

Impact of Targeted Professional Development and Feedback on Teachers' Levels of Concern
Regarding Curriculum Change

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Table of Contents

List of Tables	i
Abstract	ii
I. Introduction	1
Overview	1
Statement of Problem	2
Hypothesis	2
Operational Definitions	2
II. Review of the Literature	3
Introduction	3
Change	4
Impact of Change on Teachers	5
Supports to Manage Change	7
Leadership	7
Collaboration, Including Professional Learning Communities	8
Individual Support	9
Professional Development	11
Conclusion	12
III. Methods	13
Design	13
Participants	13
Instrument	14
Procedure	15

IV. Results	17
V. Discussion	24
Implications of Results	24
Threats to Validity	26
Connections to Existing Literature	27
Implications for Future Research	28
Conclusions	29
References	30

List of Tables

1. Participant Demographics	14
2. Kindergarten Control Group Results	17
3. Grade 2 Control Group Results	18
4. Kindergarten Treatment Group Results	19
5. Grade 2 Treatment Group Results	20
6. Average Kindergarten Percentile Changes	22
7. Average Grade 2 Percentile Changes	23

Abstract

Change is an inevitable part of a teacher's career in a school setting. Change can be both a powerful opportunity for growth but can also be anxiety producing and challenging. This quasi-experimental research set out to investigate the impact targeted professional development and informal observation feedback have on teachers' levels of concern as measured by the Stages of Concern Questionnaire. The pre-and post-survey results were analyzed through descriptive statistics and the research does indicate notable differences in stages of concern for teachers in the treatment and control groups. These findings support additional research to identify impactful supports for teachers experiencing change.

CHAPTER I

INTRODUCTION

Overview

Schools are constantly experiencing changes and innovations. Many factors impact these changes and teachers must cope with these shifts as they continue to provide daily instruction to students. Each individual teacher experiences change in a different way and ultimately administrators and school support staff must identify ways in which to best support teachers. One specific change that significantly impacts schools and teachers is implementing a new curriculum, which requires teachers to understand and implement a new initiative. As schools work to deliver new curriculum, it is important to understand how this shift impacts teachers and ultimately students. Change can produce increased levels of anxiety in teachers that impacts their ability to carry out their work (Song, 2013). With that said, changes are more successfully implemented when teachers feel empowered and knowledgeable about the innovation (Ruchti, Jenkins & Agamba, 2013). It is the responsibility of the school district and administrations to identify strategies to help teachers implement change for the benefit of all students.

The purpose of this research is to examine the levels of teacher concern regarding a school-wide change. In this case, the change is the implementation of a new curriculum. As schools work to best meet the needs of students, teachers are often asked to modify or change their teaching practice. This research is focused on the impact of providing individualized professional development and support to teachers and whether or not these supports influence a teacher's reported level of concern.

Statement of Problem

School-wide changes, specifically curricular changes, are complex and affect all members of the school community. The purpose of this study is to investigate whether providing targeted professional development and individual feedback to elementary school teachers will impact their level of concern regarding the implementation of a new curriculum.

Hypothesis

The null hypothesis is that teachers who receive targeted professional development and observational feedback will report no difference in their level of concern regarding the implementation of a new curriculum.

Operational Definitions

New curriculum: The new units of inquiry teachers are responsible for drafting and teaching in classrooms.

Targeted professional development: The support teachers received throughout the course of this research. Supports include informal observations with individualized feedback and training presented at grade level meetings.

Levels of concern: The Stages of Concern Questionnaire (SoCQ) which measures individuals' Stages of Concern about an innovation.

Independent Variable: Teacher's participation in two hours of targeted professional development and individual feedback based on six informal classroom observations

Dependent Variable: Teacher's reported levels of concern

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Change is an inevitable process that educators go through in order to grow and become better professionals. The process of change can be different for various individuals and the ways in which different people experience change can be significantly different. As districts, schools and educational leaders work to propose and support changes in schools and systems, it is of significant importance to recognize how change is experienced. Many schools are making shifts towards implementing new curriculums that significantly impact the day-to-day operations of classrooms. Teachers experience change differently and supports can be identified and implemented to help teachers embrace changes and work to best support teaching and learning for all students.

Many strategies have been utilized and researched to support teachers through the change process. Each school environment is different and must work to find a strategy, or a combination of many, that can best meet the needs of teachers in a specific school. Before impactful strategies can be identified, educational leaders must understand how change is implemented and how change impacts teachers. With this knowledge, leaders can work to implement supports such as leadership styles, opportunities for collaboration, individual feedback and professional development.

This literature review is organized to discuss the concept of change and how change impacts teachers. The subsequent sections discuss current trends in addressing change and strategies used to support teachers through the change process. Identified strategies include

leadership, collaboration including professional learning communities, individual support, and professional development.

Change

In order to discuss change and the impact of the change process, it is important that change is understood as a concept. In the educational world, change is often experienced through reforms that are determined outside of the school at the district, state or federal level (Ruchti et al., Agamba, 2013). Though this top-down model may be effective in bringing about large, systemic changes it can also pose unique challenges for the teachers in the classrooms as they work to implement the change. Utilizing a top-down approach does not allow teachers to be agents of change, but rather directs teachers to participate in and deliver a change that they have not initiated (Song, 2013). When someone feels as though they are in control of a given change their experience and process is different than if they are directed to do something and do not feel as though they are in control to make decisions. Additionally, the number of changes implemented at the same time can impact the effectiveness of any change. When numerous changes happen at the same time, less focus can be given to each change and therefore changes are often less successful (Irvin, 2010). As change is a natural and necessary process for schools to go through, the concept of change must be understood to maximize the benefits of any proposed change.

While many recognize the benefits of change, it must also be recognized that significant concern can be the result of change. Concern can manifest as specific feelings, thoughts, consideration and preoccupation that results from a change (Roach, Kratochwill, & Frank 2009). Concern is not an isolated incident or feeling, but rather can be understood in stages of concern. Individuals who experience concern in relation to change may experience various feelings and

thoughts as they work through and engage with a new program or practice. The process of implementing a change can be broken down into four distinct phases that can correspond with individuals' feelings of concern. The first phase of change implementation is the exploration phase. Installation and initial implementation follow the exploration phase. The final stage of change implementation is full implementation where all parts of the change are fully engaged. As people are diverse with varying needs and experiences, so are their levels and stages of concern as they work through the phases of change implementation. The change process is not linear, and not everyone works through the process at the same time. It is important that educational leaders work to build the capacity of teachers to lead curriculum changes (Ruchti et al., 2013). Therefore, it is of critical importance that educational leaders understand how teachers and school staff experience change to best support school personnel through the phases of change implementation.

Impact of Change on Teachers

While many educators recognize change as necessary and often beneficial, change can also be anxiety producing and it is important to recognize the impact change has on educators. While some level of anxiety can inspire change and growth, anxiety can also cause individuals to experience increased feelings of concern and create a barrier to implementing change. Any new reform signifies a change in the current structure or practice which can be anxiety producing for some as they learn the new information or way of doing things. In some ways change can signify the loss of something for some individuals. While it is recognized that change can cause anxiety, it has also been found that teachers are often more receptive to changes when their concerns are addressed through education (Song, 2013). Furthermore, it is recognized that the implementation of changes is more successful when teachers feel as though they have ownership and feel as

though they are trusted as informed professionals (Irvin, 2010). While some teachers are excited and stimulated by changes, others revert to strategies they feel comfortable with and stray away from the new and less known (Witterholt, Goedhart & Suhre, 2016). It is the duty of educational leaders to provide the information necessary to teachers in order to implement a change with the least amount of anxiety.

Teachers are diverse and it is important to recognize that different teachers are in varying levels of readiness for change based on their unique beliefs and knowledge. It is also known that changes are more successful when driven by teachers so it is of critical importance to provide knowledge and empowerment to teachers to implement the given change (Ruchti et al., 2013). It is critical to understand the individual perception of a given change because the individual experience can have significant impact on the fidelity and sustainability of the change. Leaders must recognize and gather information about how teachers are experiencing the new initiative to best meet needs and anticipate challenges and be able to respond appropriately. It is important that leaders identify problems as they occur and recognize which strategies to use in order to address teachers' concerns and work to develop collaborative relationships (Roach et al., 2009).

It is also important that teachers understand their own reactions toward change and are self-aware as to the impact of change. Change is a process, and teachers must understand how they are agents of change who engage in the change process (Hollingshead, 2009). If teachers develop an understanding of change and the implementation process it may help to alleviate anxieties and work to empower teachers. It is known that teachers typically have positive emotional responses to self-initiated changes and negative emotional response to mandated changes (Hargreaves, 2004). In the educational world, teachers experience numerous mandated changes and therefore there are opportunities for teachers to experience negative emotional

responses. If educational leaders work to harness teacher capacity to empower and support teachers through change, the proposed changes may be carried out with more fidelity and greater benefits from the change achieved.

Supports to Manage Change

It has been established that the impact of change on teachers can be significant. Therefore, educational leaders must work to identify strategies that will help to mitigate concerns and support teachers to increase the effectiveness of the change. The following four sections outline four different research-based methods of supporting teachers in order to reduce levels of concerns.

Leadership

The leader or leadership team in a building is instrumental in supporting teachers through change. School-based leaders often include such personnel as the principal, assistant principal or department chairs. While these people are not always the instigators of the change, they still serve as figureheads and leaders to guide staff through a change. It is known that strong leadership is key to support student achievement. When a change is instituted at a school, teachers may experience an increase in concerns. A strong leader can work to recognize and address those concerns to maintain steady focus on student achievement and student support. Furthermore, it benefits school leaders to understand leadership styles that are most supportive of change and engage in specific learning about the role of a leader through the change process (Anderson, 2017). Leaders must develop a self-awareness of their own styles and how those styles may impact teachers.

It is known that teachers have more positive feelings and attitudes toward change when they feel as though they have input and are seen as professionals. With this understanding and

knowledge, the school leader can support effective change through soliciting input from teachers regarding the change so the change process can be more collaborative (Irvin, 2010). While it may be challenging to solicit input when a change is mandated from the district, it is an important step toward having teachers and school staff feel as though they are a part of the decision making process and that their voices and opinions matter. When staff feels as though their voices are heard and respected, they can be more committed to the change and increase fidelity and participation. A transformational leader works alongside teachers to identify changes based on a collaborative vision and continues to work with committed teachers to see the changes through. An effective leader must understand the experiences of the teachers and staff in order to recognize their concerns and develop a system to ensure collaboration and structure to guide the school community through change. Ultimately, leadership styles have been found to impact teacher commitment, performance and job satisfaction (Anderson, 2017). Educational leaders must recognize their role in the change process and actively work to support teachers.

Collaboration, Including Professional Learning Communities

Another research-based method to support teaches through the change process is the use of professional learning communities (PLCs). PLCs are defined as a group of individuals with a shared purpose and intentional focus on student learning. These professional communities engage in shared decision-making and collaboration. It has been found that the establishment of a professional learning community increases teachers' feelings of empowerment and increases their receptivity to curriculum changes. The implementation of a PLC also increases collaboration between the members of the group that can help to provide teachers with support through change (Song, 2013). Additional research has found that twenty-five percent of the support teachers find most helpful in dealing with change relate to opportunities to collaborate.

Furthermore, when implementing a new curriculum, such as the Common Core State Standards, ninety-eight to ninety-nine percent of teachers responded that collaborative time with other teachers was the top priority to manage the transition to the new curriculum (Ruchti et al., 2013). It is established that teachers can experience increased self-concerns when undergoing a significant change and a PLC provides an opportunity for teachers to collaborate and share ideas to reduce isolation and build a professional community. It has been found that teachers who participate in a teacher support program, such as a professional learning community, experience a significant decrease in self-concerns (Roach et al., 2009). This decrease in self-concern allows teachers to experience less anxiety and focus on the change at hand while feeling supported as part of a professional learning community. Ultimately, the establishment of professional learning communities provides an opportunity for teachers to be a part of a committed group of individuals who share the same goal. This group of people can work collaboratively to manage change at the school level and provides a platform for teachers to actively participate in curriculum changes (Song, 2013). Teachers undergoing change can feel isolated with increased feelings of anxiety and the implementation of professional learning communities can work to foster connectivity and collaboration among groups of teachers to provide support through the change process.

Individual Support

Teachers and staff within a building are as diverse as the students they serve. This diversity brings richness to schools and provides professional communities with varying strengths. In addition, this individual diversity presents itself in individualized and personal needs. Each teacher brings unique prior experiences, beliefs, and knowledge. When presented with a change, these teachers may require different supports to best manage and implement a

given change. Educational leaders must identify strategies in order to meet the unique and personalized needs of staff through individualized support. Just as students have diverse needs, so do the teachers. Teachers' benefit from coaching, mentoring and feedback to best meet their needs. It is even more impactful if the individual providing the feedback tailors the feedback method in a way that the teacher will best receive feedback. This differentiation in feedback respects teachers' differences and demonstrates an understanding of diverse teacher needs (Anderson, 2017). When a change is initiated in a school building it is understood that some teachers may be resistant to full implementation. However, research has found that a teachers' perceived level of support is positively correlated with implementing changes in reform (Li, Ni, Li & Tsoi, 2013). These findings demonstrate that teachers who feel as though they are supported are more likely to implement changes asked of them. One of the ways that teachers can feel most supported is through individual support that can take the form of feedback, coaching and mentoring.

While individual support may be impactful when measuring the implementation of a change, research has also found that providing individual support does not show a significant impact on teacher satisfaction. Ultimately, educational leaders want students to be successful and show academic growth. With that said, it is important to many educational leaders that teachers feel satisfied and that their work and impact is important. One research study has found that individual support, in the form of meetings with classroom teachers and classroom visits, did not yield increased teacher satisfaction (Wess, 2014). This demonstrates that there is more to teacher satisfaction than providing a supportive environment through individualized support. While this study did not show statistically significant results to demonstrate individual support impacting

teacher satisfaction, additional research is suggested to better demonstrate how individual support can be used to decrease teachers' levels of concerns.

Professional Development

Another valuable support that can help teachers through change is targeted professional development. In order for teachers to effectively implement change and understand the importance, they must have consistent understandings across the school community regarding the implementation of the change (Madden, Wilks, Maione, Loader & Robinson, 2012). This valuable information helps teachers understand what it is they are doing and ensures that everyone has some common understanding. Professional development is most effective when the learning is structured to meet teacher needs (Ruchti et al., 2013). Teachers feel more empowered and satisfied when their needs are met and information that they require is given to them. This poses a potential challenge to educational leaders to balance mandated changes with those of teacher needs. Leaders must make a conscious effort to understand the needs of the teachers and work to meet those varied and diverse needs.

Research has found that purposeful professional development can work to reduce and refocus teacher concerns. When professional development is implemented to target teacher needs, teachers experience a shift in their concerns from self-concerns to concerns related to the impact of the change on students (Roach et al., 2009). This shift is important because it shows that teachers are working through the change implementation process and are not just focused on their own experience but see the potential impact the proposed change has on their students and school community. Additionally, teachers experience higher levels of confidence in their abilities to deliver the proposed change when there is a high level of coherence between professional development activities and teachers' own goals for learning (Li et al., 2013). This is powerful

information that suggests that targeted professional development that addresses teachers' goals can decrease reported self-concerns and increase confidence in abilities to deliver the change. Professional development is an important strategy to address teacher needs and support teachers through the change process.

Conclusion

Change is an important process that schools go through to improve outcomes for students and better meet student needs. While it is recognized as an important process, it does present unique challenges to teachers and school communities. Teachers are a diverse group of professionals with varying strengths and needs and educational leaders must work to identify those needs and work to address them. Strategic supports can be utilized to help teachers and have been found to be of varying levels of effectiveness to decrease teacher concerns. The purpose of the following research will be to further investigate the impact of targeted, individualized, professional development on teachers' reported levels of self-concern regarding new curriculum implementation.

CHAPTER III

METHODS

The purpose of this action research was to examine the effects of individual feedback and professional development on teachers' levels of concern regarding the implementation of a new curriculum model at a public elementary school in Baltimore County, Maryland.

Design

This research was conducted using a quasi-experimental design. Pre-and post-test surveys were administered to participants at the beginning and end of the six-week research period. This research was conducted to examine the connection between two variables. The independent variable for this study was access to professional development and individual feedback through observations. The dependent variable was intensity of teachers' levels of concern as measured by the Stages of Concern Questionnaire. The data from these surveys identified teachers' levels of concerns and those results were quantified, reported, analyzed, and compared using descriptive statistics.

Participants

The participants in this study consisted of a convenience sample of nine, female teachers at a public elementary school in Baltimore County. The nine teachers comprised the kindergarten and second grade teams at the school. The treatment and control groups were created through random assignment by grade level. Teachers were paired based on similar ages and tenure and then random assignment was completed using Excel to randomly sort participants into the treatment and control groups. Of the four kindergarten teachers, two teachers were randomly assigned to the treatment group, and the other two were randomly assigned to the control group. Of the two kindergarten teachers in the treatment group, one was 25 years old with 2 years of

experience and the other was 24 years old with 4 years of experience. Of the two kindergarten teachers in the control group, one was 26 years old with 2 years of experience and the other was 40 years old with 17 years of experience. Three of the second grade teachers were assigned to the treatment group and two second grade teachers were assigned to the control group. Of the three second-grade teachers in the treatment group, one was 27 years old with 2 years of experience, one was 62 years old with 18 years of experience and the third was 41 years old with 18 years of experience. Of the two second-grade teachers in the control group one was 27 years old with 5 years of experience and the other was 62 years old with 25 years of experience (see Table 1).

Table 1: Participant Demographics

Grade	Control			Treatment		
	Name	Age	Tenure	Name	Age	Tenure
K	A	26	2	E	25	2
	B	40	17	F	24	4
	C	27	5	G	27	2
2	D	62	25	H	62	18
				I	41	18

Instrument

The instrument used in this study was The Stages of Concern Questionnaire, (SoCQ), published by the Southwest Educational Development Laboratory. The questionnaire was developed as a diagnostic tool to measure dimensions of the Concerns-Based Adoption Model. The Concerns-Based Adoption Model is a framework to measure the facilitation and implementation of change in schools. The SoCQ assesses teacher concerns regarding the

implementation of a new program or change within a school or district. The questionnaire is comprised of 35 questions on a Likert scale from zero to seven. Number 0 indicates that the statement is irrelevant, numbers 1 and 2 indicate the statement is not true now, 3, 4 and 5 indicate the statement is somewhat true now and numbers 6 and 7 indicate the statement is very true now. Additionally, the questionnaire collects information regarding a respondent's length of time involved in the new program. Each respondent's survey is scored and results in a raw score across seven levels of concern. Stage 0 is unconcerned, Stage 1 is information, Stage 3 is personal, Stage 4 is management, Stage 4 is consequence, Stage 5 is collaboration and Stage 6 is refocusing. These raw scores are converted to percentile ranks that show an individual's greatest level of concern. The purpose of the outcome of the survey is to inform further professional development and needs of teachers' to further implement the new innovation.

Procedure

The SoCq survey was administered to the nine teachers in the kindergarten and second grade teams prior to the beginning of the six-week intervention period. Teachers completed the thirty-five question survey independently. Before random assignment to the treatment or control group, teachers on each team were paired based on similar ages and tenure. These matched samples were then randomly assigned to the treatment or control group. The treatment group received one informal observation each week that provided individual feedback on classroom implementation of the new curriculum. In addition to individual feedback, the treatment group also received professional development regarding the new curriculum model twice, for 2 hours at a time, during the six-week research period. The topics for the professional development sessions were determined based on feedback from observation and teacher requested topics. The control group continued the implementation of the new curriculum without any changes to current

programming. At the end of the six-week period, the Survey of Concern Questionnaire was given to all nine participants again as a post-test. Pre-and post-test levels of concerns were then examined and compared in order to identify to what extent, if any, the professional development and informal classroom observations and feedback mitigated teachers' levels and intensity of concerns.

CHAPTER IV
RESULTS

The purpose of this study was to examine what, if any, impact targeted professional development and individual teacher feedback had on teachers’ levels of concern regarding the implementation of a new curriculum. The results were gathered through pre-and post-surveys and presented in tables to be analyzed through descriptive statistics. All results were captured with percentile scores and changes in percentile ranks were measured.

Table 2
Kindergarten Control Group Results

Grade K Control	Teacher A			Teacher B			
	Stage	Pre	Post	Change	Pre	Post	Change
	0	87	99	12	22	31	9
	1	66	99	33	69	75	6
	2	80	99	19	45	51	6
	3	39	99	60	47	56	9
	4	19	48	29	24	33	9
	5	52	44	-8	28	44	16
	6	38	87	49	30	42	12

As shown in Table 1, Kindergarten teachers in the control group demonstrated the following changes: In Stage 0, Teacher A demonstrated a percentile rank change of 12 from 87 in the pre-test to 99 in the post-test while Teacher B demonstrated a percentile rank change of 9 from 22 in the pre-test to 31 in the post-test. There was an increase of 33 percentile points for Teacher A in Stage 1 from 66 in the pre-test to 99 in the post-test while Teacher B demonstrated an increase in 6 points from 69 in the pre-test to 75 in the post-test. In Stage 2, Teacher A measured an increase of 19 percentile points from 80 in the pre-test to 99 in the post-test while Teacher B demonstrated an increase of 6 points from 45 in the pre-test to 51 in the post-test.

Teacher A measured an increase in 60 percentile points in Stage 3 from 39 in the pre-test to 99 in the post-test while Teacher B measured an increase of 9 points from 47 in the pre-test to 56 in the post-test. In Stage 4, Teacher A measured an increase of 29 percentile points from 19 in the pre-test to 48 in the post-test while Teacher B measured an increase of 9 points from 24 in the pre-test to 33 in the post-test. Teacher A demonstrated a decrease of 8 percentile points in Stage 5 from 52 in the pre-test to 44 in the post-test while Teacher B had an increase of 16 points from 28 in the pre-test to 44 in the post-test. In the final stage, Stage 6 teacher A saw an increase of 49 percentile points from 38 in the pre-test to 87 in the post-test while Teacher B saw an increase of 12 points from 30 in the pre-test to 42 in the post-test.

Table 3
Grade 2 Control Group Results

Grade 2 Control	Teacher C			Teacher D			
	Stage	Pre	Post	Change	Pre	Post	Change
	0	98	99	1	81	69	-12
	1	99	84	-15	48	63	15
	2	97	95	-2	55	52	-3
	3	99	98	-1	80	70	-10
	4	66	66	0	33	27	-6
	5	52	52	0	28	40	12
	6	65	90	25	42	65	23

Table 2 displays the changes in percentile scores for the stages of concern for the Grade 2 teachers in the control group. Teacher C demonstrated a percentile point gain of 1 in Stage 0 from 98 in the pre-test to 99 in the post-test while Teacher D demonstrated a loss of 12 points from 81 in the pre-test to 69 in the post-test. Teacher C measured a loss of 15 percentile points for Stage 1 from 99 in the pre-test to 84 in the post-test while Teacher D had a gain of 15 points from 48 in the pre-test to 63 in the post-test. Teacher C demonstrated a loss of 2 percentile points

in Stage 2 from 97 in the pre-test to 95 in the post-test and Teacher D demonstrated a loss of 3 percentile points from 55 in the pre-test to 52 in the post-test. In Stage 3, Teacher C measured a loss of one percentile point from 99 in the pre-test to 98 in the post-test while Teacher D measured a loss of 10 points from 80 in the pre-test to 70 in the post-test. Teacher C stayed in the 66th percentile for Stage 4 and at the 52nd percentile for Stage 5 with no measured difference. Teacher D had a loss of 6 percentile points in Stage 4 from 33 in the pre-test to 27 in the post-test and an increase of 12 points from 28 in the pre-test to 40 in the post-test. Both teachers saw an increase in percentile points in Stage 6. Teacher C measured an increase in 25 points from 65 in the pre-test to 90 in the post-test and Teacher D had an increase of 23 points from 42 in the pre-test to 65 in the post-test.

Table 4
Kindergarten Treatment Group Results

Grade K Treatment	Teacher E			Teacher F		
	Stage	Pre	Post	Change	Pre	Post
0	99	55	-44	99	87	-12
1	88	72	-16	84	72	-12
2	87	72	-15	91	78	-13
3	83	34	-49	98	56	-42
4	33	59	26	33	38	5
5	28	88	60	14	76	62
6	52	60	8	52	90	38

The changes in percentile scores for the two teachers in the Kindergarten treatment group are displayed in Table 3. Teacher E measured a loss of 44 percentile points in Stage 0 from 99 in the pre-test to 55 in the post-test while Teacher F decreased by 12 points from 99 in the pre-test to 87 in the post-test. In Stage 1, Teacher E decreased by 16 percentile points from 88 in the pre-test to 72 in the post-test while Teacher F decreased by 12 points from 84 in the pre-test to 72 in

the post-test. Both teachers demonstrated a loss in percentile points in Stage 2. Teacher E decreased by 15 percentile points from 87 in the pre-test to 72 in the post-test and Teacher F decreased by 13 points from 91 in the pre-test to 78 in the post-test. Teacher E decreased by 49 percentile points in Stage 3 from 83 in the pre-test to 34 in the post-test and Teacher F decreased by 42 points from 98 in the pre-test to 56 in the post-test. Teacher E increased by 26 percentile points in Stage 4 from 33 in the pre-test to 59 in the post-test and Teacher F increased by 5 points from 33 in the pre-test to 38 in the post-test. In Stage 5, Teacher E measured an increase of 60 percentile points from 28 in the pre-test to 88 in the post-test and Teacher F increased by 62 points from 14 in the pre-test to 76 in the post-test. In the final stage, Stage 6, Teacher E demonstrated a gain of 8 percentile points from 52 in the pre-test to 60 in the post-test while Teacher F saw a gain of 38 points from 52 in the pre-test to 90 in the post-test.

Table 5
2nd Grade Treatment Group Results

2nd Grade Treatment	Teacher G			Teacher H			Teacher I		
	Stage	Pre	Post	Change	Pre	Post	Change	Pre	Post
0	94	87	-7	87	81	-6	98	22	-76
1	75	63	-12	63	69	6	91	43	-48
2	85	72	-13	55	63	8	94	41	-53
3	73	90	17	80	83	3	95	27	-68
4	19	43	24	33	48	15	27	30	3
5	28	52	24	59	80	21	19	72	53
6	26	34	8	65	73	8	81	47	-34

Percentile point changes for the three 2nd grade teachers in the treatment group are displayed in Table 4. All three teachers measured a decrease in percentile points in Stage 0. Teacher G decreased by 7 points from 94 in the pre-test to 87 in the post-test, Teacher H decreased by 6 points from 87 in the pre-test to 81 in the post-test, and Teacher I decreased by 76

points from 98 in the pre-test to 22 in the post-test. Teachers G and H demonstrated a decrease in points in Stage 1 while Teacher I demonstrated an increase.

In Stage 1 Teacher G decreased by 12 points from 75 in the pre-test to 63 in the post-test while Teacher I decreased by 48 points from 91 in the pre-test to 43 in the post-test. Teacher H gained 6 points from a 63 in the pre-test to 69 in the post-test. Teacher H also demonstrated an increase of 8 points in Stage 2 from 55 in the pre-test to 63 in the post-test while Teacher G decreased by 13 points from 85 in the pre-test to 72 in the post-test and Teacher I measured a decrease of 53 points from 94 in the pre-test to 41 in the post-test.

In Stage 3 Teacher G increased by 17 percentile points from 73 in the pre-test to 90 in the post-test, Teacher H increased by 3 points from 80 in the pre-test to 83 in the post-test and Teacher I measured a decrease of 68 points from 95 in the pre-test to 27 in the post-test. In Stage 4 Teacher G increased by 24 percentile points from 19 in the pre-test to 43 in the post-test, Teacher H increased by 15 points from 33 in the pre-test to 48 in the post-test, and Teacher I gained 3 points from 27 in the pre-test to 30 in the post-test.

All 3 teachers saw a gain in percentile points in Stage 5. Teacher G increased by 24 points from 28 in the pre-test to 52 in the post-test, Teacher H increased by 21 points from 59 in the pre-test and 80 in the post-test, and Teacher I increased by 53 points from 19 in the pre-test to 72 in the post-test.

In Stage 6, Teacher G gained 8 percentile points from 26 in the pre-test to 34 in the post-test, Teacher H also increased by 8 points from 65 in the pre-test to 73 in the post-test, and Teacher I demonstrated a loss of 34 percentile points from 81 in the pre-test to 47 in the post-test.

Table 6
Average Kindergarten Percentile Changes

Stage of Concern	Grade K Control	Grade K Treatment
0	10.5	-28
1	19.5	-14
2	12.5	-14
3	34.5	-45.5
4	16.5	15.5
5	4	61
6	30.5	23

Table 5 displays the average changes in percentile scores for the Kindergarten teachers in both the control and treatment groups. In Stage 0 the control group averaged an increase of 10.5 percentile points while the treatment group averaged a decrease of 28 percentile points. The Kindergarten control group averaged an increase in 19.5 percentile points in Stage 1 while the treatment group averaged a decrease of 14 percentile points. In Stage 2 the control group averaged 12.5 percentile points and the treatment group averaged a decrease of 14 points. The control group averaged an increase in 34.5 percentile points in Stage 3 while the treatment group averaged a decrease of 45.5 percentile points. Both groups demonstrated an increase in average changes in Stage 4 with the control group averaging a change of 16.5 points and the treatment group demonstrated an average change of 15.5 percentile points. The control group averaged an increase in 4 percentile points for Stage 5 while the treatment group averaged an increase of 61 percentile points. Both groups saw an increase in average changes for Stage 6 with the control group measuring an average change of 30.5 points and the treatment group an average change of 23 points.

Table 7
Average Grade 2 Percentile Changes

Stage of Concern	Grade 2 Control	Grade 2 Treatment
0	-5.5	-29.6
1	0	-18
2	-2.5	-19
3	-5.5	-16
4	-3	14
5	6	32.6
6	24	-6

The average changes in percentile scores for the Grade 2 control and treatment groups are displayed in Table 6. The control group averaged a decrease of 5.5 percentile points for Stage 0 while the treatment group averaged a decrease of 29.6 percentile points. The control group did not measure an average increase or decrease in percentile points for Stage 1 while the treatment group averaged a decrease of 18 percentile points. Both groups averaged a decrease in percentile scores in Stage 2 with the control group averaging a decrease of 2.5 points and the treatment group averaging a decrease of 19 points. In Stage 3, the control group averaged a decrease of 5.5 percentile points and the treatment group averaged a decrease of 16 percentile points. The control group averaged a decrease of 3 percentile points for Stage 4 while the treatment group averaged an increase of 14 percentile points. Both groups saw an average increase in scores for Stage 5 with the control group averaging an increase of 6 percentile points and the treatment group averaging an increase of 32.6 percentile points. In Stage 6, the control group averaged an increase of 24 percentile points while the treatment group averaged a decrease of 6 percentile points.

CHAPTER V

DISCUSSION

Descriptive analysis of the survey results does indicate that changes were observed in measured level of concern for teachers who received targeted professional development and informal observational feedback. The researcher is unable to conclude whether the difference in changes between the treatment and control groups is statistically significant as the results were analyzed through descriptive statistics. The researcher is not able to definitively say whether the results support or reject the null hypothesis. However, findings did provide meaningful insight into the impact of professional development and individual feedback for the participants in this study.

Implications of Results

Data in Tables 5 and 6 demonstrate the average changes in percentile points for teachers in kindergarten and 2nd grade in both the treatment and control groups. Teachers in both treatment groups received two hours of additional targeted professional development regarding the implementation of the new curriculum in addition to 6 informal observations to provide individualized classroom feedback. It is of particular interest to note that in both the kindergarten and 2nd grade treatment groups, there were notable decreases in percentile scores in Stages 0, 1, 2, and 3. This indicates that the teachers in the treatment group did experience a change in their measured levels of concern throughout the treatment period. Stages 0 through 3 measure concerns from unconcerned, information, personal, and management respectively. In the unconcerned stage, teachers are not unaware of the coming change and how it will impact them and then stages 1, 2, and 3 reflect gaining information about the change, how it will affect the teacher and how the change will be managed. A decrease in concerns, as observed in the

findings, indicate an individual who is better positioned to utilize the change in meaningful ways.

The kindergarten treatment group also measured notable increases in percentile scores for Stages 4, 5, and 6. Similarly, the 2nd grade treatment group also measured increases in percentile scores for Stages 4 and 5 with a decrease of 6 percentile points for Stage 6 that is likely not a compelling change. Stages 4, 5 and 6 correspond with consequence, collaboration, and refocusing respectively. Increases in these stages indicate participants are more concerned and focused on determining the impact of a change, collaborating and sharing ideas with colleagues and refocusing and reflecting for further improvement. It is positive to see teachers decrease percentile scores in Stages 0 through 3 while increasing in Stages 4 through 6 after receiving the treatment of professional development and informal feedback.

While both treatment groups saw powerful decreases in Stages 0, 1, 2 and 3, the same was not measured for the control groups. The kindergarten control group saw increases in all average percentile changes ranging from an average of 4 points to 34.5 points. This data may indicate that kindergarten teachers continued to experience levels of concern that were only heightened throughout the six-week treatment period. In contrast, the 2nd grade treatment group demonstrated average percentile changes ranging from -5.5 to 6 for Stages 0, 1, 2, 3, 4, and 5. At this time the researcher does not find these average changes to indicate notable changes in the measured levels of concern for the 2nd grade control group. It can be surmised from these findings that teachers in the control group either did not experience a compelling change in their percentile scores at each stage of concern or the percentile scores were heightened over the research period with no treatment provided.

Stage 6 of the Concerns Based Adoption Model focuses on refocusing and reflection. In this stage individuals are concerned about identifying modifications that can be made to a

program for further improvement. The kindergarten treatment, kindergarten control and the grade 2 control groups all measured notable average changes in percentile points ranging from 23 to 30.5 for Stage 6. The 2nd grade treatment group measured an average change of -6 percentile points that indicates no notable change. This particular stage directly relates to a focus on reflection supported by the new curriculum being implemented. The average increase in percentile scores for the three identified groups may be due to the particular structure of the curriculum program being implemented by these educators.

Threats to Validity

The researcher acknowledges that this action research project contained internal and external threats to validity. The following internal threats to validity impact the ability of the researcher to show the relationship between the independent and dependent variables. The nine participants used in the control and treatment groups have collegial and friendly relationships with the researcher. These positive relationships may have impacted their perception of the surveys and their corresponding responses. Additionally, the curriculum focus on reflection may have impacted responses to questions related to Stage 6 of the concern model. Furthermore, this action research project was conducted over a six-week period during the second half of the first full year of implementation of the new curriculum. The timing of the surveys in regard to curriculum implementation may impact the survey results and data.

The following external threats to validity impact the ability of the researcher to generalize research findings to other populations. The participants in this study all were in the process of implementing the same new curriculum. The generalizability of any findings is limited in that these results were captured under specific curriculum circumstances. While teachers in the control and treatment groups were implementing new curriculum, there were also other new

initiatives in the school building that may have impacted their stages of concern. While the survey specifically addressed the curriculum, the researcher cannot say whether other concerns were not captured in the data. Finally, this research included a sample size of nine that is a small, relatively homogeneous sample that limits the ability of the findings to be generalized to other populations.

Connections to Existing Literature

The findings in this research support and connect to findings in many other research studies. Previous literature and research demonstrates that change is a process that teachers work through. This process includes different steps that often do not function as discrete, independent steps (Roach et al., 2009). The findings from the data collected in this research support this idea and demonstrate that each individual teacher has a different process for working through the six Stages of Concern as measured by the Stages of Concern Questionnaire. Teachers in the same phase of curriculum implementation do not measure the same levels of concerns across the stages.

Many strategies can be implemented to support teachers experiencing change including providing information through professional development and teacher support. Teachers can be supported through effective professional development that is intentionally delivered to meet teacher needs (Ruchti et al., 2013). Throughout the course of this research the treatment group experienced professional development that was targeted to meet teacher needs and the data demonstrates notable differences in their stages of concern when comparing their pre-and post-survey data. Previous research also indicates that teachers' perceived levels of support are positively correlated with implementing changes (Li et al., 2013). This further supports the idea that effective professional development that is planned to best meet teacher needs can be a

helpful strategy in supporting teachers through the change process. Additionally, teachers must feel empowered through information and be treated as knowledgeable about their craft (Rutchi et al., 2013). Throughout this research individual feedback was provided to the treatment group through informal classroom observations. This individualized feedback directly empowered teachers to celebrate their successes and provided opportunities for growth through suggestions. Providing teachers meaningful feedback about their implementation of new curriculum allowed them to affirm what they know and continue to build their depth of understanding. The research findings from this study continue to support the ideas that targeted professional development and individual feedback can be useful tools to support teachers through the change process and various Stages of Concern as measured by the Stages of Concern Questionnaire.

Implications for Future Research

Data collected through this research supports the idea that targeted professional development and individual teacher feedback may be strategies that support teachers through the change process regarding the implementation of a new curriculum. Findings denote notable differences in the treatment groups' stages of concern that do support the notion that future research with larger sample sizes and more generalizability might be meaningful. In order for findings to be more generalized, larger sample sizes would be necessary that account for school levels, teacher populations as well as student populations. Continued research should be conducted to disaggregate specific interventions and supports that could provide more statistically significant findings for their impact on teachers' levels of concern. This particular study implemented two interventions to support teachers and it would be helpful in future research to implement one intervention at a time to better understand the most impactful strategy to support teachers.

Conclusions

The purpose of this research study was to explore the impact of targeted professional development and individual feedback on teachers' perceived levels of concern regarding the implementation of a new curriculum. The Stages of Concern Questionnaire was used and pre-and-post survey data were analyzed through descriptive statistics. The data does show trends and patterns in the average measured changes of teachers' levels of concern that are notable when comparing the treatment and control groups. This analysis demonstrates a further need for research to explore the implications and positive consequences of targeted professional development and individual feedback as strategies to support teachers through change.

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