Enhancement student data from the 2011-2012 school year and the teacher survey was collected and reviewed, but will not be shared in depth until recommendations are made to the Board of Education in the year three Policy Advocacy proposal.

Teachers' perception of the nature and quality of the program, their perceived level of professional competence and preparation, and classroom observations conducted by administrators formulated the qualitative portion of the study. Immediately following the first Enhancement teacher meeting, administrators collected, tallied, and stored surveys for a final review in April. Surveys were administered to sixteen teachers at Brooks Middle School. The instrument contained a Likert scale and consisted of ten questions pertaining to teachers' perceived preparation for and confidence in the components of the Enhancement class. The ten-question survey provided teachers with four choices --'Strongly Agree', 'Agree', 'Disagree' to 'Strongly Disagree'. The questions were created to investigate the relationship between teacher perception of the program and successful implementation. The teacher survey (Appendix A) was administered in October of 2012, December of 2012, February of 2013 and finally April of 2013. Of the sixteen potential respondents, twelve responded (75%).

The following information was shared in the initial Program Evaluation and serves as the foundation for this Change Leadership Plan. In order to assess students' perceived confidence in their abilities to perform well on large-scale assessments an attitudinal survey was administered in six sections of 7th grade mathematics at Brooks

Middle School.  The student confidence survey was the primary tool for collecting

student's perceived confidence and preparation for ISAT. The survey consisted of nine

Likert-style questions pertaining to student confidence on ISAT and MAP®. The

survey was administered in late August of 2011, early January of 2012 and again

following the ISAT assessment in late April 2012.

ISAT, MAP® and district summative assessment data were gathered for the

control and experimental classrooms during the Program Evaluation. Data was

collected to make comparisons between students' confidence on high stake

assessments as well as students' performance on high stake assessments. ISAT student

data utilized in the Program Evaluation was originally distributed by the state of

Illinois. Data were collected from the Illinois Interactive Report Card (IIRC) and

stored on the district Scoretronic 3000 database. MAP® data were available

immediately following student completion of the MAP® assessment in the fall, winter

and spring. Scoring reports identify which concepts students have mastered in order to

make student comparisons within the class and school as well as to track academic

student growth over time.

<center>Data Analysis Techniques</center>

The analysis and comparison of teachers' perceived preparation and

professional development were analyzed to first identify themes. Each question was

listed independently and evaluated accordingly with the intention of guiding program

changes for the next year's Policy Advocacy Proposal. Questions were designed to

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elicit feedback from Enhancement teachers and determine the perceived level of preparation to provide instruction within the computer-based class.

Program Evaluation data were analyzed, using SPSS, to identify correlations between students' perceived confidence on high stake assessments and overall performance scores. Each of the research questions and alternative null hypotheses were evaluated and will be discussed in Section Six. Results from four Program Evaluation research questions will also be presented and interpreted.

To evaluate the first hypothesis from the Program Evaluation, an independent samples *t*-test was conducted to test for significant differences in the mean change of confidence scores between the experimental and control groups. Pearson's correlation was utilized to test the relationship between students' perceived confidence level and their actual ISAT results. The third and fourth research questions were evaluated utilizing an independent samples *t*-test to measure differences between ISAT and MAP scores between the experimental and control groups.

SECTION FIVE: RELEVANT LITERATURE

The year one Program Evaluation focused on the impact of the classroom teacher, students' perceived confidence to perform well on high-stake assessments, and the impact that curriculum alignment and "teaching to the test" had on student outcomes. This year two Change Leadership Plan exposes students to an in-school computer-based intervention designed to increase the percentage of students College and Career Ready. The following literature review ties in concepts introduced in the Program Evaluation and analyzes effective teacher evaluations, the academic impact of teacher-led instruction, the Common Core State Standards (CCSS)[1], as well as computer-based classrooms.

Teacher Accountability and Evaluation

In an article written by Charlotte Danielson (2010) entitled *Evaluations That Help Teachers Learn*, findings suggest  the  importance of teacher evaluations shifting to a focus of assisting teachers in how to become more effective educators.  Danielson states, "A good system of teacher evaluation must answer four questions: How good is good enough?  Good enough at what? How do we know? and who should decide?"

This article proposes that traditional teacher evaluation systems are outdated. Past evaluative structures consisted of some type of checklist, a simple scoring system without a consistent definition for what the scores truly meant, the same procedures

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[1] The Common Core is a set of high-quality academic standards in mathematics and English language arts/literacy (ELA). The standards were created to ensure that all students graduate from high school with the skills and knowledge necessary to succeed in college, career, and life, regardless of where they live. (http://www.corestandards.org/)

were used for new teachers and veteran teachers along with inconsistent inter-rater reliability accountability.  In this article, Danielson advocates that a consistent definition for good teaching needs to be established and there needs to be a framework to evaluate performance, which include unsatisfactory, basic, proficient and distinguished.  Ideally teacher evaluations and informal observations would promote professional learning and ensure teacher quality.  Along with these levels, she states there also needs to be attributes and indicators explaining these rankings.

In past evaluation practices, evaluators did all the work, while teachers remained submissive participants in the process.  In the new system, Charlotte Danielson envisions teachers having an active role in order to promote intellectual engagement and teacher growth.  Danielson also encourages some type of self-assessment, self-reflection and a professional conversation component for teacher evaluations with the intention of increasing teacher effectiveness.

In 2009, the Common Core State Standards (CCSS) were created by teachers, parents, school administrators, and experts from around the country. The National Governors Association Center (NGA) and Council of Chief State School Officers (CCSSO) assembled the committees and led the development of the CCSS. According to *corestandards.org* the CCSS were developed to provide teachers, parents, and students with a set of clear expectations to ensure that all students have the skills and knowledge to succeed in college and careers after completing high school. The CCSS were developed utilizing standards from other high-performing countries and in conjunction with ideals that would need to be met in a post high

school setting. In addition, according to Common Core, the standards are research and evidence-based, consistent from state to state and require students apply their knowledge through higher-order thinking skills. With CCSS increasing academic rigor in over 40 states throughout the country, a number of teachers will be required to adjust traditional teaching practices to teach content that requires students to apply what they have learned.

In *The Missing Link in School Reform* (2011), Carrie Leana focuses on social capital and increasing student academic achievement by strengthening teacher instruction. According to provided data, nationally Hispanic and African American students graduate with their class around 50 percent of the time nationally. In addition to graduation numbers, according to Leana, only a third of fourth graders in 2009 were proficient in mathematics. Leana cites "human capital"--factors such as teacher experience, subject knowledge and pedagogical skills and "social capital"—the patterns of interactions among teachers as contributing factors to low student achievement (Leana, 2011). Although the article expresses the importance of the school principal, personal values and the power of human capital, these factors are highly subjective and difficult to measure. In a study in the New York public school system, researchers found that students showed academic achievement gains in classrooms where their teacher had frequent conversations with peers. In this example, teacher social capital showed a 5.7 percent increase in mathematics student scores over teachers that did not engage in professional conversations with peers.

Despite current reform initiatives underway in the United States focused on mathematics instruction, many mathematics teachers continue to teach and use traditional activities or direct teaching. Reform documents in the United States encourage mathematic teachers to decrease traditional activities of "telling and showing" mathematics students what they need to know (Tzur, Simon, Heinz, & Kinzel, 2001). The traditional method of teaching has proven to be ineffective in increasing student mathematical achievement (Chang, Mao, 2000). Current mathematical practices move towards a constructivist approach, which involves taking what the students know (prior knowledge) and applying that knowledge to new concepts. It is important for teachers to share a collective responsibility for student learning and a willingness to learn new ways to teach and enhance learning (Ziegler, 2001). This approach incorporates inquiry learning, which includes the strategies of problem solving, hands-on cognitively guided instruction, and a student-centered learning environment (Carpenter, Fennema & Franke: 1996). These strategies will not only encourage students to think critically, but increase teacher content knowledge.

Researchers have sought possible solutions for increasing teacher content pedagogy as well as raising student achievement through inquiry-based learning instruction. In the Odyssey program, the consistently adapting content delivery based on student responses would provide an individualized curriculum for all students. The Enhancement class would be individualized, but the Odyssey program limits student creativity to a degree in that the assessments are multiple choice. In order to mediate against these known limitations of the Odyssey program, teachers can increase their

knowledge through in-service training on content knowledge and instructional strategies that promote student centered learning. . One such initiative, the Alaska Partnership for Teachers Enhancement (APET) has helped teachers in Alaska reflect on substance, structure, syntax, and pedagogical content knowledge (Jones, Holder, 2001).  Through immersion in a constructivist teaching environment, teachers started to question their conceptions of what it means to learn mathematics and come to develop their own understanding of children's thinking (Carpenter, Fennema, and Franke, 1996).  Similarly, the Partnership Advancing the Learning of Mathematics and Science Approach (PALMS) in Massachusetts, provided teachers with on-going extensive training.  Training was developed with the intention of developing teachers' learning the new hands-on, inquiry-based, cooperative learning approach. Teachers would then build the strategies that they had learned into their daily teaching routine (Fuller, 2001).  Teachers receiving training and implementing inquiry-based learning would develop an increased understanding of concepts in mathematics (Marshall, Droward, 2000). Within the Enhancement program, teacher professional development sessions provided by administrators promoted this constructivist thinking and teaching during the small group portion of the Enhancement class. In addition to enhanced teacher expertise, research provides school information about the nature and timing of interventions.

Interventions Impacting Student Achievement

Gleichauf (2005) found in a study of 252 3rd-5th grade students that after-school interventions did not have the same positive impact on students as did the

interventions designed and utilized during the school day.  In another study in 2013 focused solely on an after-school tutoring program, JoAnn Sebastian analyzed the impact of Knowledge Points, a research based after school intervention program at two middle schools. Sebastian's study showed no significant impact on student achievement on TCAP (Tennessee Comprehensive Achievement Program) upon completion of the after-school tutoring program in two middle schools with differing demographics. Similarly, Gleichauf's research findings suggest that interventions taking place during school hours do have an impact on overall student achievement (Gleichauf, 2005).

John Hattie's *Visible Learning*, a synthesis of over 800 meta-analyses over a 15-year period presents findings of relationships among teacher impact, the curriculum as implemented and in school computer-based instruction comparable to the Enhancement classroom. Not surprisingly, Hattie's study found that teacher effectiveness impacts student performance and achievement.  "Positive teacher contributions to student learning include the quality of teaching, teacher expectations, teachers' conceptions of teaching, learning, assessment, teacher openness, classroom climate, a focus on teacher clarity in articulating success criteria and achievements, the fostering of effort and the engagement of all students" (Hattie, 2009, p34).  These components of teacher influences create an effective learning environment. "The most important consideration is the extent in which teachers have an influence on student achievement, and that makes the most difference" (Hattie, 2009, p34.). Of the 138 cited studies impacting student achievement, extra-curricular programs, such as

homework club and other after-school teacher-directed classes ranked in the low position of 114th. On the other hand, computer assisted instruction ranked much higher in the 71st position. These results led administrators to value and include 15 minutes of small group instruction per class in the five-day-a-week Enhancement program.

According to Hattie, teacher clarity involves how teachers communicate the intentions of the lesson to the students and the explanation of what success means for these targets (2009, Hattie). Teacher clarity includes organization of explanation, examples along with guided samples and the assessment of the learning. Teacher-to-student relationships are essential in creating a positive learning environment and when students feel connected to their teacher, achievement increases.  When building these relationships, the qualities of respect, efficacy, and understanding of child's personal situation –must come into consideration--a process that requires listening skills, empathy, caring and compassion by the teacher.  "In classes with person-centered teachers, there is more engagement, more respect of self and others, there are fewer resistant behaviors, there is greater student initiated and regulated activates which leads to higher achievement outcomes" (Hattie, 2009, p. 119).

Technology and computer-assisted instruction

John Hattie and countless other researchers have found the use of technology as a resource for teaching to be beneficial. Technology has a plethora of uses in the classroom.  According to Hattie, computer use in schools is effective when there is diversity in teaching strategies, when instructors receive pre-training and when the student -- not the teacher -- is in charge of the learning  (Hattie, 2009).  Computer-

based instruction provides immediate feedback and tailors instruction to individual needs based on individual responses (Hattie, 2009). Because computers are unable to have interactive conversations with the students, however, there is a direct need for teachers in the classroom.

The use of technology to enhance students' skills in critical thinking, analysis and scientific inquiry has been shown to increase classroom performance (Roschelle, Pea, Hoadley, Gordin & Means, 2002). Educators need to apply this knowledge when creating lessons. Incorporating technology into instruction can lead students appropriately toward navigating their high-tech world with success. Computer-mediated communication can be a source in creating social relations between and across classrooms, which cultivates unlimited cross-cultural collaboration among different communities (Liu, Moore, Graham & Lee, 2000).

Cognitive research indicates four key components to learning: active engagement, participation in groups, frequent interaction and feedback, and connection to real-world contexts (Roschelle et al, 2002). Whereas past media technologies simply allowed students to observe passively, innovative technologies utilize these four components to create significant positive effects in the classroom. Computers promote rapid interaction for students. Current technology has the ability to provide students with small group or individual support. Computer tools assist teachers in providing detailed and individualized feedback to students. Computer technology allows students the opportunity to apply concepts in various real world settings that would not be possible otherwise (Roschelle et al, 2002). A significant

barrier to incorporating technology into the classroom is the heavy focus on state standardized testing.  These assessments require specific teaching strategies, which conflicts with higher order learning strategies supported by technology programs such as Odyssey (Roschelle et al, 2002). Educators want to know about technology's interactive capabilities, such as providing immediate feedback, increasing learning autonomy and the ability to simulate real world experiences (Liu, Moore, Graham & Lee, 2000). The incorporation of technology in schools enhances students' ability to think critically.  Students require these skills in becoming college and career ready (Roschelle, Pea, Hoadley, Gordin & Means, 2002).

Various instructional approaches are presented in Section Five. Administrators and researchers do not necessarily agree on common definitions of best practice or instructional delivery methods. The review of literature in this section is centered on four areas: (1) the importance of the teacher-student relationship, (2) teachers repertoire of skills, (3) students' ability to acquire content knowledge, and, (4) successfully providing supports for students.  Researchers and practitioners understand the importance of appropriate in-school interventions but often have conflicting ideas about the 'ideal program' or delivery method. Based on the review of literature and student data from the Program Evaluation, administrators in the Valley View School District selected a teacher-led, computer based- in-school intervention program for students with academic deficiencies.

The Opportunity and Achievement Gap

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Brooks Middle School is an economically and culturally diverse middle school. Educators within a diverse school must understand the nature of the opportunity and achievement gap (Boykin & Noguera, 2011).  Without recognizing the impact and existence of social capital[2] within the school, teachers may develop strategies within their own classroom that continues to widen these gaps.  Carrie Leana in *The Missing Link in School Reform* writes about the importance of teachers collaborating and having an individual to converse with when students from differing backgrounds struggle in their classroom.

Boykin and Noguera (2011) identify numerous districts and schools working to close the opportunity and achievement gap.  Gardenville, a district experiencing a significant academic achievement gap between Black, Latino and white students, assessed their own beliefs by questioning teachers reasoning for students of color not meeting the same benchmarks as their white peers.  The teachers immediately blamed the low achievement on external factors such as Latino students being illegally enrolled in public schools or home factors.  Teachers in the Riverview school district, were working on interventions to assist students, such as advisory groups and block scheduling.  Rather than dedicating time to why students are failing, Riverview implemented strategies to support learning and increased academic achievement amongst all races.  The experiences in these districts provide an important reminder: claiming to support minority students alone is insufficient for addressing the problem.

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[2] Upper-class advantages: the educational, social and cultural advantages that those from the upper middle classes are believed to possess.

Schools must acknowledge the gap and accept personal responsibility for lessening

disparities in student achievement amongst subgroups of students.

SECTION SIX: DATA ANALYSIS AND INTERPRETATION

The primary data collected from the Program Evaluation verify the degree to which specific classroom interventions have impacted student academic performance on high stake assessments. These outcomes then advised the design and implementation of the Change Leadership Plan. Looking ahead, data findings and interpretations from the Program Evaluation, as well as results from the teacher survey during the Change Leadership Plan, provide the foundation for the year three Policy Advocacy Proposal. A summary of all relevant data collected, analyzed, interpreted and utilized in the formation of the Policy Advocacy Proposal will conclude Section Six.

Findings

Data findings and interpretations from the year one Program Evaluation are displayed in Appendix B. The year one Program Evaluation established the baseline information required to pursue the Enhancement class intervention. The four research questions of the initial Program Evaluation were:

*Research Question 1: Will students in the intervention class demonstrate increased confidence, feeling more comfortable and prepared for high stake assessments?*

Students who received direct instruction in curriculum aligned to high stakes testing in both content and form reported higher levels of confidence that they were prepared for the test.

*Research Question 2: Will students scoring higher on the confidence survey also score higher on high stake assessments?*

Students who reported an increase in perceived confidence to take high stake assessments outperformed their peers; however, since the effect did not reach the level of statistical significance, the results may or may not be attributed to the intervention.

*Research Question 3: Do students score higher in classrooms with a curriculum more closely aligned to high stake assessment learning objectives?*

Students who received a curriculum aligned to high stake assessments did not outperform peers receiving no level of classroom intervention.

*Research Question 4: Will district summative assessments scores and gains be consistent with student achievement on high stake assessments such as ISAT?*

Students who received test practice and increased curriculum alignment to high stakes assessments did not show significant increases in student assessment outcomes in comparison to peers receiving no intervention.

Results of the Program Evaluation and a review of the literature led to the creation of the Enhancement class. In order to monitor features of the Enhancement program during the Change Leadership Plan, teacher confidence surveys were created and administered. Administrators measured teachers' perceived readiness and preparation to teach the Enhancement class. Survey questions probed the Enhancement teachers' perception of technology support, their ability to access technology support, and their assessed level of perceived confidence in the quality and effectiveness of their professional development.

Conclusions

Conflicting results from the (year) Program Evaluation provided insight into the overall effectiveness of planned and implemented interventions.  Findings provided the need for further investigation or a new plan.  A significant difference in change in confidence scores was noted between the two groups, with a significantly greater increase in confidence scores among students in the intervention group, which represented a promising result, but did not translate into the preferred outcomes desired by Brooks Middle School administrators.

An analysis of the Program Evaluation data indicates that aligning mathematics curriculum in content and format to high stake assessments was not the sole intervention needed to meet the academic needs of students below the $50^{th}$ percentile. The Program Evaluation data did not indicate that the achievement gap between subgroups of students was narrowing. After the results of the Program Evaluation and 6 years of stagnant state assessment data, the decision was made by building administrators and teacher leaders to pursue the Enhancement program.

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SECTION SEVEN: A VISION OF SUCCESS (TO BE)

Prior to the inception of the Change Leadership Plan, our National Louis University cohort was asked to assess a current condition or program at each of our respective schools. Beginning with an 'As Is' assessment of current programs or needs, doctoral students visualized the organizational changes that would come into being as a result of the successful implementation of the Change Leadership Plan. Initially, 'strategies and actions' outlining needed organizational changes were created, as an in-class doctoral assignment, to develop school based plans (Appendix C). Originally, strategies related to Brooks Middle School focused on increasing student achievement utilizing after-school and in-school interventions. Following a series of administrative reviews based on the Program Evaluation data and research, the focus of the organizational change was narrowed to an RtI-driven in-school computer-based classroom intervention. Providing a teacher-led computer-based skills program for students falling below College and Career Readiness standards was the 'vision' behind what would become the Enhancement class.

To address the needs of nearly two-thirds of Brooks Middle School students falling short of College and Career Readiness benchmarks, a new vision for in school interventions was created. To experience school wide success, future context, conditions, competencies and culture would require change. Leaders would begin to promote and model a strong normative culture of respect, trust, and accountability for learning (Wagner, p.111). Below is the visualization of what is 'To Be'.

Context

The context of the Change Leadership Plan addresses three specific areas in need of change. The first, being the "skills" that all teachers must possess to positively impact student learning. In realizing this context, administrators would hire strong content area teachers for the Enhancement class, thus limiting future extensive professional development needs. Providing BMS students access to a highly motivated and qualified teacher would facilitate achievement of program goals. Administrators would select teachers skilled in mathematics, language arts and technology to provide students a greater opportunity to close the achievement gap in mathematics, language arts and technology.

Second, for the Enhancement program to be successful administrators would educate the Board of Education (BOE) on College and Career Readiness standards by promoting site based observations. Heightening BOE awareness, through site based observations, would provide the necessary exposure to and understanding of College and Career Readiness standards.

A final condition would be evaluating and utilizing student MAP® and ISAT data. Administrators and teachers would seek out and collect essential data to drive classroom instruction and program decisions. Strategies expanding the use of Enhancement classroom student data would be developed and implemented jointly by teacher leaders and administrators. Initially, teacher and administrator concerns about student performance would be addressed during the data review portion of Enhancement team meetings. Then teachers would become more connected to the Odyssey program. Data analysis would become a standing agenda item for all Enhancement team meetings.

Data teams would clearly define the purpose of assessing student outcomes with the intention of refining practices.

<center>Conditions</center>

The first and most important condition impeding the 'To-Be' of the change plan would be the need to reorganize classroom space and the need to purchase additional technology and infrastructure. In spite of a statewide budget crisis and the need for significant staffing reductions, administrators would secure finances for two new thirty-three seat student computer labs and four sixteen student mini-labs. In addition, the district would pay the per student user fee attached to the Odyssey program. Adequate and timely funding would allow for the physical classroom space alterations, the necessary infrastructure to access Compass Learning/the Odyssey program and supplies to properly implement the Enhancement program.

As a condition of the change plan, the Enhancement class would provide additional minutes of reading and/or mathematics instruction for students falling below College and Career Readiness standards. While primarily identified by RIT scores on the MAP® assessment, leadership teams would utilize all available data to appropriately place students. Within Brooks Middle School, previous RtI models were created, but anchored in grade-level proficiency, which was and is subjective. The new Enhancement model would reflect the use of the NWEA national percentiles to define student progress in terms of CCR and eliminate biased student placements. Placement of students in RtI tiers (Appendices D), based on student data, would ensure conditions were similar for all students and a component of the administrative vision would be realized.

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Administrators would provide teachers with concrete expectations regarding the roles and responsibilities related to teaching the Enhancement class. Informal observations/walk-throughs and data conversations, utilizing rubrics, would occur daily. Brooks Middle School would create an Enhancement steering group comprised of district technology team members, administrators and teacher leaders to assess the programs progress. Over the course of the first semester, program goals for student outcomes would be developed. In addition, the steering group would monitor student placements utilizing the Enhancement Intervention placement Diagram (Appendix E).  In order for goals to be met, teacher buy-in would be a condition of success. Involving teachers in the process would create a collaborative culture where all voices would be heard, thus, lessening initial teacher anxiety and increasing staff involvement.

## Competencies

In order for Enhancement to narrow the achievement gap, teachers would have to think strategically, be provided with essential resources, and have the time to gather and analyze data. In addition to monitoring the Odyssey program in Enhancement, teachers would develop needed skills, over time, to implement small group lessons.  Teachers would be proficient in monitoring student learning as well as evaluating student achievement data to differentiate instruction. After developing these skills, teachers would navigate and evaluate data utilizing Odyssey data tracking reports. Enhancement staff would share relevant student data and celebrate successes.

Professional development would be consistent, intentional and relevant to the needs of teachers in the Enhancement program. Specific professional development would be provided directly from Odyssey in the area of academic technology. Administered at

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the building level would be best practice-strategies, student motivation, core content, and small group instruction. Classroom observations and teacher feedback would be utilized to determine future professional development needs.

## Culture

Administrations first obstacle was redefining teacher beliefs about students and more importantly teacher beliefs about students in the Enhancement program. As a school, an administration, and as classroom teachers, the belief would be formed that each child, regardless of their current academic level had the ability to progress towards College and Career Readiness. Additionally, the team would acknowledge, but not be thwarted by factors outside of our control such as: poverty, race, home life, and socio-economic status. The school team would believe that students could make the necessary academic growth based on their enrollment in Enhancement. The focus for school administrators would be based solely on individual student growth, creating the same high expectations for students.

One of the more pressing culture changes needing attention was the notion that students who were behaving well, were achieving academically. Changing and challenging the culture of labeling "good" and well-behaved students as currently being in line for College and Career Readiness would need to be addressed. Ninety percent of students' grades in core academic classes would be based on summative assessment scores with only ten percent being attached to compliance items such as homework and participation, to eliminate teacher bias.

In Section Eight, the creation of the bridge from the 'As Is' to the 'To Be' will be explained. Within this section, the 'As Is' (Appendix F) and 'To Be' (Appendix G) charts

will be referenced to provide key explanations and the rationale behind required organizational changes. In addition to research examples and student data from previous sections supporting the need for change at Brooks Middle School, the theory behind the Change Leadership Project is provided.

SECTION EIGHT: STRATEGIES AND ACTIONS FOR CHANGE

Section Eight conceptualizes strategies and actions derived from the outcomes of the Program Evaluation and literature supporting in-school computer-based instruction. In addition, details are shared of how Brooks Middle School moved the Change Leadership Plan from "here" to "there" utilizing Tony Wagner's vision for transforming schools.

The year one Program Evaluation illuminated the need for additional in-school interventions and the more immediate need to address students currently not on pace to be College and Career Ready (CCR). In the spring of 2011, more than two-thirds of Brooks Middle School students fell short of College and Career Readiness benchmarks in reading and mathematics as identified by fall, winter and spring MAP® assessment results. Administrators responded to the achievement gap and lack of in-school interventions by developing and implementing the Enhancement program. Effectively launching the in-school intervention required administrators to address the following areas: (1) resources, (2) program design, (3) student placement, (4) professional development, and (5) program evaluation.

A district study in 2011, established that increased exposure to content and format of high stakes assessments did not correlate with higher student academic performance. As a result, and in search of an alternative practice, Brooks Middle School introduced a new middle school class in the fall of 2011. Following a short administrative search for an in-school intervention, Odyssey, by Compass Learning was selected. The Odyssey program required computers for individual students, classrooms with the appropriate infrastructure to administer the program and a per pupil user fee.

Providing physical classroom space within the building did not become an issue. Taking into consideration that Brooks Middle School, in 2005, had been an 1,800 student high school, a number of pre-existing locations within the building provided space for the program implementation. Three traditional computer labs were converted to Enhancement labs. These pre-existing labs required the Odyssey software to be installed on each computer, but other than that were equipped to house the Enhancement program. District and building capital outlay budgets provided the support for two of the five computer labs.

District technology provided desktop computers and exploited the existing infrastructure to 'connect' students to the Compass Learning program (Odyssey). In two of the five classrooms, district maintenance extended current computer drops to support additional labs at no direct cost to Brooks Middle School. By the end of the 2011-2012 school year, district technology provided the Enhancement program with 116 desktop computers, supporting five new computer labs.

In order to utilize newly constructed computer labs, building administrators designed an in-school academic intervention. The 'Enhancement' class combined reading and mathematics teacher instruction with the Compass Learning (Odyssey) program. Compass learning provided a series of creative and thought-provoking computer-assisted activities increasing skill attainment for sixth, seventh and eighth grade students. Content within the Compass Learning program was directly aligned to the newly adopted Common Core State Standards.

Increasing the percentage of students on track for College and Career Readiness by the end of eighth grade was a goal for the Enhancement class. Additionally, the in-

school intervention was designed to close performance gaps among African American, Hispanic and Caucasian students. Over the course of a traditional eight-period middle school day, thirty-one sections of 'Enhancement' plus two after-school options provided computer-assisted instruction for sixth, seventh and eighth grade students.

All students falling below the 50th percentile on the MAP® assessment in either reading or mathematics began their school year in the Enhancement class rather than careers-track classes, band or social studies. Students continued receiving services in the Enhancement class schedule until they achieved the 50th percentile nationally on either the winter or spring MAP® assessments. Details of Enhancement class options, the student placement criteria and explanations of each "tier" are included below.

For the 2011-2012 school year, the following Enhancement programming options were available: (1) five-day-a-week, (2) three-day-a-week and (3) two-day-a-week. Teachers currently certified in either language arts or mathematics would teach five-day-a-week Enhancement sections, while displaced careers and electives teachers would supervise the two-day-a-week and three-day-a-week options. Supervision of the computer-based program included the monitoring of student engagement based on the number of 'active' minutes students completed daily.

The majority of the Enhancement class included computer-assisted instruction with students working within their Odyssey assigned instructional level. Within each 44-minute period of the five-day-a-week Enhancement class, fifteen minutes per day was devoted to small group instruction. Small-group teacher-led instruction focused on supporting students' core academic classes utilizing grade level materials. Core academic teachers provided the mini-lessons.

Students in the two-day-a-week and three-day-a-week Enhancement class, taught by displaced careers and electives teachers, completed only computer-based modules specific to individual student deficiencies 'assigned' by Odyssey. Students in these sections did not receive small-group or individual instruction. Students only completed assigned modules individually throughout the 44-minute Enhancement class. Students watched computer-based lessons, completed assessments following the classroom lesson and were given tutorials on each question answered incorrectly.  The average class size in the two-day-a-week and three-day-a-week classes was twenty-eight students. Teacher-student interaction was at a minimum during the two-day-a-week and three-day-a-week class, so class sizes exceeded the cap of fifteen in the five-day-a-week offering. These teachers are not certified to teach mathematics or reading and most likely would not be effective providing small-group mathematics or reading lessons. Data further explained in the Policy Advocacy proposal (Appendix F) will indicate that students in the two-day-a-week and three-day-a-week Enhancement class displayed less success on the Spring MAP® assessment than students receiving no level of academic intervention, thus, leading administrators to believe that the two-day-a-week and three-day-a-week Enhancement classes were not beneficial.

In the five-day-a-week Enhancement class, students worked two days during the first week on mathematics and three days in language arts. The following week, students received a reverse schedule, repeating the cycle until students achieved a passing score and the five-day intervention was no longer needed. The five-day-a-week Enhancement class enrollment averaged fifteen students.  In the five-day-a-week Enhancement class, teachers divided students into small groups based on an area of academic need as defined

by the Odyssey program and core content teacher recommendations.  During the 15-minute small-group instruction, Enhancement teachers targeted specific areas aligned to the Common Core National Standards. Teachers attempted to ability group students within each class to enhance concepts students were currently studying in their core reading or mathematics classes. Materials for the 15-minute small group lesson were created by the Enhancement teacher based on students' needs.

Students currently in $6^{th}$ grade mathematics, focused on the following areas as provided by www.corestandards.org.(1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.  If a student was deficient in one, two or all of the areas listed above, Odyssey developed a series of computer-derived module lessons based on students' needs.  Teachers assigned modules with corresponding assessments as needed.   If necessary, the student was given a tutorial, and additional modules, until the area of deficiency was remediated by Odyssey.

Students qualifying for the Enhancement class were placed in one of the three options above based on an assigned 'Tier' level. 'Tier' levels are displayed below in Figure 1.
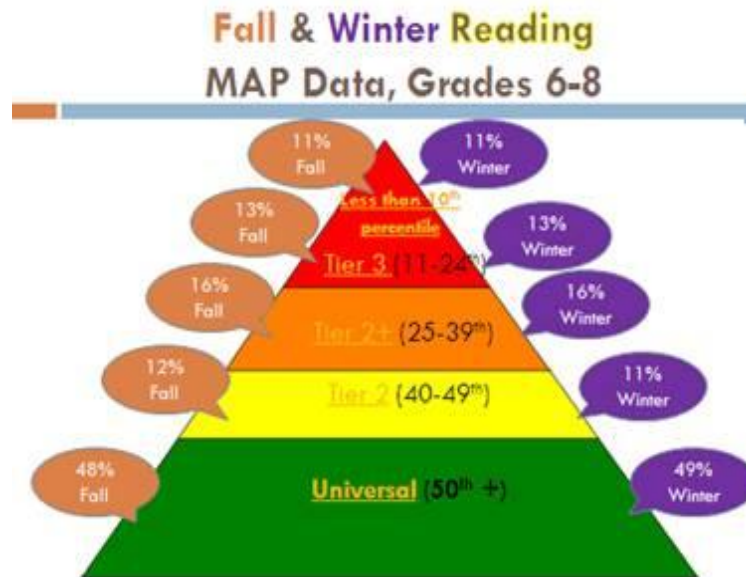
Figure 1. Enhancement Intervention Placement Diagram

- Five-day-a-week students qualified based on being Tier 3 in reading and mathematics, or placed in Tier 2 in one subject and Tier 3 in the other. Students received sixty minutes of the Odyssey computer program per subject, as well as an additional 40 minutes of small group instruction.

- Three-day-a-week students qualified based on being in Tier 2 in both subjects. Three-day-a-week students minimally received 120 minutes of the Odyssey computer program per week. Computer-based minutes were divided evenly between reading and mathematics.

- Two-day-a-week students qualified based on being Tier 1 in only one subject and Tier 2 or 3 in the other subject. Students would receive Odyssey two-day-a-week in mathematics or reading, based on the greater deficiency. Students were assigned to either Tier 2 or Tier 3.

Originally, Tier 1 students were those who exceeded the NWEA College and Career Readiness benchmark of the 65th national percentile. According to NWEA, Tier 1 students did not require additional intervention. The BMS administrative team, based on approximately 800 students at Brooks Middle School falling below the 65th percentile, reduced the Tier 1 criteria from the 65th percentile to the 50th with the intention of providing the appropriate lab space, computers and classroom teachers to facilitate the Enhancement intervention. Reducing Tier 1 from the 65th national percentile to the 50th percentile compromised the original vision, but based on available resources, administrators had no choice. Tier 2 students were those requiring substantial remediation in order to meet CCR standards. Tier 2 included all students from the 25th to 49th national percentile. Tier 3 students were those requiring intensive remediation over several years in order to reach CCR standards. Tier 3 included all students below the 24th national percentile.

*Criteria for Enrollment and Exclusions in the Enhancement Class*

Utilizing individual NWEA spring percentiles and RIT scores, administrators and teacher leaders identified 'bubble' students or those on the cusp of being placed in the Enhancement class. Utilizing the criteria below, bubble students were identified and case studies were developed:

- The secondary criterion for assignment in Enhancement included teacher recommendations based on individual student reading and mathematics grades.

- Students in Tier 3 with a grade of A in both reading and mathematics required a teacher recommendation for participation in five-day-a-week, three-day-a-week, or twos-day-a-week Enhancement, even though their percentile rank was below the $24^{th}$ percentile. In 2013, administration eliminated this measure for placement. All students scoring below the $24^{th}$ percentile were required to attend Enhancement.

- Tier 2-students with a grade of D or F in reading and mathematics required teacher recommendation for participating in five-day-a-week- or three-day-a-week of Enhancement class.

- ISAT was a tertiary measure and used only in cases where teacher data and the results from the MAP® test did not provide a clear enough picture to advise a clear placement. During the 2012-13 school year, ISAT was utilized once to make a final placement determination. The specific case was an $8^{th}$ grade student with a RIT of 230 and a national percentile rank of 63. The student was receiving an A in mathematics and 'Exceeded' on ISAT. Eventually, the student was waived from the program, with one factor being his performance on ISAT.

- Students' mandatory participation in the Enhancement class was reconsidered if standards were exceeded on ISAT as referenced above and the core content teacher recommended exclusion; any student who 'Exceeded' on ISAT was reconsidered, along with teacher recommendation; the school's administrators made the final decision on student placement.

- The school's administrators discussed special needs students with an Individualized Education Program (IEP) to determine an appropriate placement.

In case studies involving students with IEPs scoring between the 25th and 49th percentile on the MAP® assessment, the student file was evaluated by the IEP team. The IEP team included the parent, and this team made a final placement recommendation

Guidelines developed by teacher leaders and administrators supported the consistent placement of students in the Enhancement class in lieu of careers-track classes and/or social studies and eliminating potential staff bias. Eliminating teacher bias or subjective student placements provided classrooms with student achievement within a consistent range. Instructing students of 'like' ability would lessen the need for teachers to differentiate their instruction.

*Community Outreach*

In August of 2012, administrators introduced parents, students and staff to the Enhancement program, and the community received information about the intended teacher professional development schedule. Beginning in the spring of 2012, Compass Learning provided teacher professional development directed by Odyssey staff. In addition to face-to-face training, Odyssey provided online tutorials for Enhancement teachers, and additional access to information via the HELPDESK. Training brought Enhancement teachers skill in using data-tracking tools from Odyssey, enabling them to work more satisfactorily on student deficiencies. Teachers collaborated to align Enhancement student goals with the Common Core objectives for mathematics and language arts.

In order to support the implementation of the Enhancement class, school administrators held biweekly team meetings, provided ongoing professional development and utilized an administrative classroom walkthrough tool to perform observations, thus monitoring the fidelity of the program. Biweekly meetings included all Enhancement teachers (two-day, three-day and five-day teachers), the building Principal, Assistant Principals and teacher leaders. Professional development starting in the spring of 2012 was offered directly from Odyssey and Compass Learning. In addition to face-to-face training, Odyssey provides online tutorials for Enhancement teachers, as well as instructions on how to use the online data tracking system. Once teachers were proficient on how to use the data-tracking tool, they were able to use recommended interventions provided by Odyssey to work on student deficiencies. Teachers will collaborate to align Enhancement student goals with the Common Core objectives from their core general education Mathematics and Language Arts classes. The walkthrough tool was created by administrators and teachers based on Charlotte Danielson's, *Enhancing Professional Practice: A Framework for Teaching*. The formative document will cover planning, preparation, instruction and assessment (APPENDIX G). The Principal and Assistant Principals will observe each of the 31 sections of Enhancement quarterly.

The purpose of this Change Leadership plan was to challenge traditional educational methods that have year-after-year provided less than desirable student outcomes. Often, administrators and teachers find themselves choosing curriculums that are 'safe' or 'comfortable' out of the fear of failure. Even worse, these teaching methods and strategies have proven to fail our students, but because they are widely accepted and

easily place the 'blame' on the student and not the school, the 'cycle' continues. This 'cycle' or 'system' we have created continues to widen the achievement gap between White, Hispanic and African-American students. The Enhancement program provides an alternative to this system and challenges 'traditional' curriculums and ineffective teaching styles. The computer-assisted program levels the playing-field for 'all' of our students and no longer places a student's outcomes solely in the hands of the classroom teacher.

Administrators decided to change our current systems and structures yielding these undesired student outcomes as a result of classroom observations and student outcomes. District leadership has empowered and encouraged the Brooks administration to take risks and embrace these non-traditional ideas while maintaining a 'laser-like' focus on student academic outcomes as the only indicator of success.

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APPENDICES

APPENDIX A

5 DAY ENHANCEMENT STAFF PERCEPTION AND CONFIDENCE

SURVEY

Please complete the following survey. The choices are **Strongly agree** (you agree with the question completely), **Agree** (you agree**), Disagree** (you do not agree with the question), **Strongly Disagree** (You disagree with the entire question strongly).

1. The district professional development I received prepared me to implement the Odyssey program.
   Strongly Agree          Agree          Disagree          Strongly Disagree

2. I am confident classroom technology and Odyssey resources will function as promised.
   Strongly Agree          Agree          Disagree          Strongly Disagree

3. I feel my administration has prepared me to successfully implement the Odyssey program.
   Strongly Agree          Agree          Disagree          Strongly Disagree

4. The students were appropriately identified for the Odyssey program.

   Strongly Agree          Agree          Disagree          Strongly Disagree

5. Odyssey class sizes are ideal for an intervention program.
   Strongly Agree          Agree          Disagree          Strongly Disagree

6. Odyssey classrooms are ideal for an intervention program.

   Strongly Agree          Agree          Disagree          Strongly Disagree

7. I feel confident in my knowledge of the Odyssey program.

   Strongly Agree          Agree          Disagree          Strongly Disagree

8. I feel confident trouble shooting the Odyssey program when issues arise.

   Strongly Agree          Agree          Disagree          Strongly Disagree

9. I am confident in Odyssey customer support to help fix issues when they arise.

   Strongly Agree          Agree          Disagree          Strongly Disagree

10. I am confident in district technology to fix issues when they arise.

    Strongly Agree          Agree          Disagree          Strongly Disagree

APPENDIX B

PROGRAM EVALUTION YEAR 1 FINDINGS AND INTERPRETATION

Findings

*Research Question 1: Will students in the intervention class demonstrate increased*

*confidence, feeling more comfortable and prepared for high stake assessments?*

H1$_A$:  Students in the experimental group who received the intervention felt

comfortable and prepared for high stake assessments and therefore,

demonstrated a significant increase in final confidence survey scores compared

to the control group (no intervention).

H1$_0$: Students in the experimental group who received the intervention did not

demonstrate a significant increase in final confidence survey scores compared

to the control group (no intervention).

To evaluate this first hypothesis, an independent samples *t*-test was conducted

to test for significant differences in the mean change in confidence scores (from the

fall to the spring) between the experimental (intervention) group and the control (no

intervention) group.  The mean difference was calculated by subtracting the initial

(pre-intervention) fall scores from the final confidence survey score (spring scores).

The *t*-test was used to evaluate the differences between groups of this change in

confidence score.  Both groups consisted of a sample size greater than 30, which could

therefore be assumed to be normally distributed.  Because the t-test is based on an

equal variance assumption of the two independent samples, an *F* test (Levene Statistic)

was performed to validate the use of the *t*-test in this situation.  Results of the *F* test (*F*

= .619, p = .434) revealed a *p*-value greater than 0.05, indicating that there is not enough evidence to reject the equal variance hypothesis.  Therefore, it is appropriate to use *t*-test to assess the differences between the two groups. Table 1 provides the descriptive statistics for each group and Table 2 provides the results of the t-test analysis.

Table 1

Difference in Confidence Scores between Groups

| Group | N | Mean Difference | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| No intervention | 38 | .0789 | 2.78395 | .45162 |
| Intervention | 31 | 1.7097 | 2.90050 | .52095 |

Table 2

*Results of the t-test for Group Differences in Confidence Scores*

| Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|
| F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | Lower | Upper |
| .619 | .434 | -2.375 | 67 | .020 | -1.63073 | .68655 | -3.00108 | -.26038 |

The test revealed a statistic of -2.375 with a p-value of 0.020.  Therefore, we reject the null hypothesis and conclude there is a significant difference in change in confidence scores between the students in the experimental (intervention) group and the control group.

*Research Question 2: Will students scoring higher on the confidence survey also score higher on high stake assessments?*

H2$_A$: There will be a significant correlation between student confidence level and ISAT scores indicating that higher confidence level will support higher ISAT achievement scores.

H2$_0$: There will be no statistically significant correlation between confidence level (survey score) and ISAT scores.

Pearson's correlation was used to test the relationship between confidence level (scores) and ISAT achievement scores for all students regardless of intervention. Confidence survey scores were added together to construct a total confidence score for each student, which was then compared with the 2012 ISAT score for each student. The results for the total student sample (N = 69) fail to reject the null hypothesis ($r = .217$, $p = .073$), but offers a nearly significant result, suggestive of the need for further research with a larger sample size.

*Research Question 3: Do students score higher in classrooms with a curriculum more closely aligned to high stake assessment learning objectives?*

H3$_A$: There will be a statistically significant difference in ISAT scores for students in the experimental group (intervention) compared to students in the control (no intervention) group, with experimental group students scoring higher on the ISAT.

H$3_0$: There will be no statistically significant difference in ISAT scores

between the experimental group (intervention) and the control group (no

intervention).

To evaluate the third hypothesis, an independent samples *t*-test was performed

to determine if any significant of differences in ISAT scores between experimental

and control groups were evident.  Normal distribution was assumed given sample sizes

greater than 30 in both groups.  In addition, Levene's test for homogeneity of

variances suggested equal variances ($F = 0.601$, $p = .441$).  Descriptive statistics

demonstrating the mean change in score for each group are provided in Table 3 and

the *t*-test results are given in Table 4.

Table 3

*Descriptive Statistics for Group Change in ISAT Scores*

| Group | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| No intervention | 38 | 12.2368 | 12.62009 | 2.04725 |
| Intervention | 31 | 11.4194 | 14.00898 | 2.51609 |

Table 4

*Results of the t-test for Group Differences in ISAT*

| Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|
| F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% CI of the Difference Lower | Upper |
| .601 | .441 | .255 | 67 | .800 | .81749 | 3.20919 | -5.58807 | 7.22305 |

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The test statistic of 0.255 and associated *p* value of 0.800 (p > .05) fails to reject the null hypothesis. Therefore, we conclude there is no statistically significant difference in the change in ISAT scores (from 2011 to 2012) between the experimental (intervention) group and the control (no intervention) group.

*Research Question 4: Will district summative assessments scores and gains be consistent with student achievement on high stake assessments such as ISAT?*

> H4$_A$: There will be a statistically significant difference in MAP™ scores for students in the experimental group (intervention) compared to students in the control (no intervention) group, with experimental group students scoring higher on the MAP™ .
>
> H4$_0$: There will be no statistically significant difference in MAP™ scores between the experimental group (intervention) and the control group (no intervention).

Similar to the previous research question, to evaluate the fourth hypothesis, an independent samples *t*-test was performed to determine if any significant of differences in MAP™ scores between experimental and control groups were evident. Normal distribution was assumed given sample sizes greater than 30 in both groups. Levene's test for homogeneity of variances suggested unequal variances ($F = 5.777$, *p* = .019) and therefore, non-pooled test evaluation was calculated (equal variances not assumed) for the *t*-test. Descriptive statistics demonstrating the mean change in score for each group are provided in Table 5 and the *t*-test results are given in Table 6.

Table 5

*Descriptive Statistics for Group Change in MAP™ Scores*

| Group | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| No intervention | 38 | 5.42 | 5.722 | .928 |
| Intervention | 31 | 4.68 | 8.146 | 1.463 |

Table 6 *Results of the t-test for Group Differences in MAP™*

| Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|
| F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% CI of the Difference | |
| | | | | | | | Lower | Upper |
| 5.777 | .019 | .429 | 52.157 | .670 | .744 | 1.733 | -2.733 | 4.220 |

Aligning with the results of the ISAT comparisons, the test statistic of 0.429 and associated *p* value of 0.670 (p > .05) fails to reject the null hypothesis. Therefore, we conclude there is no statistically significant difference in the change in MAP™ scores (from fall 2011 to spring 2012) between the experimental (intervention) group and the control (no intervention) group.

APPENDIX C

STRATEGIES AND ACTION

| Strategy | Action |
|---|---|
| Develop extended learning opportunities for all students | Development of an after school Homework and Tutoring Center (HTC).<br><br>• Reallocate an area with computers, tables and a quiet area for students to work on assessments<br>• Develop system for volunteers<br>• Utilize NHS and NJHS students to assist<br>• Parent Volunteers<br>• Staff Volunteers (8 total) |
| Increase tutoring and remediation help in the areas of Mathematics and Language Arts | In the HTC room we will see 8 volunteers<br><br>• Two highly qualified teachers in the area of Mathematics and Language Arts<br>• Tutoring would be offered 3 times a week for 1 hour and 15 minutes a day<br>• Transportation would be provided<br>• First year students will come on volunteer basis<br>• Second year volunteer and as assigned by their teacher |
| Book study on Culturally Relevant Teaching | Creating the Opportunity to Learn by A. Wade Boykin and Pedro Noguera |
| Implement an Intervention program in lieu of Careers and/or Social Studies classes for students 3 grade levels or more behind according MAP and ISAT | Compass Learning<br><br>• Odyssey program<br>• Students assigned by need<br>• Highly qualified Math and Language Arts teacher will deliver instruction<br>• Computer based<br>   o Students will have access at home and school |
| Create fidelity checklists for all of our interventions with defined entrance and exit procedures | RtI teams in conjunction with the grade level counselors will create baseline entrance and exit criteria<br><br>• Rubrics<br>   o Based on multiple data points |

APPENDIX D

BROOKS MIDDLE SCHOOL ENHANCEMENT CLASS

## Brooks middle school enhancement class

To address the needs of such a large pool of students falling short of our benchmark, a completely new vision for enhancement needed to be created, one which changed the emphasis from grade level deficiency to College and Career Readiness deficiency. This necessitated the creation of a new RTI model and a new enhancement class model.

The new enhancement class is designed to provide additional minutes of reading and math instruction to students who have been identified as falling below College and Career Readiness standards. While primarily identified by results on MAP®, grades, teacher recommendation and ISAT results will be utilized in the final determination, though it must be clearly understood that the intent of this class is to address the needs of College and Career Readiness and not grade level expectations.

**The New RTI Model:**
Previous RTI models have been created in relation to grade level proficiency. Our district's new RTI model reflects the use of the NWEA national percentiles in relationship to College and Career Readiness.

- **Tier 1** students are those students who are close or above the CCR benchmark of $65^{th}$ national percentile. No remediation is needed for these students. This includes all students from the $50^{th}$ to the $99^{th}$ national percentile.

- **Tier 2** students are those that will require substantial remediation in order to meet CCR standards. This includes all students from the $25^{th}$ to $49^{th}$ national percentile.

- **Tier 3** students are those that require intensive remediation over several years in order to reach CCR standards. This includes all students from the $1^{st}$-$24^{th}$ national percentile.

**The Curriculum of the Enhancement Class:**
 The curriculum of the class was chosen to be a combination of teacher led instruction aligned to current classroom instruction and a computer program which could offer instruction and practice activities aimed at College and Career Readiness. Odyssey was chosen as the computer program which best met our needs. Odyssey has a proven record of helping students find success both in the classroom and on standardized assessments. This program requires 60 minutes of use by students each week per subject to have maximum impact on student performance.

**The Enhancement Class Schedule:**
The combination of the needs of our Enhancement class curriculum with our new RTI model led to the following schedule for students:

- Five-day-a-week students qualified based on being Tier 3 in reading and mathematics, or placed in Tier 2 in one subject and Tier 3 in the other. Students received sixty minutes of the Odyssey computer program per subject, as well as an additional 40 minutes of small group instruction.

- Three-day-a-week students qualified based on being in Tier 2 in both subjects. Three-day-a-week students minimally received 120 minutes of the Odyssey computer program per week. Computer-based minutes were divided evenly between reading and mathematics.

- Two-day-a-week students qualified based on being Tier 1 in only one subject and Tier 2 or 3 in the other subject. Students would receive Odyssey two-day-a-week in mathematics or reading, based on the greater deficiency. Students were assigned to either Tier 2 or Tier 3.

**Criteria for Enrollment in the Enhancement Class:**

- NWEA Spring Percentiles are the initial criteria that assign students to each Tier

- Student Grades and Teacher Recommendation are a secondary criteria
    - Tier 3 students with an A in both reading and math will then require a teacher recommendation for participating in 5, 3, or 2 days of enhancement class though the school's administration will make the final decision on student placement.
    - Tier 2 students with a D or F in reading and math will then require teacher recommendation for participating in 5 or 3 days a week of enhancement class. Again, the school's administration will make the final decision on the student's placement.

- ISAT is a tertiary measure (This will be checked in June)
    - Students who Exceed on ISAT with an A in reading and math will be excused from the enhancement class
    - Any student who Exceeds on ISAT will be reconsidered along with teacher recommendation, however, the school's administration will make the final decision on student placement.

Students with IEP's who have conditions that their disability would limit their success on MAP® testing should be privately discussed with the school's administration to determine final placement in the program.

APPENDIX E

ENHANCEMENT CLASS STUDENT RUBRIC

Enhancement Intervention Placement Diagram



**Fall & Winter Reading**
**MAP Data, Grades 6-8**

- 11% Fall
- 11% Winter
- 13% Fall
- Less than 10th percentile
- 13% Winter
- Tier 3 (11-24th)
- 16% Fall
- 16% Winter
- Tier 2+ (25-39th)
- 12% Fall
- Tier 2 (40-49th)
- 11% Winter
- 48% Fall
- Universal (50th +)
- 49% Winter
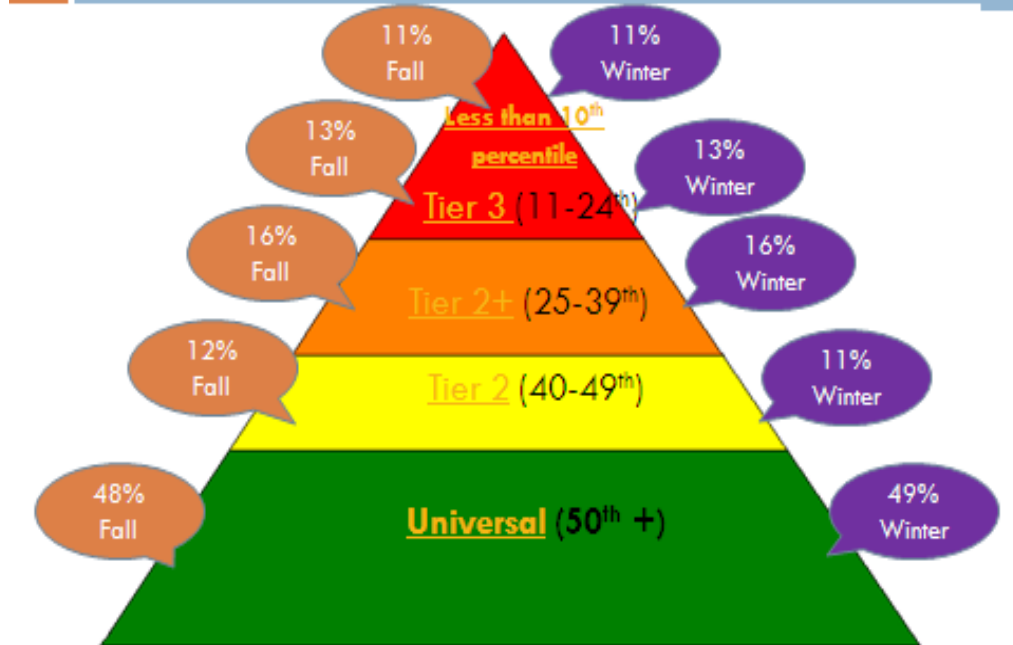
*Chart created by Kelly Gilbert and Michael Locasio directors of data and assessment in Valley View School District 365u

Students are placed in 3 tiers based on their MAP® scores in Mathematics and Reading. The combined percentiles place the child in the universal level, tier 2, tier 2+ and tier 3.

**Universal:** No intervention required

**Tier 2:** Student receives two-days of academic Enhancement in either Mathematics or Reading.

**Tier 2+:** Student receives three-days of academic Enhancement in both Mathematics and Reading on a rotation basis.

**Tier 3:** Student is in Enhancement five-days a week in both Mathematics and Reading on a rotation basis.

APPENDIX F

4CS DIAGNOSTIC TOOL AS IS

**Context**
- Significant achievement gap between students (Black, Hispanic, Caucasian)
- Curriculum is a mile wide and an inch deep.

**Culture**
- No clear efforts on culturally relevant teaching
- Curriculum is secondary to behavior
- Teachers belief in our kids are not aligned with district vision
- Not a parent friendly building
- Competitive culture

**Conditions**
- Classrooms are not assigned by need
- After school help is not available
- Teachers union controls all non contractual situations
- New initiatives yearly
- Veteran staff

**Inadequate preparation and curriculum for assessments, MAP and ISAT**

**Competencies**
- 52 percent of staff is elementary certified and middle school endorsed
- Change in district leadership
- Change in district vision
- Professional development geared at behavior

APPENDIX G

4CS DIAGNOSTIC TOOL TO BE

**Context**
- Extend the school day for students
- Community and parents are involved in the school
- Hiring process is meeting the needs of our building

**Culture**
- Clear PD designed around culturally relevant teaching
- Same expectations for all kids
- Common planning times that are utilized by staff
- Co-teaching is accepted by staff
- Classroom environments are based on the needs of students

**Conditions**
- Classrooms are assigned by need
- Building is open until 4 for students with tutors.
- Administration and union would work together
- District 3 year plan developed and implemented
- Teachers were given clear goals and had input in their development

**All students are familiar with test content and offered a curriculum based upon common core.**

**Competencies**
- Gather data
- Identify areas of concern based on data
- Formulate PD and content area teams
- Think strategically (tough to measure)
- Measure results versus a standard

APPENDIX H

DATA RESULTS FROM ENHANCEMENT PILOT

*Data Results From Enhancement Pilot*

Table 1

*Brooks Middle School 2012-13 MAP® Mathematics Assessment Results*

| MAP® 2012-13 Mathematics Assessment | Fall RIT | Spring RIT | Average RIT Increase |
| --- | --- | --- | --- |
| Group A (No Intervention) | 223.58 | 231.35 | 7.77 |
| Group B (2 Day Enhancement) | 215.43 | 222.35 | 6.92 |
| Group C (3 Day Enhancement) | 208.17 | 215.41 | 7.24 |
| Group D (5 Day Enhancement) | 199.10 | 207.94 | 8.84 |

After reviewing student data from the Enhancement class during the Change Leadership Plan (Table 1), partial success was noted. Students (Group D) enrolled in the five-day-a-week Enhancement class outperformed students (Group A) receiving no intervention by 12 percent or 1.07 RIT points. On the other hand, students (Group B and Group C) enrolled in two-day-a-week and three-day-a-week were outperformed by peers receiving no additional interventions.

APPENDIX I

ENHANCEMENT TEACHER WALKTHROUGH FORM

Enhancement Teacher Walkthrough Form

Teacher:_____

Period:_____ Date:_____

Subject:_____

Learning Target Visible? _____Student Friendly?_____ Measurable?_____
Cool Tools Posted? _____
Classroom expectations posted? _____

**Instructional Focus Walk Look Fors:**

 ➢ Teacher engaged – actively participating in the lesson
 ➢ Student engaged – actively participating in the lesson, not necessarily good behavior
 ➢ Effective classroom management procedures in place
 ➢ Making connection to prior learning-Anticipatory set/Bell ringer/Review prior material
 ➢ Minimize direct instruction
 ➢ Maximize student activity
 ➢ Informal assessment/Checking for understanding (before/during/after)
 ➢ Using data to adjust instruction
 ➢ Proximity
 ➢ Higher order questioning, inquiry based
 ➢ Pacing-allows adequate time for each phase of the lesson/Teaches bell to bell
 ➢ Allows time for student questioning and answers – wait time
 ➢ Provides constructive feedback in a positive manner
 ➢ Promotes student learning conversations
 ➢ Uses data to inform and adjust practice
 ➢ Wrap-up: Reconnects/Restates/Emphasizes learning target


What was observed.


What should be considered.


Teacher reflection on the lesson:


Administrator Signature _____       Date _____

APPENDIX J
PERSONAL IMMUNITIES TO CHANGE

| Jason's Personal Immunities MAP® | | |
|---|---|---|
| → | → | → |
| Commitment | First Noticeable Steps Forward | The Finish Line |
| *I am committed to moving my district and my school from "good" to "great" by creating a data tracking system and academic intervention class appropriate for all teachers and students.* | *I take action, pushing my school forward. In order to take the necessary risks to change a system set up for select students, I will evaluate individual student data to provide a system and the necessary level of interventions for each individual student in my school.*<br><br>*I will take action, by challenging the hiring process and spending the majority of my time and energy focused on placing highly qualified teachers before each of my students in the Enhancement class.*<br><br>*I will stay alert to the climate and culture in the classrooms, by staying connected to my students and my teachers as observed in informal classroom observations and conversations with students.* | *I have crossed the finish line when Enhancement teachers are consistently implementing the program as designed by our administration.*<br><br>*Our task is completed when each student at Brooks Middle School has been given the opportunity and proper academic intervention to progress towards College and Career Readiness as defined by their current level of academic achievement.* |

APPENDIX K

2011 RIT VALUES FOR READING, MATH, AND LANGUAGE USAGE

| 2011 READING STATUS NORMS (RIT VALUES) | | | |
|---|---|---|---|
| Grade | Beginning-of-Year Mean | Middle-of-Year Mean | End-of-Year Mean |
| K | 142.5 | 151.0 | 157.7 |
| 1 | 160.3 | 170.7 | 176.9 |
| 2 | 175.9 | 183.6 | 189.6 |
| 3 | 189.9 | 194.6 | 199.2 |
| 4 | 199.8 | 203.2 | 206.7 |
| 5 | 207.1 | 209.8 | 212.3 |
| 6 | 212.3 | 214.3 | 216.4 |
| 7 | 216.3 | 218.2 | 219.7 |
| 8 | 219.3 | 221.2 | 222.4 |
| 9 | 221.4 | 221.9 | 222.9 |
| 10 | 223.2 | 223.4 | 223.8 |
| 11 | 223.4 | 223.5 | 223.7 |

| 2011 MATHEMATICS STATUS NORMS (RIT VALUES) | | | |
|---|---|---|---|
| Grade | Beginning-of-Year Mean | Middle-of-Year Mean | End-of-Year Mean |
| K | 143.7 | 150.7 | 159.1 |
| 1 | 162.8 | 172.4 | 179.0 |
| 2 | 178.2 | 185.5 | 191.3 |
| 3 | 192.1 | 198.5 | 203.1 |
| 4 | 203.8 | 208.7 | 212.5 |
| 5 | 212.9 | 217.8 | 221.0 |
| 6 | 219.6 | 222.8 | 225.6 |
| 7 | 225.6 | 228.2 | 230.5 |
| 8 | 230.2 | 232.8 | 234.5 |
| 9 | 233.8 | 234.9 | 236.0 |
| 10 | 234.2 | 235.5 | 236.6 |
| 11 | 236.0 | 237.2 | 238.3 |

| 2011 LANGUAGE USAGE STATUS NORMS (RIT VALUES) | | | |
|---|---|---|---|
| Grade | Beginning-of-Year Mean | Middle-of-Year Mean | End-of-Year Mean |
| 2 | 175.4 | 185.3 | 190.0 |
| 3 | 191.1 | 196.5 | 200.3 |
| 4 | 200.9 | 204.4 | 207.0 |
| 5 | 208.0 | 211.0 | 212.9 |
| 6 | 212.3 | 214.4 | 216.2 |
| 7 | 215.8 | 217.3 | 218.7 |
| 8 | 218.7 | 220.2 | 221.3 |
| 9 | 220.6 | 221.0 | 221.8 |
| 10 | 221.9 | 222.2 | 222.7 |
| 11 | 222.1 | 222.7 | 223.3 |