The Effect of the Implementation Percentage of the Professional Learning Community Initiative on Academic Achievement in Peer Elementary Schools in Northwest Missouri in Years 2008-2011.

By

Tamara G. Lynn

Submitted to

The Faculty of the Educational Specialist Program
Northwest Missouri State University Missouri
Department of Educational Leadership
College of Education and Human Services
Maryville, MO 64468

Field Study Committee Members
Phillip Messner

Submitted in Fulfillment for the Requirements for
61-724 Field Study

August 3, 2012
ABSTRACT

This study was conducted to examine the implementation of the PLC Initiative in five elementary schools in rural Northwest Missouri. The purpose was to find if there was equality between the implementation of the PLC Initiative between the schools, to view the trends in academic achievement in the schools during the implementation period in the areas of the Communication Arts and Math, and to examine if there is a correlation between the Implementation percentage of the schools and the mean change in APR standard scores in the areas of Math and Communication Arts. The researcher used the Implementation Rubric provided by the Northwest RPDC specialists and the data from the APR of the five schools for the year prior to implementation, 2008, and the three years during implementation 2009-2011. The year 2011 would have signified the year of full implementation and conclusion of the training.
# TABLE OF CONTENTS

**ABSTRACT** 2

**LIST OF TABLES AND FIGURES** 5

**CHAPTER ONE: Introduction to the Study** 6

- Conceptual Underpinnings for the Study
- Statement of the Problem
- Purpose of Study
- Research Questions
- Null Hypothesis
- Anticipated Benefits of Study
- Summary

**CHAPTER TWO: Review of Related Literature** 10

- Historical Review of the Topic
- Instructional Process under Study
- Current Research on the Topic

**CHAPTER THREE: Research Design and Methodology** 18

- Research Design
- Research Questions
- Study Group
- Data Collection and Instrumentation
- Data Analysis Methods
- Summary
CHAPTER FOUR: Presentation and Analysis of the Data

Presentation of the Data Analysis

Summary

CHAPTER FIVE: Overview, Findings and Recommendations

Summary of Findings

Conclusions

Policy Recommendations

Summary

REFERENCES

APPENDIXES

Implementation Rubric

RESUME
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>PLC Implementation percentage of Schools 1-5</td>
<td>23</td>
</tr>
<tr>
<td>Figure 2</td>
<td>APR Mean scores in Math for Schools 1-5 in Years 2008-2011</td>
<td>24</td>
</tr>
<tr>
<td>Figure 3</td>
<td>APR Mean scores in Comm. Arts for Schools 1-5 in Years 2008-2011</td>
<td>25</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Correlation Output for Mean Change in Math</td>
<td>26</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Correlation Output for Mean Change in Communication Arts</td>
<td>26</td>
</tr>
</tbody>
</table>
CHAPTER ONE

Introduction to the Study

Academic achievement on standardized tests is one of the main focuses of schools and administrators of current times. Because schools and their success are gauged on the scores of students on these standardized measures, it is important to look at what enhances and improves the scores on standardized tests in schools. While there are many inputs that cannot be controlled in the education of students, having a consistent method of instruction and the use of shared, research based methodology is a solid way of providing the strongest educational experience for children.

The question has been asked as to how can educational administrators control the instructional input for all students to provide a strong and consistent level of education that yields the best results. The conclusion for many at this time is to create teams of collaborating education professionals that focus on best practice, research based methodology. These teams no longer compete against each other, but work collaboratively in groups to use data and research to drive instruction.

Collaboration amongst groups of colleagues hasn’t always been a strong focus in competitive workplaces. As a focus on collaboration in many other professions began to become increasingly important, the education profession quickly followed suit. Over the last decade, we have seen a large increase in the number of schools who have begun to form and implement the use of Professional Learning Communities with their teachers and other staff members. Collaboration in these learning communities helps to create a team approach to educating all children. Currently, Professional Learning Communities are becoming more clearly viewed as an effective structure and approach for improving learning and academic achievement and
facilitating school change. “The underlying assumption in Professional Learning Communities is that peer collaboration has the potential of transforming teaching practices in ways that will bring about higher rates of student achievement” (Riveros et al, 2012).

**Conceptual Underpinnings for the Study**

In order to clarify and specify what is being examined, a working definition of “Professional Learning Communities (PLC’s)” must be developed. For the purposes of this study, the term “Professional Learning Communities (PLC’s)” will be defined as a learning group that fosters collaborative learning among colleagues within a particular work environment or field. The goal of the PLC Initiative as established by the Department of Elementary and Secondary Education is to “increase student achievement by building the capacity of school personnel to create and sustain a school culture that promotes high levels of student and adult learning.”

The term “mean change” used in the study is the difference in the mean score as reported on the APR report for each school in year 2008 from 2011 (ending score-starting score).

**Statement of the Problem**

There is a need to better understand how Professional Learning Communities and collaboration affect academic achievement, and if the Implementation percentage of PLC’s in schools affects academic achievement.

**Purpose of Study**

The purpose of this study is to determine if the Implementation percentage of the PLC Initiative of schools is correlated to the academic achievement in Math and Communication Arts in grades 3-5. In addition, it is the purpose of the study to view the trends of the academic achievement over the implementation period.
**Research Questions**

RQ1: Have the percentages of PLC implementation been equal as measured with the PLC Implementation Rubric Summary across schools?

RQ2: What was the trend for the Math and Communication Arts scores for all schools over the Implementation time period of years 2008-2011?

RQ3: Is there a correlation between the mean change in scores in Math and the Implementation percentage and also the mean change in scores in Communication Arts and the Implementation percentage for all schools over the Implementation time period of years 2008-2011?

**Null Hypotheses**

Ho1: None.

Ho2: None.

Ho3: There is no significant correlation between the mean change in Math scores and the Implementation percentage and also the mean change in Communication Arts scores and the Implementation percentage for all schools over the time period years 2008-2011.

**Anticipated Benefits of Study**

The anticipated outcome of this study is that if academic achievement is shown to be strongly correlated with the Implementation percentage for Professional Learning Communities, PLC’s would be a good organizational model for schools to follow to improve student achievement.

**Summary**

Because schools effectiveness is gauged by student’s academic achievement on standardized tests, there is a need to explore programming that focuses on improving academic
achievement. Professional Learning Communities focus on collaboration amongst educators with the goal of improving academic achievement for all students.

This study explores the academic achievement of 5 elementary schools in Northwest Missouri after undergoing a 3 year implementation process of the Professional Learning Community Initiative. All 5 schools received the same training from the Northwest RPDC representatives, and their Implementation percentages of each school are compared, trends in achievement in the areas of grades 3-5 Math and grades 3-5 Communication Arts, and an observation of the possible correlation between the Implementation percentage and the academic achievement of the students in these groups is made.
CHAPTER TWO

Review of Related Literature

The review of literature concerning Professional Learning Communities and academic achievement includes historical discussions, research, current opinions and findings from across the nation. This review consists of a variety of literature sources to present a broad basis for discussion of past and current beliefs about Professional Learning Communities, collaboration, and academic achievement in public schools. The goal of the PLC Initiative as established by the Department of Elementary and Secondary Education is to “increase student achievement by building the capacity of school personnel to create and sustain a school culture that promotes high levels of student and adult learning.” Under this premise, a collection of teachers working in isolation cannot produce the same results as teachers who share and develop practices in groups (Moirao et al., 2012). This is an idea that is widely supported by educational research.

Historical Review of the Topic

Professional Learning Communities are designed to encourage the use of collaboration amongst educators in order to increase the efficiency of teachers and increase academic achievement. This is not a new idea in the professional world, but it is an initiative that is gaining momentum in the education field from examples in other working professions. Kenneth Salim (2012) suggests that the ideas of Professional Learning Communities stems from the practices of collaboration in fields outside of the educational field. In the medical profession, professionals use medical rounds to collaborate and discuss with others about how to better their practice. In the design world, designers use collaboration to discuss how to create the best product for consumers. Salim says that the education profession should follow suit and use collaboration and Professional Learning Communities to create the best practice for their
students. Ongoing Professional Learning Communities are the bedrock of the work that creates a whole school of effective teachers (Routman, 2012).

According to DuFour (2008), the key components of Professional Learning Communities are:

(a) the purpose of schools is to ensure high-level of learning for all students;
(b) teachers cannot achieve their collective purpose in isolation; and
(c) verification of effectiveness must be found in clear evidence of what students know and can do. (p.134)

DuFour (2012) also states that the expectations for successful implementation of PLC’s in schools are:

• meaningful, collaborative teams to achieve common goals with mutual accountability
• guaranteed and viable curriculum for all, monitoring of student learning and balanced, team-developed common formative assessments
• the analysis of evidence of student learning and data
• systematic intervention and support that allows for direct instruction for students that is timely and directive, while also based on individual needs. (p.18)

Easton (2012) outlines the goals of Professional Learning Communities as schools having a (1) Focus on Learning; with the following guiding questions for curriculum and instruction:

1. What do we want students to learn?
2. How will we know if they are learning?
3. What will we do if they don’t learn?
4. What will we do if they already know it?
they should (2) Build a Collaborative Culture, and schools need to be (3) Results Oriented. (p.2)

**Instructional Practice under Study**

Professional Learning Communities help to spread and promote the use of best practices from teacher to teacher (Hirsh, 2012). Teachers working in groups and sharing practices are more likely to ensure that all students are getting the best education and learning opportunities everyday (Hirsh, 2012). This idea is a change from the “traditional” ideas of what school has looked like and how it has been structured in the past. PLC’s are groups of educators working together with a shared vision, beliefs or values. (DuFour et al., 2008) The idea of Professional Learning Communities is that no longer are teachers solely responsible for their own kids, but everyone is responsible for the learning of all students. Members of the Professional Learning Communities are collectively responsible for the success of all students in the school district and should follow a continuous cycle of improvement within their group (Up Close, 2012). According to Smith (2012) this kind of grouping creates a mutually accountable work team. DuFour (2008) also states that in Professional Learning Communities, educators “require shared leadership” to rally around the same goals for their students. PLC’s encourage collective responsibility among teachers (Shernoff et al., 2011). “Collective responsibility brings together the entire education community, making members of the education workforce-teachers, support staff, school system staff, and administrators-as well as families, policymakers, and other stakeholders, to increase effective teaching in every classroom,” (Up Close, 2012, p.8, from Learning Forward, 2011). To encourage this collective responsibility, many schools have adopted a specific collaboration time that happens within the school day, a time that cannot be used for anything else other than working as a team. “Weekly collaborative team meetings increase teacher empowerment and build a sense of community. As teachers come together with
colleagues to share best practices, analyze student data, and plan, they break down the traditional school barriers that exist in many public schools”, (Stegall & Linton, 2012, p.64). This collective responsibility for learning facilitates an unprecedented improvement in academic achievement of students, and thus is the foundation of educational collaboration as we know it.

In a Professional Learning Community, groups of educators analyze data to determine the best instructional strategies to use in the classroom. Hirsh, 2012 states that “Educators working in an effective Professional Learning Community join the group with the assumption that the data they examine and the needs they identify will point toward the learning they will undertake to successfully address the challenges they face.” (p.64) Smith (2012) suggests PLC’s provide a structure where student learning data are reviewed and used by teachers to focus their work and implement best practices that ensure all students learn. According to Caskey & Carpenter (2012, from Defour, 2008), “the collective analysis of student assessment data in relation to specific learning targets is the catalyst for teacher learning”. (p.56)

The goal of Professional Learning Communities is to “offer a structure, process, and product that lead to systematic continuous improvement for both educators and students” (Hirsh, 2012, p.64). PLC’s is not a program to implement, but it is designed to be a way to organize a school in order to encourage collaboration. In this structure, educators can “Pilot and evaluate tools and strategies to create a truly comprehensive professional-learning system” (Hirsh, 2012, p.24). Professional Learning Communities are also designed to be a system of support for both students and teachers (Smith, 2012 from DuFour). An example of a school district that has implemented this structure is in Connecticut Public Schools. Some of the elements of the Stamford, Connecticut Public Schools PLC Cycle are: Inquire-Research it, Analyze Data, Look
at Student Work, Examine Instruction, Assess Student Progress, Reflect (Thessin et al., 2011). Components of this cycle are very similar to many schools and districts across the nation.

Administrators should encourage and support PLC’s as a form of professional development that allows teachers to direct the focus of their learning and they should validate and celebrate the accomplishments of these groups (Linder et al, 2012). With all of their many other duties, helping to direct teachers to purposeful and focused professional development can be a tough job. Despite the focus on collaborative teacher learning, too many teachers, including middle grade teachers, still work in isolation and engage solely in individual professional development (Caskey et al., 2012). A survey of administrative experiences and opinions contributed, “Early in our district’s transition, we heard things like “I taught it, they just didn’t learn it.” Applying our guiding principles, we realized that we could not simply hope that students would learn, and we could not blame students if learning did not occur” (Smith et al, 2012, p.57).

In order to be successful, PLC’s should have an ongoing commitment to 4 key goals; Culture, Knowledge, Practice and Achievement (Moirao et al., 2012). The culture is built through commitments to meeting regularly to share ideas and strategies to improve instruction in the classroom. By sharing knowledge and expertise, the teachers start to build a common instructional language which they apply to their group discussions. The commitment to practices is established with administrative support and can be opportunities to observe other teachers to help refine one’s own teaching style. Teachers in Professional Learning Communities then take data to analyze achievement and gauge which practices have a positive impact on teacher instruction and student learning.
There are some challenges with implementing Professional Learning Communities in school districts as well. The PLC Initiative is merely a structure for organizing schools and districts to encourage collaboration. This does not improve schools without strong leadership and direction from administration. Riveros (2012) argues that “Professional Learning Community models could be enhanced if these models incorporate a method for identifying areas of improvement; in other words, professional learning communities are not a goal in and of themselves, but they are means for school improvement”. (p. 211)  

Another challenge facing the Professional Learning Communities Initiative is the time that it takes to put all of the pieces in place. Several articles stated examples of educators resisting this change in their schools or districts, because it was seen as one more initiative that will come and go. Kise (2012) says “Yes is takes time for Professional Learning Community members to reach consensus around a vision, but doing so can make the difference between teachers believing that collaboration is key to student achievement or seeing no value in Professional Learning Communities”. (p. 39)  

**Current Research on the Topic**  

Professional Learning Communities have shown promise in positively impacting student achievement while empowering K-12 educators by allowing them to craft and tailor ongoing professional development to meet their immediate needs (Rekart, 2012).  

As a testament to the success and achievement of Professional Learning Communities, one Chicago area school district improved their academic achievement rating in the state of Illinois from 241\textsuperscript{st} to 65\textsuperscript{th} in 6 years of measurement by “implementing and nurturing Professional Learning Communities” (Myers & Rafferty, 2012, p. 21). In addition to improving the ranking of their school district in the state, they also had an additional 2400 students meeting the state proficiency academics standards. The district improved their reading proficiency
standards from 76 percent to 91 percent, and their math gains have been “equally dramatic” (Myers & Rafferty, 2012, p. 22).

Schools in other states boast of similar success stories. One school district in Dayton, Ohio saw their district performance index (a state measure of student achievement levels) steadily increasing and is now the highest in the district’s history (Hewitt & Weckstein, 2012). The success stories of school districts could likely continue on, and many states are now amping up their efforts in collaborative models. The Missouri PLC Initiative brought on by the Department of Elementary and Secondary Education is using the Regional Professional Development Centers to train and implement Professional Learning Communities models in area schools as well. At this point, very few schools are denying the results that PLC’s can have, and are looking for how they can use the PLC model in their schools. “School districts implementing the PLC process do not view it as one of a myriad of initiatives to improve student learning. They consider it the fundamental strategy for raising achievement” (DuFour, 2012, p. 19).

Another study done by Stewart, 2007, showed school cohesion was found to be significantly related to academic achievement. It was also found by Stewart, 2007, that students who attend schools with a “supportive and inviting environment have significantly higher academic achievement”. This suggests that a school’s climate and culture is created in part by Professional Learning Communities and are “extremely important to successful student outcomes” (Stewart, 2007, p. 199).

Student outcome data is not the only aspect that is essential to improving academic achievement, but “aligning professional growth, culture and structures” by identifying “essential evidence that produces student gains”, as is the goal of Professional Learning Communities, helps teachers and leaders to work towards continuous improvement (Foord & Haar, 2012, p. 
36). School and district goals and priorities should be aligned with and the guiding force of PLC’s, making them an effective way to improve student achievement (Up Close, 2012). While improved academic achievement is one of the greatest benefits of Professional Learning Communities, the alignment of goals, shared vision, and the collaborative spirit and cohesiveness that comes from successful implementation of Professional Learning Communities adds immeasurable value to our education system.
CHAPTER THREE

Research Design and Methodology

The problem under investigation is that it is unknown as to whether the degree of Implementation of the PLC Initiative influences the academic achievement in elementary schools. Also, if there is a trend in the academic achievement of schools who have implemented the PLC Initiative.

Research Design

This study is a one shot non-experimental, descriptive study of five elementary schools in Northwest Missouri. The five elementary schools have implemented the Professional Learning Community Initiative from years 2008-2011. The implementation of and the training for the PLC Initiative has been guided by the Northwest Missouri Regional Professional Development Center representatives.

Research Questions

RQ1: Have the percentages of PLC implementation been equal as measured with the PLC Implementation Rubric Summary across schools?

RQ2: What was the trend for the Math and Communication Arts scores for all schools over the Implementation time period of years 2008-2011?

RQ3: Is there a correlation between the mean change in scores in Math and the Implementation percentage and also the mean change in scores in Communication Arts and the Implementation percentage for all schools over the Implementation time period of years 2008-2011?
Study Group

The study involves five different rural elementary schools in Northwest Missouri who have implemented the Professional Learning Community Initiative from years 2008-2011. The year 2008 serves as the baseline year before the initial implementation, and the year 2011 serves as the first year that the school was fully implemented. The school staff was trained by the Northwest RPDC specialists and were mentored and monitored during all three years of the implementation process. The Implementation Rubric was designed and used by the Northwest RPDC specialists to rate the overall implementation of the schools in 8 different strands.

Data Collection and Instrumentation

The data were collected through the Northwest RPDC specialist for Professional Learning Communities. The Implementation rubrics with the school rankings were obtained through the RPDC as well as the APR for all of the schools. The Implementation percentage is the degree to which the school had fully implemented PLC’s. The Implementation percentage was calculated by assigning points “4” through “1” respectively to the total number of rankings in the following categories: deep, proficient, partial and minimal in order to calculate the percentage of overall implementation. The scores reported are a mean score from each school’s APR in the areas of Math and Communication Arts grades 3-5 from years 2008-2011.

The Implementation rubric was used by the Northwest RPDC representative to rank the schools implementation of the PLC model. The rubric is broken into 8 strands, with each strand containing sub statement criteria. The RPDC representatives observed the schools throughout the year making observations. In addition, the representatives also interviewed the different stakeholder groups to gain a more clear view as to the culture and implementation level of the school. Anecdotal data was also included with the Implementation rubric rankings.
The reliability of the data collection is unknown in this study because of the manner in which the data was collected. It is also in question because of the number of schools in which the data was collected in totaled five schools.

**Data Analysis Methods**

The reported the implementation percentage was calculated by assigning points to the total number of rankings in the following categories: deep=4, proficient=3, partial=2 and minimal=1. The scores were then divided by the total number of possible points in order to calculate the percentage of overall implementation for the school.

The changes in the mean scores for each school were calculated in the areas of Math and Communication Arts by subtracting the year 2011 score from the year 2008 score. Graphs were then made to show the trend changes over time using the Microsoft Excel Spreadsheet graphing program.

The VassarStats program, (Lowry, 2012), was used to find if there was a correlation between the mean change in the Math scores and the Implementation percentage and the mean change in the Communication Arts scores and the Implementation percentage. The alpha level was set at 0.25.

**Summary**

The research study examined the degree of Implementation of the PLC Initiative and the influence it has on the academic achievement in elementary schools. The trend in the academic achievement of schools who have implemented the PLC Initiative was also evaluated. The one shot non-experimental, descriptive study of five elementary schools in Northwest Missouri who have implemented the Professional Learning Community Initiative from years 2008-2011 was observed using the Implementation rubric. The Implementation rubrics with the school rankings
were obtained through the Northwest RPDC representatives as well as the APR for all of the schools. The RPDC representatives interviewed the different stakeholder groups to gain a more clear view as to the culture and implementation level of the school, in addition to observing the school throughout the year. The rubric was used to calculate and report the implementation percentage for each school.

The changes in the mean scores for each school were also calculated in the areas of Math and Communication Arts by subtracting the year 2011 score from the year 2008 score. Graphs were then made to show the trend changes over time using the Microsoft Excel Spreadsheet graphing program, and the VassarStats program, (Lowry, 2012), was used to find if there was a correlation between the mean change in scores and the Implementation percentage for each of the schools.
CHAPTER FOUR  
Presentation and Analysis of the Data

The primary purpose of this study was to determine if the implementation of the Professional Learning Communities Initiative in five elementary schools in Northwest Missouri improved the overall academic achievement in the schools. To determine if the academic achievement of the schools had changed, the researcher looked at the percentages of PLC implementation to determine if they were equal as measured in five elementary schools in Northwest Missouri when given the same training and support services. The researcher also chose to view the trends in academic achievement in the five elementary schools after implementing the PLC Initiative in three years. In addition, the researcher also chose to determine if there was a correlation between the Implementation percentage and the mean change in Math and Communication Arts scores and the Implementation percentage for the five elementary schools.

Presentation of the Data Analysis

RQ1: Have the percentages of PLC implementation been equal as measured with the PLC Implementation Rubric Summary across schools?

Figure 1 shows the Implementation percentage of the five elementary schools who implemented the PLC Initiative during the three year time period. The Implementation percentage was found using the reported level of implementation by the Northwest RPDC Specialists using the Implementation Rubric and was calculated by assigning points to each category of implementation (deep=4, proficient=3, partial=2, minimal=1). The percentage was calculated based on the totals for each school. The Implementation percentage is the overall level of implementation for each school. School 4 was the closest to full implementation with
84%, and school 3 had the lowest Implementation percentage of 61%. All schools were trained by the same PLC specialists from the Northwest RPDC over the same time period.

Figure 1. The Implementation percentage of the five elementary schools who participated in the PLC Initiative during the three year time period. The Implementation percentage is level of implementation of each school as based on the Implementation Rubric and the rankings of deep, proficient, partial and minimal.

RQ2: What was the trend for the Math and Communication Arts scores for all schools over the Implementation time period of years 2008-2011?

Figure 2 is a chart and graph showing the APR Mean Scores in Math for the five elementary schools for the years 2008-2011. The year 2008 was the year prior to any PLC training or implementation. The year 2011 shows the final Mean Score following the complete training and implementation of the PLC Initiative. All of the five elementary schools showed growth over the time period, with the exception of school one that showed a decrease. The following growths in the mean scores for Math from year 2008 to 2011 were: School one (-15), School two (37.5), School three (22.4), School four (28.3), and School five (5.5).
Figure 2. The APR Mean Scores in Math for the five elementary schools for the years 2008-2011.

Figure 3 is a chart and graph showing the APR Mean Scores in Communication Arts for the five elementary schools for the years 2008-2011. The year 2008 was the year prior to any PLC training or implementation. The year 2011 shows the final Mean Score following the complete training and implementation of the PLC Initiative. All of the five elementary schools showed growth over the time period. The following growths in the mean scores for Math from year 2008 to 2011 were: School one (3.4), School two (36.2), School three (3.9), School four (9.6), and School five (30.4).
RQ3: Is there a correlation between the mean change in scores in Math and the Implementation percentage and also the mean change in scores in Communication Arts and the Implementation percentage for all schools over the Implementation time period of years 2008-2011?

A Basic Linear Correlation was conducted using the from VassarStats program (Lowry, 2012). Figure 4 is the correlation output of the mean change in scores in Math and the Implementation percentage from VassarStats (Lowry, 2012) \( (t=0.16; \ p\text{-value}=0.44) \). The alpha level was set at 0.25. Based on the output, there is no correlation shown between the mean change in Math scores from the years 2008-2011 and the Implementation percentage.
A Basic Linear Correlation was conducted using the from VassarStats program (Lowry, 2012). Figure 5 is the correlation output of the mean change in scores in Communication Arts and the Implementation percentage from VassarStats (Lowry, 2012) ($t=0.4$; $p$-value=0.36). The alpha level was set at 0.25. Based on the output, there is no correlation shown between the mean change in Communication Arts scores from the years 2008-2011 and the Implementation percentage.

![Table 1](image1)

![Table 2](image2)

Figure 4. The correlation of the mean change in scores in Math and the Implementation percentage output report from VassarStats (Lowry, 2012).

![Table 3](image3)

![Table 4](image4)

Figure 5. The correlation of the mean change in scores in Communication Arts and the Implementation percentage output report from VassarStats (Lowry, 2012).
Summary

The primary purpose of this study was to determine if the implementation of the Professional Learning Communities Initiative in five elementary schools in Northwest Missouri improved the overall academic achievement in the schools. Research question one examined the equality of the Implementation percentage of the schools after receiving the same training from the Northwest RPDC specialists. The five elementary schools did not show the same Implementation percentage.

Research question two examined the trend in APR Math and Communication Arts scores for the year prior to training and implementation and the three years during the implementation of the PLC Initiative. In the area of Math, all schools with the exception of school one showed an increase in their mean score. In the area of Communication Arts, all schools showed an increase in their mean score.

Research question three examined the correlation between the mean change in Math scores and the Implementation percentage and the mean change in Communication Arts scores and the Implementation percentage. There was no correlation found between the mean change in scores and the level of implementation of the schools.
CHAPTER FIVE

Summary of Findings, Conclusions, and Policy Recommendations

The primary purpose of this study was to determine if the implementation of the Professional Learning Communities Initiative in five elementary schools in Northwest Missouri improved the overall academic achievement in the schools. The researcher examined the Implementation percentage of the five elementary schools, the trends in academic achievement in Math and Communication Arts for the years 2008-2011, and the possible correlation between the Implementation percentage and the mean change in Communication Arts and Math.

Summary of Findings

The first research question examined the Implementation percentage of the five elementary schools to see if there was consistency among the schools who had received the same training and resources from the Northwest RPDC. There was no null hypothesis for this research question. The schools Implementation percentages ranged from 84% to 61%.

The second research question examined the trends in the Mean scores for five elementary schools in the areas of Communication Arts and Math for the years 2008-2011. A figure was created with a line graph of the Mean scores for each year for each school. The figure included the actual scores of each school. There was no null hypothesis for this question. The trends showed increases for all of the schools in the areas of Math, with the exception of school 1. The trends showed increases for all of the schools in the areas of Communication Arts.

The third research question examined the correlation between the mean change in Math scores and the Implementation percentage and the mean change in Communication Arts scores and the Implementation percentage. The null hypothesis was written as: There is no significant correlation between the mean change in Math scores and the Implementation percentage and also
the mean change in Communication Arts scores and the Implementation percentage for all schools over the time period years 2008-2011. The alpha level was set at 0.25. The p-value for the correlation between the mean change in Math scores and the Implementation percentage was p=0.44. The p-value for the correlation between the mean change in Communication Arts scores and the Implementation percentage was p=0.36. The null hypothesis was accepted, there was no correlation found either of the mean change in achievement scores in Math or Communication Arts and the Implementation percentage for the schools.

Conclusions

Based on the information from the Mean Scores for Math and Communication Arts reported by the APR for the five elementary schools and the research presented in the Review of Literature, schools would find benefit in many ways by effectively implementing a collaborative model similar to the PLC Initiative. Some of the benefits to school stakeholders would be increased collaboration, shared instructional strategies, strategically aligned curriculum, school cohesion and improved academic achievement.

Although there was no correlation between the Implementation percentage for the schools and the mean change in academic achievement for the five elementary schools under study, it is my assumption that a deeper and more complete implementation as based on the Implementation Rubric, the higher level of gains and improvement in academic achievement will result.

Policy Recommendations

While the Implementation percentage for the five elementary schools was not shown to have been correlated to the increased academic achievement, it would be the recommendation of the researcher that schools initiate and implement to the fullest extent a collaborative model such
as the PLC Initiative. Recommendations for full implementation would be collaborative time during the school day, school and personal goals that are aligned with district goals, a shared vision, time for curriculum alignment, and time to write common assessments.

**Summary**

The purpose of this study was to determine if the implementation of the Professional Learning Communities Initiative in five elementary schools in Northwest Missouri improved the overall academic achievement in the schools. The researcher had three research questions in this study. The first research question examined the equality of the implementation in the five schools who received the same training. The second research question examined the trends in the academic achievement of the five schools from years 2008-2011. The third research question examined the correlation between the mean change in academic achievement scores and the Implementation percentage of the schools. The first two research questions did not have null hypotheses, the third questions null hypothesis of “There is no significant correlation between the mean change in Math scores and the Implementation percentage and also the mean change in Communication Arts scores and the Implementation percentage for all schools over the time period years 2008-2011” was accepted and no correlation between the Implementation percentage and mean change in academic scores was found.

Given the results of the study and the information reviewed in the Review of Literature, the researcher came to the conclusion that schools and school stakeholders would benefit from the implementation of the PLC Initiative and would reap the results of increased collaboration, shared instructional strategies, strategically aligned curriculum, school cohesion and improved academic achievement. Even though there was no correlation found between the Implementation percentage and the mean change in scores for the schools, it is recommend
policy that the PLC Initiative be implemented to its fullest extent. Based on the researcher’s recommendation, full implementation would contain collaborative time during the school day, school and personal goals that are aligned with district goals, a shared vision, time for curriculum alignment, and time to write common assessments.
REFERENCES


Myers, N. & Rafferty, E. (2012). Moving up from mediocre. *School Administrator* *69*(1).


Smith, R., Johnson, M., & Thompson, K.D. (2012). Data, our GPS determining what students need and working together to provide direction are the keys to this district’s success. *Educational Leadership*, February, 56-59.


MO PLC Implementation Rubric

Assessment Dates: Pre-____________, Interim(s)-__________, Site Review-__________
School Name:___________________ Region:___________________

PLC Implementation Rubric Summary Sheet

1. **NOTES**: Transfer the results of the Implementation Rubric to this summary sheet by checking the level of implementation for each indicator. The term “ALL” in the Implementation Rubric is applied to the indicators where involvement of teams must be 100% for proficiency. However, should an indicator be determined to be proficient with a few exceptions, identify the exceptions in the NOTES section below, and briefly describe why the exception is acceptable and/or what plans are in place to correct the exception. Throughout the IR, the phrase “inconsistently and/or in a limited fashion” is used. “Inconsistently” will be defined as implements sometimes and not others, irregularly. “In a limited fashion” will be defined as may be implemented regularly, but poorly, partially, or inappropriately. Both or either descriptors may be appropriate for a given situation.

<table>
<thead>
<tr>
<th>Implementation Level</th>
<th>Deep</th>
<th>Proficiency</th>
<th>Partial</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strand 1: Foundation for Learning Community Culture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Values/Commitments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. SMART Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. School Culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strand 2: How Effective Building-Level Leadership Teams Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Shared Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Meeting Conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Change Process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Progress Monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Feedback to Teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strand 3: Administrative Leadership</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Modeling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Shared Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strand 4: How Effective Teams Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Meeting Conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Collaborative Meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Corollary Questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strand 5: What Students Need to Know and Do</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Essential Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Identified ELOs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Unwrapped ELOs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Instructional Timeline (map)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strand 6: Assessment For/Of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Purpose and Type</td>
</tr>
<tr>
<td>B. Methods</td>
</tr>
<tr>
<td>C. Feedback</td>
</tr>
<tr>
<td>D. Grading Practices</td>
</tr>
<tr>
<td>E. Student Involvement</td>
</tr>
<tr>
<td>F. Scoring</td>
</tr>
<tr>
<td>G. Data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strand 7: Systematic Process for Intervention/Student Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Collective Responsibility</td>
</tr>
<tr>
<td>B. Data Communication</td>
</tr>
<tr>
<td>C. Tier 1</td>
</tr>
<tr>
<td>D. Tier 2</td>
</tr>
<tr>
<td>E. Tier 3</td>
</tr>
<tr>
<td>F. Protocols for Enrichment</td>
</tr>
<tr>
<td>G. School-Wide Implementation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strand 8: Continuous Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Induction</td>
</tr>
<tr>
<td>B. Action Research</td>
</tr>
<tr>
<td>C. Data Analysis</td>
</tr>
<tr>
<td>D. Celebration</td>
</tr>
<tr>
<td>E. Fidelity</td>
</tr>
</tbody>
</table>

**TOTAL FOR ALL LEVELS**

**NOTES AND EXCEPTIONS:**

Signature of Principal: ___________________________________________
Signatures of Leadership Team Members: ___________________________________
Signatures of Resource Specialists: _______________________________