Measuring the Impact of Common Assessments On Student Achievement in Seventh Grade Mathematics

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A Special Project

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Dr. Gretta Merwin

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FACULTY APPROVAL

Measuring the Impact of Common Assessments

On Student Achievement in Seventh Grade Mathematics

Approved for the Faculty

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ABSTRACT

The purpose of the project was to identify the impact of common assessments being used in the seventh grade on student learning in mathematics. Common assessments were developed that aligned with the Washington State Grade Level Expectations. The seventh grade team developed the common assessments. The common assessments were given to seventh graders at the end of each of the four units that were taught during the 2008-2009 school year.

Using data from the Measures of Academic Progress tests, student scores from 2008-2009 were compared to student scores from 2007-2008 when the strategy of using common assessments was not used. The results of the project supported the use of common assessments.

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CHAPTER 1

Introduction

Background for the Project

The middle school where the author taught participated in the use of common assessments. Common assessments were used to test students based on common learning targets as agreed on by the Professional Learning Community. The learning targets were based on the Grade Level Expectations, as defined by the Office of the Superintendent of Public Instruction in the state of Washington.

After common assessments had been given to all students, the Professional Learning Community analyzed the results of the common assessment and reflected on student learning. Future teaching was then modified to adapt to the challenges faced by the previous group of students.

The author questioned the use of common assessments as an effective tool in evaluating student learning. Did the use of the common assessments greatly impact student learning? Did the common assessments also greatly impact teacher learning and future methods of teaching the content?

Statement of the Problem

Fully developed common assessments took time to complete. The impact of using the common assessments had not been visible to some of the teachers at the author's school. These teachers questioned the impact of using common

assessments on student learning when compared to the time commitment that the strategy mandated. Conclusive data on the value of using common assessments was lacking.

Purpose of the Project

As a result of the project the author intended to identify the impact of common assessments being used in the seventh grade on student learning in mathematics. The author then planned to share the results of the study with the Professional Learning Community. The Professional Learning Community would then decide on the future use of common assessments.

Delimitations

The seventh grade mathematics class was used to evaluate the impact of common assessments on student learning. During the 2007-2008 school year the seventh grade class consisted of 395 students. Of the 371 students that had been in the seventh grade class all year, 186 were female, 185 were male, 154 were Hispanic, 188 were White, 17 were Black, 12 were Pacific Islander and 168 were on free or reduced lunch.

During the 2008-2009 school year the seventh grade class consisted of 420 students. Of the 372 students that had been in the seventh grade class all year, 180 were female, 192 were male, 190 were White, 159 were Hispanic, 12 were Black, 11 were Pacific Islander and 174 were on free or reduced lunch.

The school at which the author worked consisted of a student population of 1,293 students during the 2007-2008 school year. The breakdown of the student population was as follows: 49.8 percent were male, 50.2 percent were female. The ethnic makeup of the school was 0.8 percent American Indian/Alaskan Native, 2.8 percent Pacific Islander, three percent Black, 41.5 percent Hispanic and 50.9 percent White. Close to half of the population, 45.4 percent, was on free or reduced price meals (OSPI, 2008).

The student population consisted of 10 percent special education, 7.8 percent transitional bilingual and 4.1 percent migrant. The author's school had an unexcused absence rate of 0.4% (OSPI, 2008).

During the 2008-2009 school year the student population consisted of 1,322 students. The breakdown of the student population was as follows: 49.4 percent were male, 50.6 percent were female. The ethnic makeup of the school was 0.8 percent American Indian/Alaskan Native, 2.6 percent Pacific Islander, 3.1 percent Black, 41 percent Hispanic and 51.6 percent White. Close to half of the population, 45.3 percent, was on free or reduced price meals (OSPI, 2008).

The student population consisted of 11.1 percent special education, 8.2 percent transitional bilingual and 3.3 percent migrant. The school had an unexcused absence rate of 0.3% (OSPI, 2008).

The school at which the author worked had 80 certificated teachers during the 2007-2008 school year. The average years of teacher experience was 9.9 years. More than half of the teachers had masters degrees, close to 59 percent. All 80 teachers met the No Child Left Behind highly-qualified definition.

During the 2008-2009 school year there was 85 teachers employed at the school. The average years of teacher experience was 10.4 years. More than half of the teachers had masters degrees, close to 62 percent. Most, 96.3 percent of the teachers, met the No Child Left Behind highly-qualified definition.

The Heritage Special Project was conducted using the Measures of Academic Progress tests. The 2007-2008 seventh grade mathematics class took the Measures of Academic Progress test in October of 2007 and again in May of 2008. The 2008-2009 seventh grade mathematics class took the Measures of Academic Progress test in October of 2008 and again in May of 2009. The results of the Measures of Academic Progress tests were then recorded in a table and analyzed using a *t*-test to determine the significance of common assessments.

Assumptions

The members of the seventh grade mathematics team were highly qualified teachers, as defined by the state of Washington. Four of the five members held Master's in Education degrees. All five members had worked together on the same team for three years. The common formative assessments written by the

seventh grade mathematics team followed the common pacing developed by the school district. Students in each seventh grade mathematics classroom were taught at the appropriate level using the appropriate pacing. Students were assessed using the common formative assessments in the same manner. Students in each classroom were allowed one hour to complete the assessment with no interruptions, allowed to use calculators, and the assessments were taken individually.

Hypothesis

The use of common assessments in seventh grade mathematics resulted in greater student achievement from fall to spring as measured by the Measures of Academic Progress assessment using a non-independent *t*-test when compared to the previous year.

Null Hypothesis

The use of common assessments in seventh grade mathematics did not result in greater student achievement from fall to spring as measured by the Measures of Academic Progress assessment using a non-independent *t*-test with a significance level of .05 when compared to the previous year.

Significance of the Project

The author investigated the impact of common assessments on student achievement. Common assessments were an integral part of teaming within the author's building. During the author's Professional Learning Community meeting times, the author's team created common assessments. The students at the author's school were then assessed using the common assessments. The Professional Learning Community team analyzed the results of the common assessment and future teaching was modified to accommodate student strengths and address student weaknesses. The use of the common assessments directly aligned to the district goals.

The positive results of the research, as determined by the *t*-test, would validate the use of common assessments and would provide the author with research to share with the author's Professional Learning Community team. Negative results would question the use of common assessments as a tool for the author's seventh grade mathematics Professional Learning Committee.

Procedure

Common assessments were developed that aligned with the Washington State Grade Level Expectations. The seventh grade team developed the common assessments. The common assessments were given to seventh graders at the end of each of the four units that were taught during the 2008-2009 school year. The

Professional Learning Community team analyzed student results and content not understood was re-taught to students. Future teaching was modified to adapt to student strengths and to address student weaknesses.

The Measures of Academic Progress assessment was used to gather data on student achievement. For the 2007-2008 year and the 2008-2009 year the first Measures of Academic Progress test was taken in October. The results of the Measures of Academic Progress test were used as a pre-test to determine the seventh grade class' prior knowledge. The second Measures of Academic Progress test was taken in May. The results of the Measures of Academic Progress test were used as a post-test to determine the student's achievement. A non-independent *t*-test was used to determine the significance of student achievement.

Definition of Terms

common assessments. Common assessments were tests developed by the seventh grade team. Each student in seventh grade was assessed using the same test.

Measures of Academic Progress. The Measures of Academic Progress was a computerized assessment developed by the Northwest Evaluation Association.

Professional Learning Communities. Professional Learning Communities were a group of teachers who worked together to reach a common goal which centered on student achievement.

team. The seventh grade mathematics Professional Learning Community was referred to as a team.

Acronyms

CMP. Connected Mathematics Program

GLE. Grade Level Expectations

MAP. Measures of Academic Progress

OSPI. Office of Superintendent of Public Instruction.

PLC. Professional Learning Community

CHAPTER 2

Review of Selected Literature

Introduction

As a result of the project the author intended to identify the impact of common assessments being used in the seventh grade on student learning. The author researched the formation of Professional Learning Communities as outlined by Richard DuFour. The author also researched the development of common assessments and interpreting the results of the common assessments. As a result, the author separated the research into the following subtopics: Professional Learning Communities, common formative assessments, and the Measures of Academic Progress test.

Professional Learning Communities

Professional Learning Communities in the school was an idea first developed by Richard DuFour. "The idea of improving schools by developing Professional Learning Communities was currently in vogue" (DuFour, 2004, p. 1). However, any combination of individuals with an interest in education was defined as being a PLC. With a loose definition, the idea of a Professional Learning Community became vague and the term used so ubiquitously, the term was in danger of losing all meaning (DuFour, 2004). Therefore, the Professional Learning Community model was broken down into three big ideas.

The first big idea of a PLC was that the focus of the group would be on ensuring students learn. The idea ensured the mission of formal education was not simply that students would be taught but that students learned. The simple shift provided profound implications for schools.

> As the school moves forward, every professional in the building must engage with colleagues in the ongoing exploration of three crucial questions that drive the work of those within a professional learning community:
>
> - What do we want each student to learn?
> - How will we know when each student has learned it?
> - How will we respond when a student experiences difficulty in learning?
>
> The answer to the third question separates learning communities from traditional schools. (DuFour, 2004, p. 2)

The response to the third question was to be systematic and school wide. The response was also to be timely, based on intervention, and directive. The school identified quickly the students who needed additional time, provided the students with the necessary support and required that students devote the extra time and received additional assistance (DuFour, 2004).

The second big idea of a PLC was to promote a collaborative culture. Teachers who worked in isolation avoided the idea of collaboration. Many

teachers thought that collaboration would simply be a focus on building camaraderie or being focused on common protocols for items such as supervision, tardiness, or emergency drills. However, although the ideas were helpful, none represented true collaboration that could transform a school into a professional learning community (DuFour, 2004).

Collaboration meant that teachers worked in teams to analyze and improve classroom instruction. "Teachers work in teams, engaging in an ongoing cycle of questions that promote deep team learning. This process, in turn, leads to higher levels of student achievement" (DuFour, 2004, p. 3).

The final big idea of a PLC was a focus on results. The effectiveness of a PLC was judged based on student results. "When teacher teams develop common formative assessments throughout the school year, each teacher can identify how his or her students performed on each skill compared with other students" (DuFour, 2004, p. 5). Individual teachers relied on team colleagues to help them with areas of concern.

The process of implementing and using professional learning communities took time and a commitment from all teachers. The seventh grade team had completed the third year of PLCs and the result of the work had now become apparent.

Common Formative Assessments

The terms formative and summative had been confused in the past. Formative and summative assessments were to be used in a balanced assessment system (Garrison, 2009). Larry Ainsworth went further to identify and define four types of assessments: classroom formative assessments, classroom summative assessments, common formative assessments and common summative assessments (2006).

Classroom formative assessments were traditionally referred to as pre-tests or pre-assessments given to students prior to formal instruction. The assessment was then administered at the end of instruction and the results were used to measure student learning. Classroom summative assessments were similar to formative assessments but were only administered at the conclusion of a unit (Ainsworth, 2006).

Common formative assessments were designed by participating teachers or grade-level teams who all taught the same content standards to the students (Ainsworth, 2006). The common formative assessment was administered in a similar format to the classroom formative assessment. However, the results of the assessments, both pre- and post-, were used to identify student learning and identify teaching strategies that were particularly effective. Common summative

assessments were similar to the common formative assessments but were only administered at the conclusion of a unit (Ainsworth, 2006).

The common formative assessments used at the author's school were designed by the author and the author's seventh grade mathematics Professional Learning Community and assessed student understanding of the particular Grade Level Expectations that were taught during the unit. "Common formative assessments are assessments collaboratively designed by a grade-level or department team that are administered to students by each participating teacher periodically throughout the year" (Ainsworth, 2006, p. 2). The author's PLC collaboratively scored the assessments and analyzed the results. The results of the assessments were then used to guide instruction. Modifications were made by the PLC and some subject matter was re-taught. In essence, the common formative assessments were used to guide instruction in the author's school.

The common formative assessments were designed to mimic the overall theme of the Washington State Assessment of Student Learning (WASL). By doing this, the seventh grade students were exposed to the format of the WASL and the results of the common formative assessments served as a predictor for student results on the WASL. As outlined by Ainsworth:

> If the common formative assessments are aligned to the large-scale assessments in terms of what students will need to know and be able to do on

> those assessments, the formative assessment results will provide valuable information regarding what students already know and what they yet need to learn. These assessments thus offer 'predictive value' as to the results students are likely to produce on the large-scale assessments. Provided with this feedback early, educators can adjust instruction to better prepare students for success on the large-scale assessments. (2006, p. 3)

Common formative assessments developed by the author's PLC were used in a pre- /post-design model. The common formative assessments were administered prior to the start of an instructional cycle and again at the end. This process allowed the PLC to modify instruction to best fit the needs of the students prior to the actual instruction. The process also allowed individual teachers and the students in the classroom to see the progress in student learning made during the unit. Ideas not fully understood by the students were re-taught using a model of instruction that better fit the needs of the students.

The PLC also used the results of the common formative assessments as a judge of instruction and student learning. Each teacher in the PLC identified how the students performed on each skill compared to another teacher's students. Individual teachers enlisted the help of team colleagues to help the individual teacher reflect on areas of concern (DuFour, 2004). Team members shared the results of individual teachers and when the results stood above others, the

individual teacher shared the method of instruction used so that other teachers would use the method.

Measures of Academic Progress

The Measures of Academic Progress tests were administered twice a year to the seventh grade students. Scores on the tests determined grade level proficiency. The grade level proficiency was determined by the comparison of a seventh grade student's score with the scores of all other seventh grade students who had taken the Measures of Academic Progress test. The results of the MAP were also broken down into statistical tables that identified strengths and areas of concern for a particular student.

"Reliability and validity are two of the words most commonly associated with tests" (NWEA, 2004, p. 2). Reliability of a test ensured the test administered to the same student twice yielded the same results. A Pearson product-moment correlation coefficient (r) was used to determine reliability. The minimum accepted correlation score was .80 and a perfect correlation was stated as 1.00. When tested over time, the MAPs scored an $r = .85$.

When looking at the validity of a test, a variety of evidence to support validity was used. "In general terms, the better a test measures what it purports to measure, the greater its validity is said to be" (NWEA, 2004, p. 3). The test content of the MAP was assured by using existing content standards from a state

in the test's blueprint. Test items were selected that matched the content standards and the difficulty level of the test being created. When looking at the concurrent validity of the MAP, a Pearson correlation coefficient was used. The coefficient answered the question, "How well do the scores from this test that reference this (RIT) scale in this subject area (e.g., Reading) correspond to the scores obtained from an established test that references some other scale in the same subject area" (NWEA, 2004, p. 3)? A score of .80 again showed that the MAP did in fact have validity. When the MAP was compared to the seventh grade mathematics Washington Assessment of Student Learning the correlation was shown to be $r = .85$.

Summary

The author researched the use of professional learning communities in a school environment. The author found that the effectiveness of PLCs was based on a commitment from all members of the seventh grade mathematics team. The author then researched the use of common formative assessments as a tool in gathering data that was then used to judge the impact of PLCs. Again, the author found that common formative assessments were only effective if there was a commitment from all members of the seventh grade mathematics team. There also needed to be willingness from all members to analyze the results of the assessment and reflect on how each individual teacher improved with the help of

the entire seventh grade team. Finally the author researched the Measures of Academic Progress test. The author found that the MAPs were reliable and that there was validity in the student results of the MAPs.

CHAPTER 3

Methodology and Treatment of Data

Introduction

As a result of the project the author intended to identify the impact of common assessments being used in the seventh grade on student learning in mathematics. The author then planned to share the results of the study with the Professional Learning Community. The Professional Learning Community would then decide on the future use of common assessments.

Methodology

To determine the impact of common assessments on student learning, the author selected a quantitative approach to the research. Specifically, the author used experimental research to link the use of common assessments to student learning. "To establish that one variable causes another provides strong evidence for linking variables" (Gay, Mills, & Airasian, 2003, p. 12).

When analyzing the results of the MAPs from 2007-2008 and 2008-2009, the author selected a random sample from the seventh grade population. In order to select the random sample, the author defined the populations, assigned a number to each member of the populations, and then used a random number generator to select 30 members from each population. The 30 members from each population then became the sample from which the author determined significance.

Significance was determined by using the STATPAK software included in the Gay textbook. A non-independent *t* test was used to determine significance. A *t* score of 2.042 or higher showed significance (Gay et al., 2003).

Participants

The seventh grade mathematics class was used to evaluate the impact of common assessments on student learning. During the 2007-2008 school year the seventh grade class consisted of 395 students. Of the 371 students that had been in the seventh grade class all year, 186 were female, 185 were male, 154 were Hispanic, 188 were White, 17 were Black, 12 were Pacific Islander and 168 were on free or reduced lunch.

During the 2008-2009 school year the seventh grade class consisted of 420 students. Of the 372 students that had been in the seventh grade class all year, 180 were female, 192 were male, 190 were White, 159 were Hispanic, 12 were Black, 11 were Pacific Islander and 174 were on free or reduced lunch (OSPI, 2009).

Instruments

The Measures of Academic Progress assessment was used to gather data on student achievement. For the 2007-2008 year and the 2008-2009 year the first Measures of Academic Progress test was taken in October. The results of the Measures of Academic Progress test were used as a pre-test to determine the

seventh grade class' prior knowledge. The second Measures of Academic Progress test was taken in May. The results of the Measures of Academic Progress test were used as a post-test to determine the student's achievement. A non-independent *t*-test was used to determine the significance of student achievement.

A Pearson product-moment correlation coefficient (*r*) was used to determine reliability of the MAPs. The minimum accepted correlation score was .80 and a perfect correlation was stated as 1.00. When tested over time, the MAPs scored an $r = .85$.

Validity was determined by comparing the MAP assessment to the Washington Assessment of Student Learning. A Pearson product-moment correlation coefficient (*r*) was used to determine validity of the MAPs. Again the minimum accepted correlation score was .80 and a perfect correlation was stated as 1.00. When the MAP was compared to the seventh grade mathematics Washington Assessment of Student Learning the correlation was shown to be $r = .85$ (NWEA, 2004).

Design

The author used the 2007-2008 MAP assessment as a pre-test. During the 2007-2008 school year common assessments were not used. The 2008-2009

MAP assessment was used as a post test. During the 2008-2009 school year common assessment were used.

The author selected a random sample of 30 students from each year and used a non-independent *t* test to determine significance. A score of 2.042 or greater showed significance.

Procedure

Common assessments were developed that aligned with the Washington State Grade Level Expectations. The seventh grade team developed the common assessments. The common assessments were given to seventh graders at the end of each of the four units that were taught during the 2008-2009 school year. The Professional Learning Community team analyzed student results and content not understood was re-taught to students. Future teaching was modified to adapt to student strengths and to address student weaknesses.

To determine the impact of the common assessments on student learning, the MAPs test was used. The author compared student scores on the 2007-2008 MAPs, when common assessments were not used, to student scores on the 2008-2009 MAPs, when common assessments were used. Significance was determined by a non-independent *t* test. A random sample of 30 students was selected from each group and tested using the non-independent *t* test. The sample was selected by replacing each student name with a number and then a random number

generator was used to select 30 students. The random number generator was used from a Texas Instrument's TI-83 calculator.

Treatment of the Data

After the random sample of 30 students was collected from each group, the author looked for significance by using a non-independent *t* test. The author used the STATPAK software that was included in the L.G. Gay and Peter Airasian textbook. This software allowed the author to conduct the non-independent *t* test and then look for significance. A *t* score of 2.042 or greater showed significance, according to Table A.4 (Gay et al., 2003).

Summary

The author intended to identify the impact of common assessments being used in the seventh grade on student learning in mathematics. Common assessments were developed by the seventh grade mathematics team. The assessments were given to all seventh grade students at the end of each of the four units taught during the 2008-2009 school year. MAPs scores from the 2007-2008 and 2008-2009 school year were analyzed by the author. A random sample was collected and tested using a non-independent *t* test. A score of 2.042 or higher showed significance of the project.

CHAPTER 4

Analysis of the Data

Introduction

Fully-developed common assessments took time to complete. The impact of using the common assessments had not been visible to some of the teachers at the author's school. These teachers questioned the impact of using common assessments on student learning when compared to the time commitment that the strategy mandated. Conclusive data on the value of using common assessments was lacking.

Description of the Environment

The seventh grade mathematics class was used to evaluate the impact of common assessments on student learning. During the 2007-2008 school year the seventh grade class consisted of 395 students. Of the 371 students that had been in the seventh grade class all year, 186 were female, 185 were male, 154 were Hispanic, 188 were White, 17 were Black, 12 were Pacific Islander and 168 were on free or reduced lunch.

During the 2008-2009 school year the seventh grade class consisted of 420 students. Of the 372 students that had been in the seventh grade class all year, 180 were female, 192 were male, 190 were White, 159 were Hispanic, 12 were

Black, 11 were Pacific Islander and 174 were on free or reduced lunch (OSPI, 2008).

The school at which the author worked had 80 certificated teachers during the 2007-2008 school year. The average years of teacher experience was 9.9 years. More than half of the teachers had masters degrees, close to 59 percent. All 80 teachers met the No Child Left Behind highly-qualified definition.

During the 2008-2009 school year there was 85 teachers employed at the school. The average years of teacher experience was 10.4 years. More than half of the teachers had masters degrees, close to 62 percent. Most, 96.3 percent of the teachers, met the No Child Left Behind highly-qualified definition.

The Heritage Special Project was conducted using the Measures of Academic Progress tests. The 2007-2008 seventh grade mathematics class took the Measures of Academic Progress test in October of 2007 and again in May of 2008. The 2008-2009 seventh grade mathematics class took the Measures of Academic Progress test in October of 2008 and again in May of 2009. The results of the Measures of Academic Progress tests were then recorded in a table and analyzed using a *t*-test to determine the significance of common assessments.

Hypothesis

The use of common assessments in seventh grade mathematics resulted in greater student achievement from fall to spring as measured by the Measures of

Academic Progress assessment using a non-independent *t*-test when compared to the previous year.

Null Hypothesis

The use of common assessments in seventh grade mathematics did not result in greater student achievement from fall to spring as measured by the Measures of Academic Progress assessment using a non-independent *t*-test with a significance level of .05 when compared to the previous year.

Results of the Study

The results of the non-independent *t*-test for the 2007-2008 seventh grade students showed there was no significance. During the 2007-2008 school year, the seventh grade mathematics team did not use common assessments. The mean of the post-test was lower than the mean of the pre-test. The *t* score was -0.50 which resulted in $p > .05$, thus showing no significance.

t-test of Pre-Post Test Results for 2007-2008 Seventh Grade Students

Test	N	Mean	Standard deviation
Pre	30	225.57	12.97
Post	30	224.97	12.39
df = 29		*t* = -0.50	p>.05

The results of the non-independent *t*-test for the 2008-2009 seventh grade class showed there was significance at the .001 level of significance. Two thousand eight was the first year the seventh grade mathematics team used common assessments. A significant improvement was seen in the mean of the post-test when compared to the mean of the pre-test. Since significance was shown at the .001 level, the null hypothesis was rejected.

t-test of Pre-Post Test Results for the 2008-2009 Seventh Grade Students

Test	N	Mean	Standard deviation
Pre	30	226.07	13.70
Post	30	233.40	13.43
df = 29		$t = 10.55$	$p<.001$

Findings

Common assessments were first used during the 2008-2009 school year. During the school year students took the MAPs test in the fall of 2008 and again in the spring of 2009. When the results of the MAPs were analyzed using a non-independent *t*-test, significance was shown at the .001 level. Prior to the 2008-2009 school year, no significance was seen when analyzing the MAPs results using the same non-independent *t*-test. The data clearly supported the hypothesis and rejected the null hypothesis.

Discussion

As a result of the project the author intended to identify the impact of common assessments used in the seventh grade on student learning in mathematics. The author then planned to share the results of the study with the Professional Learning Community. The Professional Learning Community would then decide on the future use of common assessments.

The author used the statistical analysis of the MAPs data to show the significance of common assessments to the seventh grade mathematics team. The decision was made to continue implementation of the common assessments.

Summary

Conclusive data supporting the use of common assessments was lacking. The author collected MAPs scores from the 2007-2008 school year, when common

assessments were not used, and analyzed the results using a non-independent *t*-test. The author did the same for the 2008-2009 school year, when common assessments were used. After analyzing the data, the author found that the hypothesis was supported and the null hypothesis was rejected. The author shared the results of the analysis with the seventh grade mathematics team and a decision was made to continue the implementation of common assessments.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

The middle school where the author taught participated in the use of common assessments. Common assessments were used to test students based on common learning targets as agreed on by the Professional Learning Community. The learning targets were based on the Grade Level Expectations, as defined by the Office of the Superintendent of Public Instruction in the state of Washington.

After common assessments had been given to all students, the Professional Learning Community analyzed the results of the common assessment and reflected on student learning. Future teaching was then modified to adapt to the challenges faced by the previous group of students.

As a result of the project the author intended to identify the impact of common assessments being used in the seventh grade on student learning in mathematics. The author then planned to share the results of the study with the Professional Learning Community. The Professional Learning Community would then decide on the future use of common assessments.

Summary

The author used the seventh grade MAPs results from two different school years. During the 2007-2008 school year, common assessments were not used. The 2008-2009 school year marked the first year for the use of common

assessments. Results from both years' MAPs scores were analyzed using a non-independent *t*-test. The results of the *t*-test showed significant growth and were shared with the seventh grade mathematics team.

Conclusions

The results of the MAPs test from the 2007-2008 school year showed no significant growth. The results of the MAPs test from the 2008-2009 school year, when common assessments were used, showed significant growth at the .001 level. After analyzing the data, the author found that the hypothesis was supported and the null hypothesis was rejected. The author shared the results of the analysis with the seventh grade mathematics team and a decision was made to continue the implementation of common assessments.

Recommendations

Based on the conclusions, the author recommends that the procedure be replicated to validate the results that were seen during this Special Project. While the results of this project were clearly seen, to see similar significance shown from a different set of participants would validate the results and provide clear evidence for the use of common assessments.

While not entirely feasible, the author would recommend testing a control group who did not use common assessments and analyze the results of the group compared to a group who did use common assessments. However, by conducting

the test, the author feels that one group would be denied the benefits of a powerful strategy and therefore would be set up to fail.

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Appendices

2007-2008 Seventh Grade Mathematics

Student	Fall 07 MAPs	Spring 08 MAPs
1	202	205
2	250	255
3	211	212
4	243	235
5	223	233
6	248	246
7	232	228
8	214	215
9	234	237
10	231	229
11	227	226
12	221	228
13	228	228
14	203	199
15	227	226
16	233	218
17	224	217
18	233	236
19	212	228
20	234	216
21	223	221
22	216	212
23	234	231
24	223	224
25	245	240
26	230	231
27	218	218
28	215	220
29	199	203
30	234	232

2008-2009 Seventh Grade Mathematics

Student	Fall 08 MAPs	Spring 09 MAPs
1	222	230
2	256	264
3	212	224
4	227	238
5	221	232
6	214	228
7	205	212
8	206	203
9	241	243
10	199	208
11	245	252
12	233	243
13	227	235
14	216	227
15	233	236
16	220	225
17	227	234
18	219	225
19	225	229
20	235	243
21	247	253
22	231	240
23	245	245
24	239	249
25	229	239
26	234	237
27	229	233
28	204	213
29	223	232
30	218	230