

## **ABSTRACT**

D. Ashley Cooper, **PRINCIPALS USING THE TRANSFORMATIONAL FEEDBACK MODEL TO SUPPORT STUDENT PERFORMANCE** (Under the direction of Dr. Harold Holloman). Department of Educational Leadership, March 2018.

Teachers need support from school leaders to improve instructional practices and student performance. This problem of practice study examines the role individualized feedback from principals to teachers in one-on-one conferences after receiving student benchmark assessment results can support instructional changes for improved student performance. To address this problem, the mixed-method study examined the feedback principals provided to teachers using the Transformational Feedback Model developed based on the literature. Using principals and teachers at two middle schools, individualized feedback was provided to the teachers by principals after each round of student benchmark assessment results. Data was collected from student benchmark results, participant surveys, participant interviews and results from state assessment results prior and after the study took place. The findings of the study illustrated how individualized feedback to teachers using the Transformational Feedback Model positively affected student performance results on student benchmark assessments and state assessment results. The findings supported the use of the Transformational Feedback Model by school leaders in how they lead within a school through feedback conferences to establish an environment that strengthens relationships teachers. Strong relationships between school leaders and teachers allow the teacher to use the feedback provided to make the necessary instructional changes to improve their instructional delivery which lead to improved student performance.



PRINCIPALS USING THE TRANSFORMATIONAL FEEDBACK MODEL  
TO SUPPORT STUDENT PERFORMANCE

A Dissertation

Presented to

The Faculty of the Department of Educational Leadership

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of the Requirements for the Degree

Doctor of Education in Educational Leadership

by

D. Ashley Cooper

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D. Ashley Cooper

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TO SUPPORT STUDENT PERFORMANCE

by

D. Ashley Cooper

APPROVED BY:

DIRECTOR OF DISSERTATION: \_\_\_\_\_  
Harold Holloman, PhD

COMMITTEE MEMBER: \_\_\_\_\_  
Pascal Mubenga, PhD

COMMITTEE MEMBER: \_\_\_\_\_  
William Rouse, Jr., EdD

COMMITTEE MEMBER: \_\_\_\_\_  
Thomas Williams, EdD

INTERIM CHAIR OF THE DEPARTMENT OF EDUCATIONAL LEADERSHIP:

\_\_\_\_\_  
Marjorie Ringler, EdD

DEAN OF THE GRADUATE SCHOOL:

\_\_\_\_\_  
Paul Gemperline, PhD

## **DEDICATION**

To Jaxson and Sophia, let no one or nothing get in the way of your goals. You can accomplish anything no matter the obstacle, just believe in yourself.

## ACKNOWLEDGEMENTS

I would not have been able to complete this dissertation and the journey I have taken without the acknowledgement of those who supported and helped me along the way. Through my educational career I have had the opportunity to work with individuals who have shaped my thinking and enabled me to reach my potential and for that I am truly grateful.

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## TABLE OF CONTENTS

	Page
TITLE.....	i
COPYRIGHT .....	ii
SIGNATURE.....	iii
DEDICATION.....	iv
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES .....	xvi
LIST OF FIGURES .....	xviii
CHAPTER 1: LEADERSHIP CONTEXT AND PURPOSE OF ACTION.....	1
Problem of Practice .....	3
Benchmark Usage and State Assessment Correlation .....	4
Lessons Learned .....	6
Defining the Problem of Practice .....	7
Recent Performance Gap in the District. ....	7
Need for the Study.....	9
Student Learning Gaps.....	13
Addressing Student Learning Gaps. ....	14
Purpose of the Study.....	15
Building Teacher Capacity with Feedback .....	16
Student Performance Gap. ....	18
Significance of the Study.....	25
Data Coaching to Improve Student Performance .....	28

Principals as Data Coaches .....	28
Research Questions .....	29
Study Design .....	31
Improvement Outcomes .....	33
Expected Findings .....	34
Definition of Terms .....	36
Summary .....	36
<b>CHAPTER 2: REVIEW OF SUPPORTING SCHOLARSHIP .....</b>	<b>39</b>
Testing and Accountability in North Carolina .....	39
The Principalship.....	40
Supervision within the Principalship.....	42
The Principal as a Change Agent .....	43
Establishing Relationships for Change. ....	44
Establishing a Shared Vision for Change .....	44
Establishing Communication for Change .....	45
Establishing School Expectations and Culture for Change.....	46
Feedback .....	47
Feedback Challenges .....	49
Feedback Systems .....	50
The Practices of Feedback .....	51
Assessments for Learning. ....	54
Data-Driven Decisions .....	54
Instructional Improvement .....	57

Curriculum and Instructional Alignment.....	58
The Four Actions of Feedback.....	59
Relationships for Change.....	59
Communicate Effectively.....	61
Create Shared Vision.....	63
Establish Expectations and School Culture.....	64
Transformational Leadership.....	65
The Four Characteristics and Behaviors of Transformational Leadership.....	68
Idealized Influence.....	68
Idealized Influence and Goal Setting.....	70
Idealized Influence and Creating Meaning.....	71
Inspirational Motivation.....	72
Inspirational Motivation and Vitality.....	73
Inspirational Motivation and Energizing Connections.....	74
Intellectual Stimulation.....	75
Intellectual Stimulation and Reflection.....	75
Intellectual Stimulation and Self-Esteem.....	76
Individualized Consideration.....	78
Individualized Consideration and Building Trust.....	79
Individualized Consideration and Personalization.....	81
Transformational Feedback Model.....	82
Summary.....	84
<b>CHAPTER 3: METHODOLOGY.....</b>	<b>87</b>

Defining the Purpose of the Study .....	87
Setting and Participants .....	88
Innovation .....	90
Logic Model.....	91
Resources .....	93
Activities .....	96
Outputs.....	98
Outcomes.....	98
Impact.....	99
Instruments and Data Collection .....	100
Quantitative Data.....	100
Student Benchmark Performance Data and Reports .....	101
End-of-Grade Performance Data and Reports.....	106
Qualitative Data.....	110
Feedback Protocol .....	111
Teacher Feedback Conferences .....	112
Feedback Conference Surveys .....	113
Participant Interviews. ....	114
Timeline of the Study .....	115
Summary.....	115
<b>CHAPTER 4: RESULTS .....</b>	<b>117</b>
Research Questions .....	117
Review of Methodology .....	118

Introducing the Analysis .....	119
Reliability of Participant Surveys .....	119
Collection of Quantitative Data from Benchmark and State Assessment Results .....	120
Qualitative Data Analysis Procedures .....	123
Reporting Results of the Participant Interviews .....	123
Assertion 1-Focus. ....	124
Assertion 2-Personal Growth. ....	125
Assertion 3-Support. ....	126
Linking to the Transformational Feedback Model .....	126
Research Question #1 Findings.....	129
Research Question #1a Findings .....	129
Research Question #1b Findings .....	130
Research Question #2 Findings.....	133
Research Question #3 Findings.....	144
Research Question #3a Findings. ....	145
Research Question #3b Findings .....	145
Research Question #4 Findings.....	147
Research Question #4a Findings. ....	147
Research Question #4b Findings .....	148
Research Question #4c Findings. ....	149
Research Question #4d Findings .....	149
Research Question #4e Findings. ....	150
Research Question #4f Findings.....	150

Research Question #4g Findings .....	151
Additional Findings .....	151
Consistency .....	151
Improvement Over Time.....	152
Structured Feedback Sessions and Improved Student Performance .....	154
Summary .....	154
CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....	159
Background.....	160
The Transformational Feedback Model .....	161
Study Results in Relation to the TFM .....	162
Characteristics of Transformational Feedback.....	163
Behaviors of Transformational Feedback .....	163
Practices of Transformational Feedback.....	163
Actions of Transformational Feedback.....	164
Results in Relation to Characteristics of Transformational Feedback.....	164
Results in Relation to the Behaviors of Transformational Feedback. ....	164
Results in Relation to the Practices of Transformational Feedback .....	169
Results in Relation to the Actions of Transforamtional Feedback .....	173
Lessons Learned through the Research Process .....	176
Updated TFM .....	178
Updated PATCH.....	179
Implementation.....	180
Professional growth. ....	181

Limitations of the Study .....	182
Recommendations for Practice .....	183
Policy Development.....	184
Organizational Management.....	186
Human Resource Management.....	189
Fiscal Management .....	196
Recommendations for Stakeholders.....	196
State Leaders .....	197
School Boards, Superintendents and District Leadership.....	197
School Administrators.....	198
Teachers .....	198
Higher Education.....	201
Recommendations for Future Research.....	202
Closing Word.....	203
REFERENCES .....	206
APPENDIX A: INSITUTIONAL REVIEW BOARD APPROVAL .....	255
APPENDIX B: DISTRICT PERMISSION TO CONDUCT RESEARCH STUDY .....	256
APPENDIX C: IDENTIFICATION OF LOW-PERFORMING SCHOOLS .....	258
APPENDIX D: IDENTIFICATION OF LOW-PERFORMING LOCAL SCHOOL ADMINISTRATIVE UNITS .....	259
APPENDIX E: NCDPI SCHOOL PERFORMANCE GRADES UPDATE PRESENTATION.....	261
APPENDIX F: 2015–16 SCHOOL PERFORMANCE GRADES (A–F) FOR NORTH CAROLINA PUBLIC SCHOOLS .....	267
APPENDIX G: NORTH CAROLINA END-OF-GRADE TESTS OF MATHEMATICS GRADES 3-8 ACHIEVEMENT LEVEL DESCRIPTORS AND SCALE SCORE CUT	

OFFS .....	271
APPENDIX H: COPY OF ESTIMATED BENCHMARK BUDGET FOR 2016-17 SCHOOL YEAR.....	285
APPENDIX I: TRANSFORMATIONAL FEEDBACK MODEL.....	286
APPENDIX J: TRANSFORMATIONAL FEEDBACK MODEL FOR OTHER OCCUPATIONS.....	287
APPENDIX K: PRINCIPAL AND TEACHER COMMUNICATION HANDOUT .....	288
APPENDIX L: PRINCIPAL TRAINING MATERIALS.....	289
APPENDIX M: UNDERSTANDING AND USING STUDENT BENCHMARK REPORTS.....	300
APPENDIX N: UNDERSTANDING CLASS AND CONSOLIDATED ITEM ANALYSIS REPORTS.....	302
APPENDIX O: CLASS PERFORMANCE DASHBOARD .....	304
APPENDIX P: UNDERSTANDING THE CLASS PERFORMANCE DASHBOARD.....	305
APPENDIX Q: CONSOLIDATED ITEM ANALYSIS REPORT.....	306
APPENDIX R: CLASS ROSTER ANALYSIS REPORT.....	307
APPENDIX S: UNDERSTANDING THE CLASS ROSTER ANALYSIS .....	308
APPENDIX T: INTERPRETIVE GUIDE TO WINSCAN .....	309
APPENDIX U: TEACHER FEEDBACK CONFERENCE SURVEY FOR TEACHERS .....	331
APPENDIX V: TEACHER FEEDBACK CONFERENCE SURVEY FOR PRINCIPALS .....	335
APPENDIX W: TEACHER INTERVIEW QUESTIONS .....	339
APPENDIX X: PRINCIPAL INTERVIEW QUESTIONS .....	341
APPENDIX Y: SAS EVAAS POLICY BRIEF .....	343
APPENDIX Z: UPDATED TRANSFORMATIONAL FEEDBACK MODEL.....	345
APPENDIX AA: UPDATED PRINCIPAL AND TEACHER COMMUNICATION HANDOUT .....	346



APPENDIX AB: FEEDBACK AND COMMUNICATION TRANSCRIPT.....	347
APPENDIX AC: PRINCIPAL FEEDBACK POLICY BRIEF .....	348
APPENDIX AD: SUMMARY OF THE NORTH CAROLINA SUPERINTENDENT EVALUATION PROCESS .....	350
APPENDIX AE: SUMMARY OF THE NORTH CAROLINA PRINCIPAL EVALUATION PROCESS .....	352

## LIST OF TABLES

1. Case 21 Benchmark and North Carolina End-of-Grade Assessment Student Performance Correlation .....	5
2. Comparison Data between North Carolina and the Central North Carolina School District ....	8
3. Comparison of Composite Results between School District and North Carolina .....	16
4. School District Cohort Performance for School Years 2013-14 through 2015-16.....	20
5. School District Cohort Performance from Grade Five to Grade Six .....	21
6. State Cohort Performance from Grade Five to Grade Six.....	22
7. School District Cohort Performance for School Years 2013-14 through 2015-16.....	24
8. School District Feeder Pattern Cohort Performance from Grade Five to Grade Six .....	26
9. Participating Middle School Breakdown.....	89
10. Timeline of the Study .....	116
11. Principal and Teacher Survey Reliability for Transformational Leadership Questions .....	121
12. Principal and Teacher Survey Reliability for Practices of Feedback Questions .....	122
13. Themes, Theme-related Components, and Assertions from Participant Interviews .....	127
14. Themes, Theme-related Components, and Assertions from Participant Interviews Connected to the TFM.....	128
15. Comparison of Middle Schools on Benchmark One to Benchmark Two in Mathematics ...	131
16. Comparison of Middle Schools on Benchmark Two to Benchmark Three in Mathematics .....	134
17. Comparison of Projected Achievement Level on Benchmark Three to the Results on the North Carolina End-of-Grade Mathematics Assessment for the District .....	136
18. Comparison of Projected Achievement Level on Benchmark Three to the Results on the North Carolina End-of-Grade Mathematics Assessment for the District Middle Schools.....	138
19. School District Cohort Performances in Mathematics from Grade Five to Grade Six .....	140

20. North Carolina Cohort Performance in Mathematics from Grade Five to Grade Six.....	141
21. Achievement Gap Between the North Carolina Cohort and the School District Cohort at Grade Five Mathematics .....	143
22. Achievement Gap Between the North Carolina Cohort and the School District Cohort at Grade Five Mathematics .....	144
23. Projected Achievement Level Change Comparison Between Benchmark One and Benchmark Three in Mathematics .....	146
24. Comparison of the Projected Achievement Level Change Between Benchmarks .....	153
25. EVAAS Growth for District Grade Six Mathematics Cohorts by Middle school for 2016-2017 .....	156
26. EVAAS Growth for Grade Six Mathematics by Previous Cohorts .....	157
27. North Carolina End-of-Grade Comparison from 2015-16 to 2016-17.....	177
28. North Carolina Superintendent Evaluation Process and the Connection to the TFM.....	192
29. North Carolina Principal Evaluation Process and the Connection to the TFM .....	194

## LIST OF FIGURES

1. North Carolina school performance grade formula .....	11
2. EVAAS growth conversion scale.....	12
3. Study design.....	35
4. Formative Feedback System.....	51
5. Microtasks of the Formative Feedback System .....	53
6. Data-Driven Decision-Making Model.....	56
7. Curriculum Alignment Matrix .....	60
8. Transformational Leadership Framework .....	67
9. Principal Feedback Logic Model .....	94
10. Class report .....	102
11. Item analysis report .....	104
12. Class roster report .....	108
13. Achievement Level Performance Report .....	109

## **CHAPTER 1: LEADERSHIP CONTEXT AND PURPOSE OF ACTION**

Another round of student benchmark assessments was given to students at the school and results were printed and placed in the teacher's mailboxes. As teachers received their results they find a note attached from the principal that reads, "Please review your data and be ready to discuss how you will improve your results on the next benchmark at the grade level PLC meeting next week." An assortment of teacher reactions occurred as teachers read the note; from one teacher throwing their hands up in the air with frustration because no direction was given, to another teacher going back to their classroom and writing a list of specific actions they hope would improve their student's performance. In each case, the teachers were not sure if they knew what the principal wanted or if the principal could even provide specific advice on how to change the current outcomes on the student benchmarks. Stiggins (2002) wrote that schools have failed to connect assessments to school improvement and that school leaders do not know how to address the problem. Many school leaders do not know how to provide helpful feedback to teachers as it relates to student assessment data.

The central North Carolina school district that is the focus of this study began using student benchmark assessments in all North Carolina End-of-Grade and End-of-Course assessment grades and subjects to improve student performance at the start of the 2015-16 school year. The implementation of student benchmark assessments was in direct response to seven of the sixteen schools in the school district being designated as low performing schools as described by the North Carolina Department of Public Instruction (2015a). As the district began using student benchmark data to improve student performance, a pattern began to appear in responses from principals during district-wide data meetings after each round of student benchmark assessments. Principals were not sitting down one-on-one with teachers to discuss the student

benchmark data or providing specific feedback to support instructional improvement in the classroom. Many teachers did not understand the importance of the student benchmark assessments, how to interpret the student benchmark data, how to make instructional improvements based student benchmark performance, or how to ensure alignment between the North Carolina Standard Course of Study and their instruction.

Bryk, Sebring, Kerbow, Rollow, and Easton (1998) described the role principals play as critical in the quality of a school's academic program. Therefore, principals must establish the quality of a school's academic program by building the culture and expectations when it comes to the use of student benchmark data. Supovitz and Klein (2003) found "the fingerprints of strong leadership are all over the data activities" (p. 36) in schools that effectively use and discuss data. Leadership is critical in providing student success by establishing a strong school climate with the expectations for data use with teachers to promote learning with the goal of instructional improvement (Fullan, 2006; Leithwood, Seashore, Anderson, & Wahlstrom, 2004; Levin & Datnow, 2012).

To model appropriate feedback with teachers that may improve student benchmark assessment performance, the principal should demonstrate the characteristics of transformational leadership in their feedback communication through specific behaviors. Transformational leadership is made up of four characteristics; idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1984). Each characteristic of transformational leadership exhibits two different behaviors.

Based on the literature that will be discussed further in chapter two, behaviors related to feedback model each of the four transformational leadership characteristics. Those behaviors demonstrated in each transformational leadership characteristic are: (1) idealized influence-goal

setting and creating meaning; (2) inspirational motivation-vitality and connections; (3) intellectual stimulation-self-esteem and reflection; and (4) idealized influence-building trust and personalized.

From the behaviors of transformational leadership, feedback is shared through the four practices of feedback that comes out of the literature focused on feedback: (1) using assessments for learning, (2) data-based decision making, (3) instructional improvement, and (4) curriculum and instructional alignment. The practices of feedback structure the communication during the feedback conference through a feedback protocol developed specifically for this study. Further discuss of the protocol will be given in chapter three.

The transformational leadership characteristics and the associated behaviors work in conjunction with the four practices of feedback by the principal to convey the actions of feedback. The actions that come out of feedback based on the research are: (1) relationship for change, (2) effective communication, (3) shared vision, and (4) establish expectations and school culture. These actions of feedback demonstrate to the teacher what the principal is expecting and striving to accomplish within the school.

### **Problem of Practice**

Student benchmark assessments give schools much needed student performance data to support the enhanced student learning necessary to improve student performance on state assessments. During the district-wide principal benchmark data meetings that took place after each round of student benchmarks as mentioned above, the data indicated that individual grade levels were exhibiting improvement in their student benchmark performance from one student benchmark to another. However, this improvement was not consistent for each teacher, across an entire school, or across the district. This lack of consistent improvement on the student

benchmark results was especially evident from principals who were not as comfortable understanding the student benchmark performance data or discussing the student benchmark results with their teachers. Many principals were not communicating with their teachers the purpose of the student benchmark assessments or how to use the benchmark data to improve instructional practices.

### **Benchmark Usage and State Assessment Correlation**

The Case 21 benchmarks created by the vendor TE-21 began production in 2010 and focuses their student benchmark assessments on providing districts and schools with data to inform instruction and a tool for teachers. Case 21 benchmarks are used in four states and are used by 25% of school districts in North Carolina as of this study (TE-21, 2016). At the end of the first year of using the student benchmark assessments the district conducted their own correlation study reviewing how each student's projected achievement level on the third benchmark related to the achievement level they received on the North Carolina End-of-Grade or End-of-Course Assessment. Student data was broken down into two categories for the Case 21 results and two categories for the State Assessment results. Those two categories were Not Proficient which included Level 1 and 2 achievement levels and Proficient which included Level 3, 4, and 5 achievement levels. Table 1 shows the number and percentage of students who were projected to be not proficient and proficient after the third benchmark compared to the students who were not proficient and proficient on the North Carolina End-of-Grade and End-of-Course Assessments. Table 1 also shows the correlation between the student results on Case 21 student benchmark assessments and the North Carolina End-of-Grade Assessment. As a district, the average percentage of students who were projected to be proficient based on the Case 21 third



Table 1

*Case 21 Benchmark and North Carolina End-of-Grade Assessment Student Performance Correlation*

Grade	EOG	ELA/Reading				Math			
		Not Proficient Students		Proficient Students		Not Proficient Students		Proficient Students	
		#	%	#	%	#	%	#	%
3	Not Proficient	224	80.0	65	18.0	166	78.0	47	11.0
	Proficient	56	20.0	299	82.0	47	22.0	378	89.0
4	Not Proficient	235	76.0	53	16.0	203	84.0	85	21.0
	Proficient	73	24.0	283	84.0	40	16.0	314	79.0
5	Not Proficient	219	87.0	75	22.0	223	85.0	53	16.0
	Proficient	34	13.0	263	78.0	39	15.0	276	84.0
6	Not Proficient	233	81.0	45	16.0	266	90.0	46	18.0
	Proficient	54	19.0	232	84.0	31	10.0	212	82.0
7	Not Proficient	221	81.0	65	19.0	352	85.0	22	11.0
	Proficient	52	19.0	277	81.0	60	15.0	177	89.0
8	Not Proficient	285	80.0	60	20.0	402	88.0	42	22.0
	Proficient	71	20.0	237	80.0	56	12.0	153	78.0

*Note.* Correlation was completed using Case 21 student benchmark data and North Carolina End-of-Grade Assessment data from the 2015-16 school year from the Central North Carolina School District (North Carolina Department of Public Instruction, n.d.a)

benchmark and the North Carolina End-of-Grade Assessment was 81% in reading and 83% in mathematics.

### **Lessons Learned**

When student benchmark results were first made available to principals in the central North Carolina school district, no direction was provided to them on how they should distribute the student benchmark results or interact with teachers to review the student benchmark data. In addition, principals were not given a timeframe of when they should meet with teachers and what they should be discussing when they provided the teachers with their student benchmark performance data. When the district met as a team to discuss the results in principal benchmark data meetings, many principals had difficulty discussing what was occurring or needed to be addressed in the instructional practices of the teachers to improve student performance.

This lack of guidance on the part of the district and the principals, lead to confusion on the part of the teachers because they did not understand the purpose behind the student benchmark assessments. Principals and teachers did not set specific performance goals for the benchmarks so, when results were given both principals and teachers had no way to judge if the results were positive or negative. The lack of specific goals led to negative feelings towards the student benchmark results on the part of the principals and teachers. The negative feelings expressed by the teachers was a direct result of principals not understanding the purpose of how to use the student benchmark data to provide effective feedback and support teachers to manage multiple sources of feedback to initiate improvement in their instruction and in student performance.

## **Defining the Problem of Practice**

If the central North Carolina school district participating in this study is going to accomplish the established goals of the superintendent and the board of education, then an intervention needs to be implemented with principals to continue the student performance improvement that began during the 2015-16 school year. For student benchmark data to improve instruction and student performance, the principal needs to communicate the change needed for improvement, a vision of what instruction and curriculum alignment looks like, effectively discuss how to accomplish the goals of the teacher and the school, and what the culture and expectations of a school that focuses on improving teacher instruction and student performance. To accomplish these actions, the principal must demonstrate transformational leadership.

## **Recent Performance Gap in the District**

The overall student performance composite in the central North Carolina school district over the past three school years prior to 2015-16 was stagnant or loss ground to the North Carolina state average (see Table 2). The achievement gap between the district and the state widened over the school years of 2012-13 through 2014-15. The achievement gap between the school district and North Carolina reduced by 42% at the end of the 2015-16 school year. The district ranking of the overall student performance composite on the North Carolina End-of-Grade and End-of-Course assessments in relation to the 115 school districts in North Carolina prior to 2015-16 was either stagnant or dropped. With the increase performance for the 2015-16 school year, the districts ranking increase by nineteen places and placed the school district's overall composite ranking at sixty-third in the state of North Carolina (North Carolina Department of Public Instruction, n.d.a).

Table 2

*Comparison Data between North Carolina and the Central North Carolina School District*

---

District	School Year			
	2012-13	2013-14	2014-15	2015-16
North Carolina	44.7	56.3	56.6	58.3
School District	37.4	49.7	48.8	55.0

*Note.* Adapted from results of district data from the 2012-13 through the 2015-16 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

## **Need for the Study**

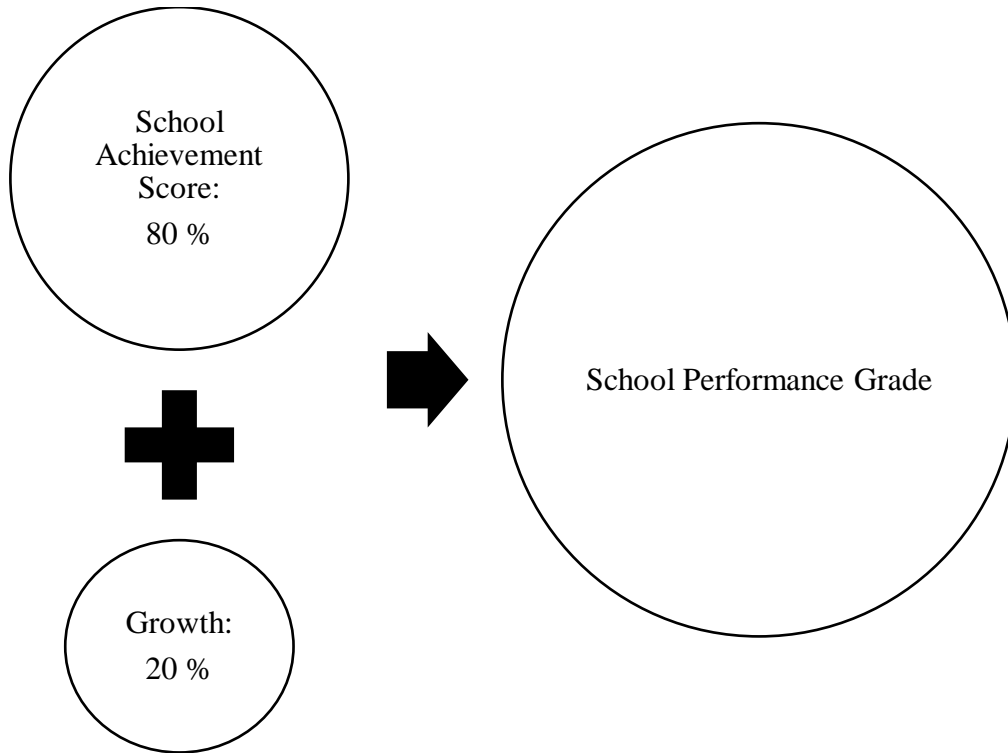
Student benchmark assessment data must be used to facilitate the diagnoses of gaps in student learning, so teachers can make instructional improvement. Previous research has found that to use effective assessment data, the feedback process must provide guidance on how to improve instruction (Black & William, 2010; Blanc et al., 2010). Baadte and Schnotz (2014) noted in their feedback research on educational performance, that feedback has been viewed as a way to promote the process of learning. The fore mention study will help principals guide teachers in managing multiple points of data through feedback to improve instruction and increase student performance on student benchmark assessments. These learning gaps were a contributing factor in the district potentially being listed as a low performing school district under the current North Carolina General Statue G.S. 115C-105.37 (see Appendix C).

The North Carolina General Assembly has defined low performing schools as schools “that receive a school performance grade of D or F and a school growth score of “met expected growth” or “not met expected growth” as defined by G.S. 115C-83.15” (North Carolina General Assembly, 2013c). The designation as a low performing school is determined on an annual basis after school performance and growth results are released by the North Carolina State Board of Education. A low performing school district is defined by the North Carolina General Assembly as a district where a majority of the schools in the district received a school performance grade of D or F and a school growth score of “met expected growth” or “not met expected growth” as defined by G. S. 115C-83.15 and G.S. 115C-105.37 (North Carolina General Assembly, 2013b). Low Performing School Districts are identified on an annual basis at the same time as low performing schools (see Appendix D).

School Performance Grades (G.S. 115C-83.15) were passed by the North Carolina General Assembly to grade schools based on student achievement and student growth. The formula is broken down into eighty percent of the school performance score is the student achievement on the designated performance indicators as defined in G. S. 115C-83.15 (see Appendix E) at the school and twenty percent on the school growth using the EVAAS model (North Carolina Department of Public Instruction, 2015b) The school performance score is then placed on a 15-point scale to determine the school's School Performance Grade (see Appendix F). Figure 1 illustrates the School Performance breakdown. The indicator that will be pertinent to this study is the North Carolina End-of-Grade assessments at grades three through eight in mathematics.

The EVAAS model to determine school growth uses current and previous student North Carolina End-of-Grade and End-of-Course performance results to determine whether schools are not meeting, meeting, or exceeding student achievement growth on the North Carolina End-of-Grade and End-of-Course assessments using gain-based and predictive-based models (North Carolina Department of Public Instruction, 2015c). A school's growth is designated in one of three categories; 'Did Not Meet Expected Growth', 'Meets Growth', or 'Exceeds Expected Growth'. The school's growth is converted to a fifty to one-hundred-point scale to determine the point value of the twenty percent that makes up part of the school performance grade a school receives (see Figure 2).

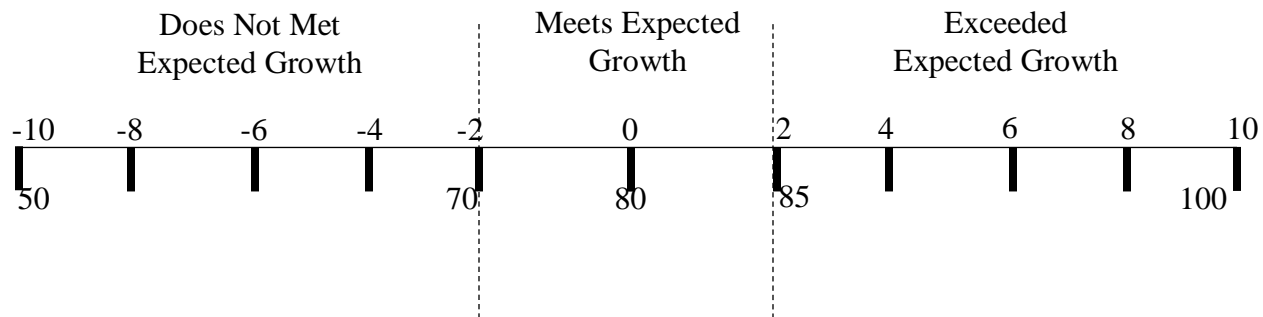
In the central North Carolina school district during the 2014-15 school year, one school received a school performance grade of a "D", but exceeded growth which meant the school did not meet low performing status as established by the North Carolina General Assembly Legislation G. S. 115C-105.37. By exceeding growth, the school was not labeled as a low



*Note.* Adapted from North Carolina Department of Public Instruction Webinar presentation: School Performance Grades Update (see Appendix E).

*Figure 1.* North Carolina School Performance Grade Formula.

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Note. Conversion Chart is estimated point scale conversion of point value earned by a school. Adapted from North Carolina Department of Public Instruction Webinar presentation: School Performance Grades Update (see Appendix E).

*Figure 2. EVAAS Growth Conversion Scale.*

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performing school. Another school in the district had a school performance score that was rounded up from 54.6 points to 55 points which placed the school's performance score in the range for a "C" letter grade. If the school's performance score was two tenths of a point lower the school would have received a school performance grade of "D" which would have designated the school as low performing and resulted in the school district being named a low performing school district.

Under North Carolina Legislation G. S. 115C-105.37 currently being followed, school districts in North Carolina are labeled as a low performing school district when fifty percent or more of the schools in the district receive a school performance grade of "D" or "F" whose school growth index is at or below expected growth as measured by EVAAS data. The central North Carolina school district in this study had fifty percent of its schools receive a "D" or "F", but the district did not meet the description of low performing because one of the schools exceeded growth as stated earlier.

### **Student Learning Gaps**

Student learning gaps for students occur for many reasons such as poverty, lack of educational programs, poor quality schools, unprepared teachers, and low teacher expectations (National Education Association, 2015a). The learning gaps found in the central North Carolina school district as compared to the North Carolina state results are in reading at grade five and in mathematics in grades six and seven as it relates to cohort results on the North Carolina End-of-Grade assessment as of the 2015-16 school year. These gaps in learning especially in mathematics is negatively impacting the district's ability to perform above the North Carolina state average and prepare students going forward in their academic careers.

## **Addressing Student Learning Gaps**

To reduce the student learning gap, actions by principals and teachers must take place. The National Education Association (2015b) suggests that principals need to support teaching and learning by setting the priorities and actions of the school and recommends teachers to use effective strategies, maintain high standards, and set expectations that are appropriate for individual students. The Council of Chief State School Officers (1996) published the six standards that address teaching and learning that have been found to close gaps in learning for students. Those six standards are: (1) the vision of learning, (2) the culture of teaching and learning, (3) the management of learning, (4) relationships with the broader community to foster learning, (5) integrity, fairness, and ethics in learning, and (6) the political, social, economic, legal, and cultural context of learning. Many of these standards focus on the instruction of the teacher and the well-being of the students in the classroom.

Roscigno (1998) explained that in his view the gaps in learning is predicated on the expectations and quality of the teacher and the characteristics of the school. Bloom's (1971) instructional strategy labeled mastery learning was developed to support student learning by focusing on teacher instruction. The essence of mastery learning is: (1) students need corrective and enriching feedback and (2) instruction must be consistent.

Differentiated instruction (Bloom, 1956; Bruner, 1966; Taba, 1962) is another way to close the learning gaps in the classroom. By differentiating instruction, teachers are rigorous, relevant, flexible, and varied with the intent to meet the individual needs of the students (Tomlinson & Allan, 2000).

Many students fear that teachers will show bias towards them and treat them unfairly (Yeager, Walton, & Cohen, 2013). Students need to have trust in their teacher that they want

them to succeed (Cohen, Steele, & Ross, 1999). To raise student performance, schools must improve the student's experience (Yeager et al., 2013) and teachers must be motivated to improve the student's experience (Ford, 1992). To improve the student's experience, teacher's need professional development that allows the teacher to improve their craft in a school culture that encourages change (Ford, 1992).

Learning gaps can occur for many reasons as demonstrated. How learning gaps occur is important for the principal to understand and address through their leadership. As the principal, it is their job to lead the reduction of learning gaps between groups of students in their building by addressing the gaps in teacher instruction and teacher interaction as it relates to students in the teacher's classroom. To do this, the principal must be active in their pursuit of reducing learning gaps to improve student performance.

### **Purpose of the Study**

After the first year of student benchmark assessment implementation during the 2015-16 school year, the central North Carolina school district as mentioned previously demonstrated tremendous improvement in results. The school district went from having seven low performing schools to three low performing schools. As a district, a six-point improvement in its overall Grade Level Proficiency (GLP) composite was accomplished which closed the achievement gap with North Carolina from over seven points to just over three points (see Table 3). Even with these positive results in student performance, the school district still had schools whose overall student performance decreased or did not meet expected growth. In addition, the school district's superintendent set a district goal for each school to have a school performance score of sixty or higher for the 2016-17 school year.

For all schools in the central North Carolina school district to reach the superintendent's school performance score goal of sixty or higher, four of the sixteen schools would have to reach sixty for the first time under the current school performance grade model and four schools would need to maintain their current school performance grade score and show positive student performance growth to continue to stay above the superintendent's goal. The school performance goal of sixty or higher would support the district's overall performance rising above the North Carolina achievement performance score average that was 58.3 at the end of the 2015-16 school year (North Carolina Department of Public Instruction, 2016e).

Having an increased school performance goal set forth by the superintendent, the principals need to develop the skill of providing direct feedback to teachers to continue the improvement in student performance to surpass the North Carolina state average, compete with North Carolina school districts regionally who are of similar demographics, and most importantly, avoid school performance regression towards low performing status. Principals must build teacher capacity and understand the student performance gaps that exist in their school.

### **Building Teacher Capacity with Feedback**

Teachers receive feedback data whenever they receive any type of assessment results given to their students. This data feedback informs the teacher if students understand what they have been assessed. Providing principal feedback to teachers bridges the gap between the data results teachers receive on student performance and the actions of feedback to improve instruction and student performance in the classroom. These actions of feedback by the principal involves building relationships for change, developing a shared vision, effective communication, and establishing expectations and a culture with each teacher.

Table 3

*Comparison of Composite Results between School District and North Carolina*

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School Year	School District	North Carolina	Achievement Gap
2014-15	48.8	56.6	7.8
2015-16	55.0	58.3	3.3

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*Note.* Adapted from results of district and state data from the 2014-15 and 2015-16 school years (North Carolina Department of Public Instruction, n.d.a)

The purpose of this study is to build capacity in the teacher to use multiple sources of feedback to improve student performance and instruction in the classroom through principal feedback. Teachers who can take the principal feedback and use it to understand the student assessment results on their own will become transformational leaders in the classroom.

### **Student Performance Gap**

In looking at the school district's performance specifically by student cohorts, a downward trend can be seen in the student cohort performances for students in grades six and seven for mathematics over the past three school years in the district starting with the 2013-14 school year through the 2015-16 school year. These two student cohorts are the only student cohorts to see downward student performance in mathematics over a two and three-year span in the district, respectfully. This student performance concern not only affects the middle schools in the school district, but also the three traditional high schools located in the school district when these students participate in the North Carolina high school mathematics End-of-Course assessment required for the current North Carolina Accountability Model (see Appendix E).

The North Carolina End-of-Grade assessments have designated five performance levels of achievement when data is reported to the public. Students who attain an achievement level of three, four, or five are considered Grade Level Proficient (GLP). Each achievement level covers a range of scale scores to inform how high or low a student's performance was in that particular achievement level. The five achievement levels as they are currently constructed were introduced starting with the 2013-14 school year (North Carolina Department of Public Instruction, 2014a). A full description of each achievement level and the scale score ranges for End-of-Grade Mathematics can be found in Appendix G.

Both student cohorts' performance in mathematics dropped each of the past two school years. The grade six student cohort demonstrated a negative six and one tenth performance drop between the 2014-15 school and the 2015-16 school year. The student performance from 2013-14 to 2014-15 was a negative two and eight tenth point drop. Similarly, the grade seven student cohort saw a negative three and one tenth point decrease over the last two years and a negative twelve and two tenth point drop over the three-year span (see Table 4).

If we review the student performance results on the North Carolina End-of-Grade assessment for the grade six and grade seven student cohorts as it relates to the two-year span from grade five to grade six, the student cohort demonstrated a student performance difference in mathematics from 2013-14 to 2014-15 school years of negative nine and one tenth point. The grade six student cohort as stated earlier saw a negative six and one tenth point difference in mathematics between 2014-15 and 2015-16. This decline in mathematics performance for students in grade six needs to be addressed (see Table 5).

The decrease student performance on the North Carolina End-of-Grade assessment in mathematics as a school district for the grade six and grade seven cohorts is concerning when compared to the grade six and grade seven student performance results statewide over the same time span from 2013-14 through 2015-16. The current grade six cohort performance for North Carolina dropped by negative five and nine tenths while the grade seven cohort performance in North Carolina dropped by negative seven and nine tenths from fifth to grade six (see Table 6).

The student cohorts in North Carolina and in the school district that is the focus of this study demonstrated negative student performance drops from grade five to grade six in mathematics. The central North Carolina school district saw a slightly larger decrease by the grade six student cohort and a larger drop in performance by the grade seven student cohort

Table 4

*School District Cohort Performance for School Years 2013-14 through 2015-16*

Cohort	School Year			Difference	
	2013-14	2014-15	2015-16	2 yr.	3 yr.
Sixth	45.8	49.1	43.0	-6.1	-2.8
Seventh	49.9	40.8	37.7	-3.1	-12.2

*Note.* Adapted from results of district data from the 2013-14 through the 2015-16 school year. Performance data is based on the GLP of the cohort (North Carolina Department of Public Instruction, n.d.a).



Table 5

*School District Cohort Performance from Grade Five to Grade Six*

Cohort	Grade Level		Difference
	Grade Five	Grade Six	
Sixth	49.1	43.0	-6.1
Seventh	49.9	40.8	-9.1

*Note.* Adapted from results of district data from the 2013-14 through the 2015-16 school years. Performance data is based on the GLP of the cohort (North Carolina Department of Public Instruction, n.d.a).

Table 6

*State Cohort Performance from Grade Five to Grade Six*

Cohort	Grade Level		Difference
	Grade Five	Grade Six	
Sixth	57.5	51.6	-5.9
Seventh	56.4	48.5	-7.9

*Note.* Adapted from results of district data from the 2013-14 through the 2015-16 school years. Performance data is based on the GLP of the cohort (North Carolina Department of Public Instruction, n.d.a).

when they were administered the grade six North Carolina End-of-Grade assessment. These differences do not seem enormous, but if you review the overall student performance from the school district as compared to the overall student performance of North Carolina, the difference in student performance at grade six is a large portion of what is causing the overall student performance achievement gap between North Carolina and the central North Carolina school district. For two of the three years from 2013-14 through 2015-16 the student achievement gap in grade six mathematics between the school district and North Carolina was at six and four tenths of a point with one of those years being the most current school year (North Carolina Department of Public Instruction, n.d.a). Addressing the student performance in grade six mathematics through principal feedback to teachers on student benchmark results will hopefully lead to student performance on the North Carolina End-of-Grade mathematics assessment making positive gains as related to the student cohort performance in grade five mathematics.

Table 7 shows each of the school districts three high school feeder patterns. Comparing the three feeder patterns is necessary to determine where the problem in student performance in grade six mathematics lies within the four middle schools in the school district. The high school feeder patterns “East” and “West” both show negative performance over two and three years since the 2013-14 school year respectfully.

At the “East” high school feeder pattern, the grade six and grade seven student cohorts demonstrated the largest negative student performance on the North Carolina End-of-Grade assessment in mathematics of the three middle school student cohorts as it relates to the difference in student performance from the students North Carolina End-of-Grade performance from grade five to their grade six year. The “West” high school feeder patterns show negative student performance on the same North Carolina End-of-Grade assessment in mathematics over

Table 7

*School District Cohort Performance for School Years 2013-14 through 2015-16*

Feeder Pattern	Cohort	School Year			Difference	
		2013-14	2014-15	2015-16	2 yr.	3 yr.
East	Sixth	47.7	57.9	37.5	-20.4	-10.2
	Seventh	62.4	38.6	37.3	-1.3	-25.1
West	Sixth	54.3	55.2	41.1	-14.1	-13.2
	Seventh	43.7	37.1	30.3	-6.8	-13.4
Central	Sixth	33.4	36.6	39.4	2.8	6.0
	Seventh	46.4	37.7	41.3	3.6	-5.1

*Note.* Adapted from results of district data from the 2013-14 through the 2015-16 school years. Performance data is based on the GLP of the cohort. Feeder pattern West includes two middle schools while the other two feeder high schools each only have one middle school (North Carolina Department of Public Instruction, n.d.a).

the same two grade span. The exception to the student performance were the grade six student cohort in the “Central” feeder pattern (see Table 8).

### **Significance of the Study**

Examining the role of the principals’ behavior in using student assessment data is valuable for the central North Carolina school district for a multitude of reasons. First, the central North Carolina school district as stated previously was very close to being designated as a low performing district after the 2014-15 school year and the district still had three schools designated as low performing after the 2015-16 school year. Students in these schools deserve the opportunity to get sound instruction from their teachers (Darling-Hammond & Baratz-Snowden, 2007).

Second, as part of the school performance grades required by the North Carolina General Assembly, principals can be removed if a school is designated as low performing by the superintendent (North Carolina General Assembly, 2013b). Schools that continue to be designated as low performing could cause leadership upheaval instead of leadership stability. With leadership upheaval, teachers are influx which can lead to teacher turnover that hurts the continuity in the child’s educational career at the school and is harmful to the student’s achievement (Ronfeldt, Loeb, & Wyckoff, 2013). The central North Carolina school district’s teacher turnover rate has been higher than the North Carolina state average for the past three schools reported from 2012-13 through 2014-15. Currently the teacher turnover rate for the school district is 18.31% compared to 14.84% for the state of North Carolina (North Carolina Department of Public Instruction, 2015d).

Third, the central North Carolina school district’s overall performance is still below the North Carolina state average and to compete against other school districts in North Carolina for

Table 8

*School District Feeder Pattern Cohort Performance from Grade Five to Grade Six*

Feeder Pattern	Cohort	Grade Level		Difference
		Grade Five	Grade Six	
East	Sixth	57.9	37.5	-20.4
	Seventh	62.4	38.6	-23.8
West	Sixth	55.2	41.1	-14.1
	Seventh	43.7	37.1	-6.6
Central	Sixth	36.6	39.4	2.8
	Seventh	46.4	37.7	-8.7

*Note.* Adapted from results of district data from the 2013-14 through the 2015-16 school years. Performance data is based on the GLP of the cohort (North Carolina Department of Public Instruction, n.d.a).

not only recognition, but to demonstrate to potential families that the school district is one worth enrolling their child(ren) in, the central North Carolina school district must continue to enhance instruction to promote student success. The central North Carolina county the school district is located has seen an overall population growth of 4.47% and is the twenty-sixth fastest growing county in North Carolina based on county population changes between 2010 and 2014 (North Carolina Budget and Management, 2014a). The county is currently described as having a medium growth rate within the state (North Carolina Budget and Management, 2014b). The town located in the southwest part of the county that the “West” high school feeder pattern is located is the 54<sup>th</sup> fastest growing municipality between 2010 and 2014. The neighboring municipality that crosses into the southwest portion of the county is 40<sup>th</sup> on that same rankings list (North Carolina Budget and Management, 2014c). In addition to the increase growth in the central North Carolina county the school district is also facing an increase in students leaving the school district to attend public charter schools. As of the 2015-16 school year, 9.5% of the students living in the county attend public charter schools. This was an increase of almost 1.5% from the previous school year (North Carolina Department of Public Instruction, 2016b). This means families are deciding to move into the county because of its proximity to a major North Carolina city and want their child(ren) to have the best possible educational experience.

Fourth, the current student performance on North Carolina’s End-of-Grade assessment demonstrates that results in mathematics has improved a small amount in the past three years (North Carolina Department of Public Instruction, n.d.a). This deficit in student mathematics performance is detrimental to students having future opportunities to be successful in school and beyond high school graduation (Allensworth & Easton, 2005). Students who continue to have academic difficulties early on in their educational career leads to the development of behavior

problems (McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008). In the central North Carolina school district, the behavior problems at the high schools has increased over the last two school years. The short-term suspension rates of students increased by two students per one hundred between 2013-14 and 2014-15 in grades nine through thirteen (North Carolina Department of Public Instruction, n.d.b).

### **Data Coaching to Improve Student Performance**

Today's schools are expected to raise student test scores which is driving schools to renovate school instruction (Honey et al., 2005, Sharkey & Murnane, 2006; Wayman, 2005; Yeh, 2005). Schools cannot rely on just student test scores at the end of the year to make instructional changes (Halverson, 2010). Schools must have the capacity to use data throughout the school year to improve student learning.

Instructional practices in the classroom have not caught up to the rigor of assessments being given to students (Marzano & Toth, 2014). Teachers need feedback on the student benchmark results to help improve instructional practices and fill in the gaps between current student performance and the student performance necessary to demonstrate proficiency on student benchmark assessments and on the North Carolina End-of-Grade assessment.

### **Principals as Data Coaches**

Supporting principals on how to coach and support teachers as they manage multiple sources of feedback is an important endeavor for the study to implement. First, understanding the significance of principal feedback and the effective use of student assessment data for learning is essential. The principal must understand why their feedback to teachers is imperative when teachers receive student benchmark data results. Second, the development of a feedback protocol for principals to utilize with teachers when teachers are analyzing student benchmark assessment



results enables the principal to consistently reinforce the highest priority instructional activities. The feedback protocol will give structure to the feedback session using the work of Sadler (1989) and Hattie and Timperley (2007). Sadler's work found three elements of effective feedback by collaboratively developing: (a) a goal for the teacher to reach, (b) an understanding of where his or her class is currently performing on the data, and (c) how the teacher can move from his or her current performance to his or her desired goal. Hattie and Timperley's work focused on how feedback can be used to enhance learning. Finally, teachers can use the principal feedback to improve upon their instructional practices in the classroom. The ability to provide meaningful feedback that has an impact on student performance is very important for principals as they move their schools forward and prepare students to meet the college and career ready standards established (North Carolina Department of Public Instruction, n.d.c).

The current use of student benchmarks has increased the need for a better understanding of student performance data and how to analyze it. Principals must be interacting with their teachers to discuss and analyze student assessment data to increase student performance. Principal feedback and the use of a protocol when discussing student performance results with teachers becomes essential as more districts set out to improve principal leadership that is transformative, especially in regard to utilizing student performance data to improve teacher instruction and student performance.

### **Research Questions**

The essential question that will guide the research in addressing the role principals' play in providing feedback to teachers to improve student performance is, do structured principal feedback sessions with teachers on student benchmark data improve overall student assessment performance? My research will attempt to answer the following questions:

1. Did individual student performance on student benchmarks improve with teachers who received structured principal feedback?
  - a. Did individual student projected achievement levels improve between benchmark 1 and benchmark 2?
  - b. Did individual student projected achievement levels improve between benchmark 2 and benchmark 3?
  
2. Did the overall student performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve for schools whose teachers received structured principal feedback?
  - a. Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment improve from the projected achievement level on benchmark 3?
  - b. Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve from the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment achievement level performance at grade five?
  
3. Did individual student performance in mathematics at grade six demonstrate greater improvement from teachers who received structured principal feedback (RSF) over teachers who did not receive structured principal feedback (NRSF)?
  - a. Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 1 and benchmark 2?

- b. Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 2 and benchmark 3?
4. Did the behaviors of the Transformational Feedback Model have an impact on the principal and teacher?
- a. Did the level of trust between the principal and teacher improve?
  - b. Did feedback from the principal become more personalized for the teacher?
  - c. Did the relationship between the principal and teacher improve?
  - d. Did teacher self-esteem about their student's performance improve after feedback conferences?
  - e. Are teachers able to adjust their instruction based on the principal feedback?
  - f. Did teachers receive feedback from the principals that supported their established goals for the student benchmark?
  - g. What do teachers learn from the principal feedback sessions that support instructional improvement?

### **Study Design**

The design of this study will use Creswell's (2003) mixed method design approach using a concurrent triangulation strategy where both quantitative and qualitative data collection is integrated for analysis and compared to determine the results. The study will include two middle school principals from the central North Carolina school district. The principals will work with their two grade six mathematics teachers to provide feedback on student benchmark results. Each

school is from one of the two feeder patterns “East” and “West” described earlier in this chapter. The two principals will be given student benchmark data reports focused on each teacher’s results in grade six mathematics. The student benchmark data provided will be a combination of reports developed by the student benchmark vendor TE-21 and by the researcher.

The central North Carolina school district is administering student benchmarks provided by the third-party vendor, TE-21 named Case 21. The school district provides TE-21 the district pacing guide for each grade level and subject. TE-21 develops three Case 21 student benchmark assessments for each subject and grade level with a North Carolina End-of-Grade or End of Course state assessment for the school district based on the times during the school year the school district requests to administer the assessments. The student benchmarks are based on the same technical specifications found on the North Carolina End-of-Grade and End-of-Course tests. Each student benchmark increases in length and number of questions. The first student benchmark is based solely on the curriculum taught from the first day of school until the end of the first nine weeks. The first student benchmark is administered the week after the first nine weeks grading period for the school. The second student benchmark is administered after the end of the second nine weeks grading period and covers the curriculum taught to that point in the school year. TE-21 gives the Case 21 benchmarks more emphasis on questions on the curriculum from the district pacing guide taught to students during the second nine weeks grading period. Seventy percent of the student benchmark questions are on curriculum objectives covered by the district curriculum pacing guide from the second nine weeks grading period and thirty percent covers the curriculum objectives on the district pacing guide from the first nine weeks grading period. The final student benchmark is given within a month of the North Carolina state testing

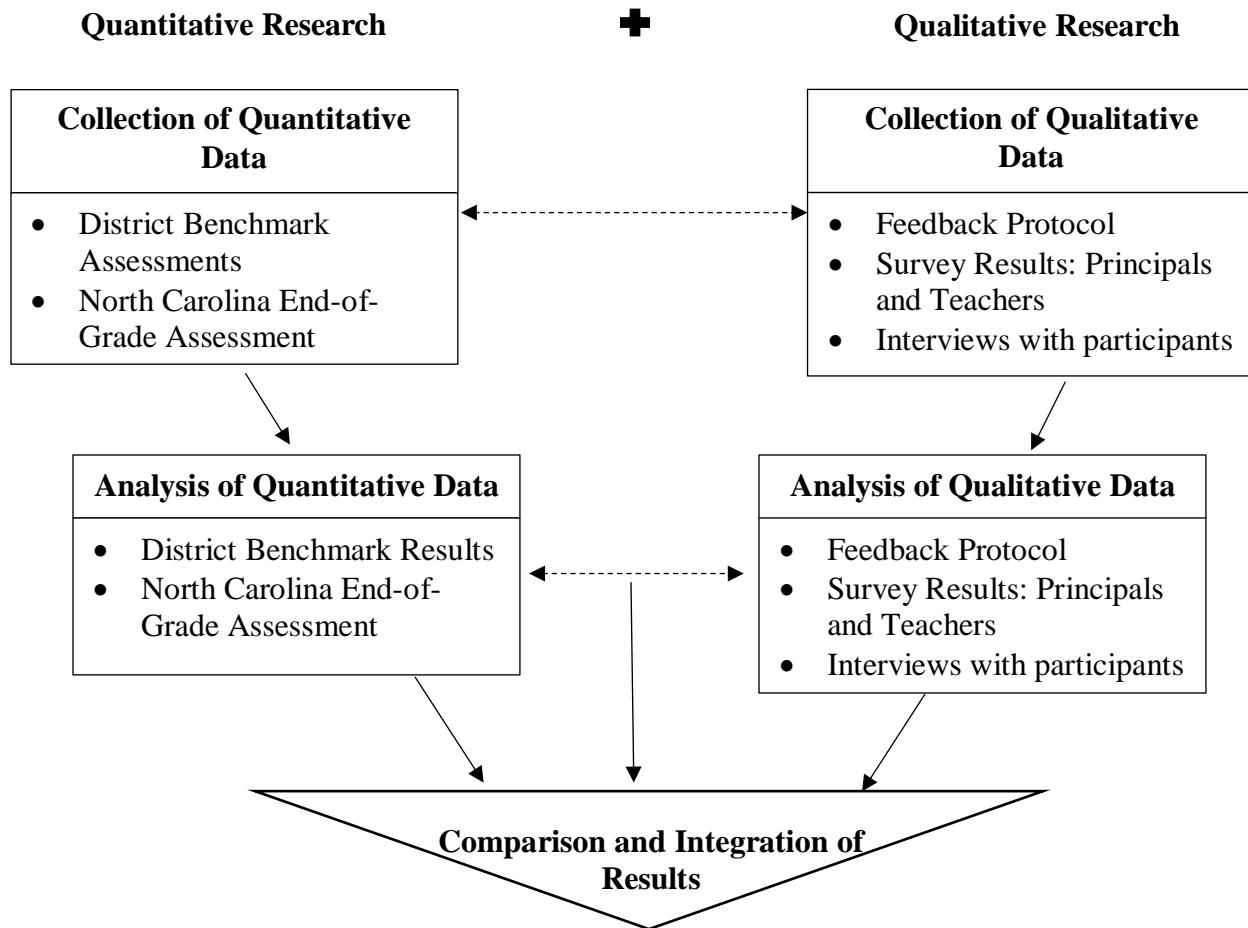
window that occurs in the last ten days of the school year (North Carolina General Assembly, 2016) and covers the entire North Carolina curriculum for the subject/grade level.

The student benchmark reports included in the teacher feedback conferences will be class performance reports for the current benchmark, comparison data to previous student benchmark performance, item analysis on each student benchmark assessment question, and item analysis on the curriculum objectives covered on the student benchmark assessment. Each principal will use a feedback protocol designed for this study to guide the feedback conversation with the teacher using the data reported on the student benchmark. As aforementioned, the protocol is modeled after Sadler's (1989) and Hattie and Timperley (2007) work respectfully. Copies of the principal feedback protocol with the notes from the principal will be provided to the teacher at the end of the principal feedback session. These principal feedback sessions will take place within a week of the student benchmark data being received by the principal. After each principal feedback session, both the principal and teacher will complete a survey reflecting on the feedback conference. At the end of the school year the teachers and principals will be interviewed separately to find out what they thought of the feedback and its impact on the instruction in the classroom and on student performance.

Data collected from the student benchmark performance reports, the feedback protocol used in each conference, surveys completed afterwards by the principal and teacher and exit interviews after the study will be analyzed and compared to answer the research questions of this study. Figure 3 outlines the study design.

### **Improvement Outcomes**

The outcomes of this research study are to show the impact of effective principal feedback on student performance using student benchmark assessments in grade six



*Note.* Triangulation Strategy being implemented for the problem of practice this study will address. Adapted from Creswell (2003) Concurrent Triangulation Strategy

*Figure 3.* Study design.

mathematics. Understanding the role principal feedback has on the use of student benchmark assessment results will be valuable in developing a culture of continuous improvement using student performance data within the central North Carolina school district. The five outcomes of the research study will be:

- (a) Principals in the participating school district will have a structured feedback protocol that facilitates effective conversations between principals and teachers when reviewing student assessment performance.
- (b) Improve the student's projected achievement level on each benchmark.
- (c) Improve student achievement level performance on the North Carolina End-of-Grade assessment from grade five to grade six in mathematics.
- (d) Improve teacher understanding of how to use student benchmark assessment data to improve the instruction in their classroom.
- (e) Improve communication between the principal and teacher that promotes:
  - a. personalized feedback
  - b. emotional exhilaration in the teacher
  - c. accomplishments made by the teacher in the classroom

### **Expected Findings**

Principals using student benchmark data with teachers to promote student achievement is very important in the central North Carolina school district being researched in this study. The school district has invested an estimated \$88,000 to support student achievement through student benchmark assessments (see Appendix H). Principals need to understand how to be able to use the student assessment data collected on student performance to have structured, timely

conversations with teachers to discuss the student assessment data and to develop a road map to improve student performance results on the next student benchmark assessment.

This research study is expected to yield improved student performance on student benchmark assessments in a student's projected achievement level and a student's performance achievement level on the North Carolina End-of-Grade assessment. In addition, the study should bring to light how the overall feelings the principal and teacher each express individually after the feedback conference improved the teacher's overall well-being as it relates to job satisfaction.

### **Definition of Terms**

*Feedback.* To guide and tutor teachers towards the realization of the established learning goals, motivate and foster self-explanation, self-regulations, and self-evaluation (Chi, deLeeuw, Chiu, & Lavancher, 1994) regarding their performance or understanding (Hattie & Timperley, 2007).

*Student Benchmarks.* Assessments given throughout the school year to give teachers feedback on how students are performing as it relates to the standards established in the content area and/or grade level (Coffey, 2009).

### **Summary**

When student benchmarks were implemented during the 2015-16 school year, principals in the participating school district were not provided direction by the school district on how to specifically use student benchmark data results with teachers effectively. Benchmark conversations that did take place between principals and teachers lacked guidance, structure, and focus necessary for effective feedback. Providing direction to principals on effective use of



student benchmark data results that gives guidance, structure, and focus through feedback is vital to improvement in student performance and in teacher instruction.

Principals play a critical role in the quality of a school's academic program (Bryk et al., 1998). The need to study the area of principal feedback as it relates to student benchmark assessment results is valuable to the school district because after the success in year one on the North Carolina End-of-Grade and End-of-Course assessment using the student benchmark assessments, the school district is still three points below the North Carolina state average. The school district is not competitive with similar districts as it relates to demographics and socio-economic status. The superintendent has established a goal for the 2016-17 school year that all schools in the district will have a performance score of sixty or higher on the current school performance model (G.S. 115C-83.15) used by North Carolina's General Assembly to grade schools in the state of North Carolina.

Two of the four schools in the school district which have never reached a performance score of sixty under the current School Performance Grade model are the two middle schools that will participate in the study which will focus on grade six mathematics. The last two student cohorts to complete grade six mathematics demonstrated a decrease in performance at both the state and district level. If the district is to be competitive with similar districts and perform above the overall state average, the behavior of the principal interacting with student benchmark data as it pertains to teacher instruction must be addressed.

The literature review in chapter two will illustrate the importance of the principal delivering feedback to teachers using the transformational leadership characteristics. Two theoretical frameworks are used to anchor the literature review and are at the core of the study. These two frameworks are the formative feedback system (Halverson, Prichett, & Watson, 2007)

and transformational leadership (Bass & Avolio, 1995). Blending the characteristics of transformational leadership with feedback on benchmark results will hopefully yield improved student performance.

These two frameworks along with a mixed method study collecting and analyzing both quantitative and qualitative data will be used to answer the established research questions and outcomes of the study. Data collection will take place over the 2016-17 school year using three student benchmark assessments given by the schools in the district. Final analysis will include data collected on the grade six North Carolina End-of-Grade assessment to determine the impact principal feedback has on student performance.

## **CHAPTER 2: REVIEW OF SUPPORTING SCHOLARSHIP**

Chapter one discussed the need to support principals as they conference with teachers on how to effectively use student benchmark assessment data to increase student performance. Chapter two will describe the literature behind the frameworks of transformational leadership and formative feedback and how they relate to the context of the study. The literature review will summarize, the theoretical frameworks on feedback including the work of Halverson, Prichett, and Watson's (2007) formative feedback system, and the transformational leadership framework by Bass and Avolio (1995). These frameworks will inform and anchor the methodology that will be used to conduct the research. Utilizing the two frameworks to anchor the literature has allowed the development of the Transformational Leadership Model (TLM). A further explanation of the TLM is found at the end of the chapter.

Other theoretical perspectives are discussed and borrowed from within the literature and have relevance to the overall body of work. These perspectives include, but are not limited to, Feedback Intervention Theory (Kluger & DeNisi, 1996), Goal Setting Theory (Locke and Latham, 1990), Hierarchy of Human Needs (Manslow, 1943), Self-Determination Theory (Deci & Ryan, 2000), and the Teacher Performance-Motivation Theory (Blasé, 1982).

### **Testing and Accountability in North Carolina**

Testing has been a part of the public-school system since the nineteenth century, but the use of accountability to hold students, teachers, principals, and school accountable has only become a recent phenomenon (Ravitch, 2002). The concept of testing and accountability comes from the work by Edward L. Thorndike who wanted education to be measured based on the principles of science to improve the professional practice of teaching (Ravitch, 2002)

In the state of North Carolina, Governor James B. Hunt in 1977 turned to testing and accountability to promote equality in schools using minimum competency tests like the California Achievement Test (Baker, Myers, & Vasquez, 2014). During the 1980s North Carolina raised graduation requirements, began administering North Carolina end-of-course tests in core subject areas in high school, and writing assessments. North Carolina stopped administering the California Achievement Test in 1992 and started administering the North Carolina End-of-Grade tests in reading and mathematics to all students in grades three through eight (Baker et al., 2014).

By 1995, the North Carolina General Assembly requested from the State Board of Education a plan for public schools that included higher accountability standards. Out of the plan came the ABCs of Public Education where schools would be held accountable for student performance (Blue Ribbon Commission on Testing and Accountability, 2008). In 2012, the READY Accountability Model was introduced in North Carolina. The new model followed the implementation of the new Standard Course of Study that included the Common Core State Standards for English Language Arts and Mathematics. In the fall of 2014, brought the North Carolina General Assembly's A-F School Letter Grades to the public to communicate the performance of each school in North Carolina (North Carolina Department of Public Instruction, 2012).

### **The Principalship**

The origins of the principalship began in the early 1800s. As schools became larger a new position was created, the "principal teacher" (Kafka, 2009). In the beginning, the principalship involved taking attendance, having authority over the other teachers, and maintaining the school grounds (Pierce, 1935). In Pierce's research on the history of the principalship, he noted the

principal's importance going back to 1884, when the superintendent of the Chicago school district declared the principal as "the prime factor in the success of an individual school" (p. 39). The superintendent of the St. Louis schools in 1930 who echoed similar thoughts of the Chicago superintendent when he declared:

The principal is regarded as the executive head of his school. He stands in the line of authority, and every element of local school control is exercised through him. Corollary to this fact the principal is the responsible agent in the school for all phases of management and instruction. It is the business of the principal to secure the best possible educational results and to do this with the utmost efficiency (Pierce, p. 56).

Research on the principalship began in the 1930s with only a few scholars as it related to its origins (Kafka, 2009). Today, literature is abundant as it relates to the principalship (Bryk et al., 1998; Fullan, 2006; Leithwood et al., 2004; Levin & Datnow, 2012; Supovitz & Klein, 2003). Shin, Slater, and Backhoff (2012) discussed the importance of principals today, when they noted that school leadership is responsible for improving student performance results. Researchers previously determined the principal has an important role in improving student performance indirectly within a school (Leithwood & Jantzi, 2005; Scheerens, 2012). Leithwood, Harris, and Hopkins (2008) said "there is not a single documented case of a school successfully turning around its pupil achievement trajectory in the absence of talented leadership" (p. 29).

Leadership is essential as it relates to student performance. Davis and Darling-Hammond (2012) found principals are second only to teachers in their effect on student learning. Quin, Deris, Bischoff, and Johnson (2015) noted the importance of principals in the era of accountability when they concluded that achievement and growth of students is an expectation. In schools today, principals are expected to use student data to justify their decisions and inform decision making (Ladd, 1996). The principal, to meet these expectations, must be a

transformational leader who builds relationships for change, communicates effectively, creates a shared vision, and establishes expectations of their staff to improve instruction which will lead to improved student success.

### **Supervision within the Principalship**

School improvement and effective schools cannot happen without strong leadership (Edmonds, 1979). Supervision of instruction by the principal can be found in the literature from the early twentieth century (Power, 1919) that detailed a plan for principals to use when observing teachers and giving feedback. The principalship includes a variety of tasks that must be accomplished. Those tasks include setting the direction for the school, securing resources, observing teachers (Griffith, 2004), and improving instruction on the curriculum (Leithwood, 2005).

Supervision by the principal at its core is working with teachers on specific ways to improve instruction and student performance which has been defined as “supervision of instruction” (Glanz & Behar-Horenstein, 2000). Glanz, Shulman, and Sullivan (2007) concluded in their study with regards to supervision that it is “purposeful, targeted, and central to school wide instructional initiatives” (p. 23). The Wallace Foundation (2012) determined through their research, five practices that are vital to effective school leadership: (1) setting the vision, (2) creating a healthy school climate, (3) building leadership capacity, (4) improving instruction, and (5) managing the school environment to nurture school improvement.

Principals who practice effective supervision must understand the characteristics and skills quality teachers must exhibit along with knowing the instructional strategies and practices proven to work to promote student achievement (DiPaola & Hoy, 2008). This is important

because Leithwood et al. (2004) noted that “successful leadership can play a highly significant- and frequently underestimated-role in improving student learning” (p. 3).

### **The Principal as a Change Agent**

Effective principals must establish a vision and have the leadership knowledge and skills necessary to lead change and innovation (Thompson & McKelvy, 2007). The principal as the instructional leader of the school must make the quality of instruction the priority. The quality of instruction should reveal itself in the vision the principal has for the school (Ozdemir & Sezgin, 2002). If the principal is going to be successful at leading change, they must understand the ability to change involves learning. The principal must encourage teachers to take risks and be willing to adventure into the unknown as it relates to their instruction. Without this encouragement from the principal, change will not take place in the school (Evans, 2001; Buchanan, 2007). Understanding how change takes place is not going to lead to change. The principal must understand the relationship between vision, creativity, and connection to ensure that continuous growth will lead to change (Land & Jarman, 1992).

An effective leader “catalyzes commitment to a compelling vision and higher performance standards” (Collins, 2001, p. 20). Fullan (2001) called the principal of the future “the Cultural Change Principal” who must see the big picture as it relates to transforming an organization. Lunenburg and Ornstein (2004) stated, “the school principal has been cited as the most influential person in promoting school reform, change, and innovation” (p. 375). Fullan (2002) noted that having innovative ideas and having knowledge of the change process is not the same. For the principal to understand change, Fullan established the following guidelines: (1) innovate selectively, (2) leaders help others assess and find meaning and commitment, (3) leaders can’t avoid the early difficulties of trying something new, (4) successful leaders don’t

worry about people being resistant to the change, (5) transforming a culture means changing what people value and how they work together in the organization, and (6) it takes hard work every day to change the organization. This follows along with Leithwood et al. (2004) three basics of successful leadership: (1) setting directions, (2) developing people, and (3) redesigning the organization.

### **Establishing Relationships for Change**

Principals initiating change understand the difficulty of building relationships (Hay Management Consultants, 2000). The focus on relationships builds a foundation for year two and beyond (Fullan, 2002). Fullan went further in the importance of relationship building when he suggested that leaders who can motivate and energize teachers can make a lasting effect on the overall outlook of the organization.

Change has either a positive or negative effect on people's feelings (Armenakis, Harris, & Mossholder, 1993; Lines, 2005) and the attitudes that come from those feelings play a vital role in the ability of goals in the organization being accomplished (Faghihi & Allameh, 2012). The principal's behavior holds influence over a teacher's attitude when change is taking place (Pidert, 2000) and is vital during the implementation of change (Fullan, 1996). This means the principal must fill the role of facilitator and supporter (Hoy & Miskel, 2001). This supportive relationship is most likely going to lead teachers to accept the change (Boomer, Rich, & Rubin, 2005; Park & Jeong, 2013).

### **Establishing a Shared Vision for Change**

The vision must be clear, so it can be understood, effective, and accepted (Locke et al., 1991; Nanus, 1992). Shared vision contains two essential components that lead to a shared direction for the organization. Those components of a shared vision are: attributes and content



(Kantabutra, 2012). The attributes of a shared vision are inspiring, strategic, and focus on the future. Kantabuta (2012) summarized the research on the characteristics of a shared vision. Those characteristics are “brevity, clarity, future orientation, stability, abstractness, and desirability or ability to inspire” (p. 1,162). The shared vision’s content must provide an image. Kotter (2012) described vision as creating a picture of what the future could become. Kotter further described the vision as key to the transformation of the organization.

Developing a shared vision between the leader and follower is significant for an organizations improvement (Kantabuta, 2009; Senge, 1990). Principals must have a long-term vision of the school because it gives them direction and a greater outlook of the organization (Farrell, 2015). Farrell (2015) elaborated on the benefits of the long-term vision saying it enables them “to deal with day to day operations as he/she knows what is important so that minor situations do not deter or frustrate the leader” (p. 122). Leaders can influence student learning by promoting a vision that supports teachers and focuses on the best instruction possible as it relates to teaching and learning (Leithwood & Reihl, 2003).

### **Establishing Communication for Change**

Communication is critical for planning change (Lewis, Schmisser, Stephens, & Weir, 2006; Marques, 2010) and the foundation for leadership that is successful (Tyson, 2006). Change fails when there is poor communication within the organization (Elving, 2005; Kavanagh & Ashkanasy, 2006). When an organizations communication is effective the desired actions from the people inside the organization occurs (Elving, 2005; Schweiger & DeNisi, 1991).

Communication to stakeholders about change is important because change is participative (Barbour, Jacocks, & Wesner, 2013). When the principal is leading change, they must ensure readiness in the organization (Holt, Armenakis, Field, & Harris, 2007; Stevens, 2013).

“Readiness focuses on the purpose and content of communication between change agents and organizational members” (Campbell, Carmichael, & Naidoo, 2015). Campbell, Carmichael, and Naidoo organized effective communication by change agents into three areas. Effective communication must be ongoing, have dialogue between all parties, and be credible. Van Dam, Oreg, and Schyns (2008) added the dialogue regarding change efforts needs to be communicated in a timely manner. This reduces the uncertainty and anxiety and increases trust with the leader (Tucker, Yeow, & Viki, 2012).

### **Establishing School Expectations and Culture for Change**

The key to increasing student performance is to establish expectations that are clear (Rosenholtz, 1985; Supovitz & Poglinco, 2001). These clear expectations come from establishing a vision and academic goals that are clear (Hallinger & Heck, 1998; Katterfield, 2013; Murphy, 1990; Supovitz, Sirindes, & May, 2009). Those clear goals by the principal provide teachers with “a tangible representation of what effective instructional planning and delivery looks like...an instructional portrait they can work toward” (Supovitz & Poglinco, 2001, p. 4).

Change cannot happen without the obligation of the followers (Bennis, 2000). Employees must be committed (Neubert & Cady, 2001; Robinson & Griffiths, 2005) for change to occur. Committed employees must come to the realization that the organizational change will improve their work and that their own professional goals align with the organization’s goals (Coatsee, 1999; Fedor, Caldwell, & Herold, 2006).

The obligation for change happens because of the important role norms play in the interactions within an organization. Norms reduce doubt, set standards, and establish suitable behaviors (Leo & Wickenberg, 2013). Leo and Wickenberg noted the research of Hechter and

Opp (2001) regarding how change agents must challenge old norms and transmit new norms for the organization to move forward.

### **Feedback**

The purpose of feedback is to provide direction to achieve or maintain a high level of performance (Dean, Hubbell, & Pitler 2012). Narciss et al. (2014) research explained the importance of feedback when they concluded that feedback provides information about the current state of knowledge to improve learning. The information provided in feedback must address the direction to improve learning and gives specific guidance on strengths and weaknesses (Black & Wiliam, 2010). If feedback is going to be given in the way Black and Wiliam describe, the receiver of the feedback must be able to interpret and be responsive. Their interpretation and responsiveness is based on their own personal attributes, tensions, fear, confidence, and reasoning processes (Eva et al., 2012; Mann et al., 2011; Sargeant et al., 2010; van der Leeuw, Slootweg, Maas, & Lombarts, 2013).

Feedback is crucial in facilitating improvement (Sargeant et al., 2010). If left to oneself to improve, the teacher will judge themselves as achieving proficiency while learning from experiences declines (Eva, 2009; Eva et al., 2012). Feedback guides and tutor learners, in this case teachers, towards the realization of the established learning goals, motivate and foster self-explanation, self-regulations, and self-evaluation (Chi et al., 1994). Feedback to teachers supports the growth of effective educators (Mielke & Frontier, 2012). When principals provide feedback to teachers on student assessment results, the feedback must focus around the practices of assessments for learning, data-driven decision-making, improving instructional performance of the teacher, and alignment of the curriculum and instruction. Feedback must make the student

assessment and the student assessment data meaningful to the teacher because feedback is found to be fundamental for expertise to be gained (Ericsson, 2004).

Feedback is not uniform in how it is used or in its concept. When it comes to feedback it is when, how, and who is giving the feedback that matters the most (Kluger & van Dijk, 2010; Shute, 2008). The reason for its importance is that any feedback given is interpreted through the receiver's filters that include their views on instructional practices, the feedback provider, and the receiver's own abilities, along with what motivates the receiver individually, their fears, and their own expectations (Kennedy, Regehr, Baker, & Lingard, 2009; Stewart, 2008). Eva et al. (2012) suggested that based on Kruger and Dunning's (1999) work that feedback is necessary, but does not have to be part of the receiver's self-concept to influence change in their behavior.

Hattie and Timperley (2007) developed four levels of feedback. Those four levels are; task, process, self-regulation, and self. The most powerful of the four levels is feedback about the task. Hattie and Timperley state that for feedback to be most effective, it needs to move from task feedback to processing feedback, and then from processing to self-regulating feedback.

Principal feedback given to teachers must maintain confidence in the teacher based on the study by Eva et al. (2012) and previous work done by Bandura (1997) and Teunissen et al. (2007) focusing on self-efficacy and value of positive feedback. Eva et al. concluded that for better or worse, it is important to consider how feedback is received and the data is interpreted. Eva et al. (2012) noted in their research that feedback is an emotional experience for the receiver and the conflict they must balance between is wanting to improve and the fear of "looking stupid" (p. 23).

Principals must understand when giving feedback, the teacher may desire feedback, but at the same time not wanting the feedback by avoiding or discounting the feedback as valuable

(Gilbert & Wilson, 2000). There are two ongoing internal battles within a person concerning feedback as defined by Mann et al. (2011): (a) wanting the feedback, but fearing disconfirming information, and (b) understanding the need for feedback, but struggling to do so because it goes against one's self-appraisal. Mann et al. (2011) also found that even feedback that was of value to the receiver was difficult for them to hear, accept, and use to improve. If the feedback is disconfirming, Mann's team found the receiver had to move past the emotional reaction of the feedback before they could accept the feedback. The principal must understand this dynamic before they begin giving feedback to the teacher. For feedback to be trustworthy, the principal must give feedback that is "interpretable and palatable" (Eva et al., 2012, p. 25) through the lens of the teacher's perceptions and allows them to maintain their self-concept (Eva et al., 2012).

Brookhart and Moss (2015) discussed the three lenses with which feedback should be viewed. Those lenses are: (1) the micro view, (2) the snapshot view, (3) the long view. These three lenses allow the principal to take a step back before they provide the feedback to the teacher. The micro view describes if the feedback will be beneficial in supporting the teacher's learning. The principal needs to ask themselves a few questions when they look at the feedback from the micro view: Is the feedback descriptive? Is it timely? Does it contain the right amount of information? Does it compare to an established criteria? Is the feedback positive and clear? and Is the feedback specific? The snapshot view focuses on how does the feedback foster learning for both the principal and teacher. The long view helps decide what the next steps will be for the teacher. At the end of a feedback conference the teacher should have a clear understanding of what they should be doing to improve their instruction.

## **Feedback Challenges**

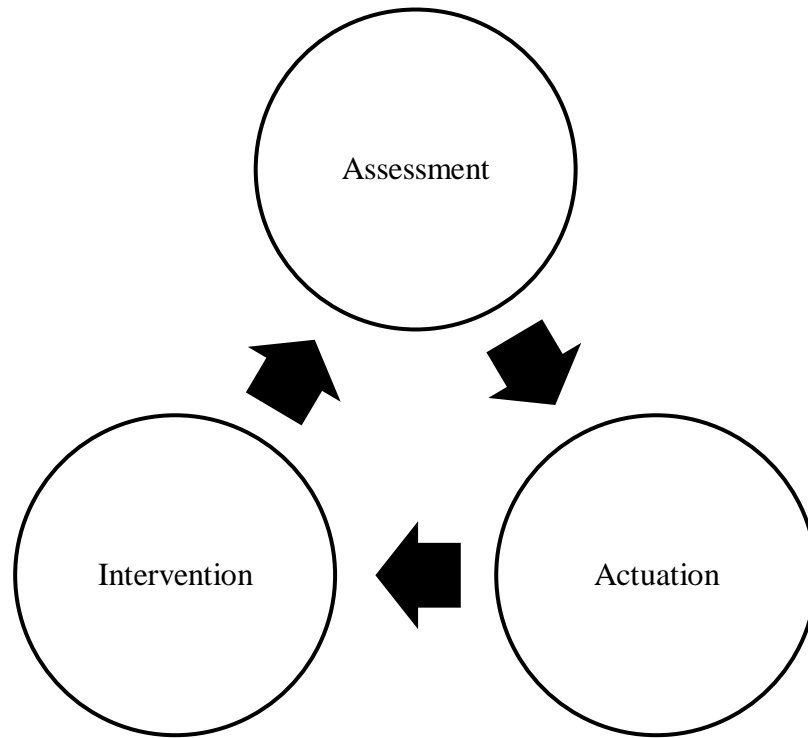
Kluger and DeNisi (1996) argue that it is not just negative feedback that could cause no improvement to occur in performance. They call feedback interventions a “double-edged sword” (p. 275) because it is not consistent in its ability to increase performance. Their research led to the development of their Feedback Intervention Theory. As highlighted in other research, if feedback is threatening to one’s self-esteem the chances of it improving instruction diminishes. Kluger and DeNisi also acknowledged in their research that if feedback includes the correct solution then feedback has a positive effect on the outcome.

This “double-edged sword” as described by Kluger and DeNisi (1996) about feedback is valuable and something principals should pay close attention to when they provide feedback to their teachers in one-on-one conferences. Feedback that threatens or appears to threaten will be lost on the teacher. Effective feedback gives details on how to improve, not just that the teacher is doing good or bad in the classroom (Pridemore & Klein, 1995).

## **Feedback Systems**

Halverson et al. (2007) developed a formative feedback system for educators to use to engage with the student performance data. This feedback system links the efforts of the teacher to the expectations in the classroom. The feedback system Halverson et al. developed is one of the two theoretical frameworks being utilized in the methodology to guide this research study. Instituting a feedback system, the teacher is given “accurate, incremental, and actionable measures of student learning and behavior directly linked to the units of practice most meaningful to classroom teaching and learning” (Halverson, 2010, p. 131).

In schools, the formative feedback system (see Figure 4) facilitates the understandings from the classroom to the school as a whole by providing information about teaching and



*Note.* Feedback Framework System is one of the two frameworks anchoring the literature review. Formative feedback system model Adapted from Halverson (2010).

*Figure 4.* Formative Feedback System.

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learning with three distinct functions; (a) information signals that measure student performance in terms of an intervention, (b) develops sensor and processing functions to assess information signals, and (c) identify controllers that could actuate the new information in order to adjust the instruction (Halverson, 2010).

Interventions is the method principals and teachers use to guide student learning. This includes curriculum materials that support teachers in the classroom to promote learning.

Assessments are the sensor in the system that helps understand which information is received from the student. Actuation is how the principal and teacher come to understand and react to the intervention established for student leaning (Halverson, 2010).

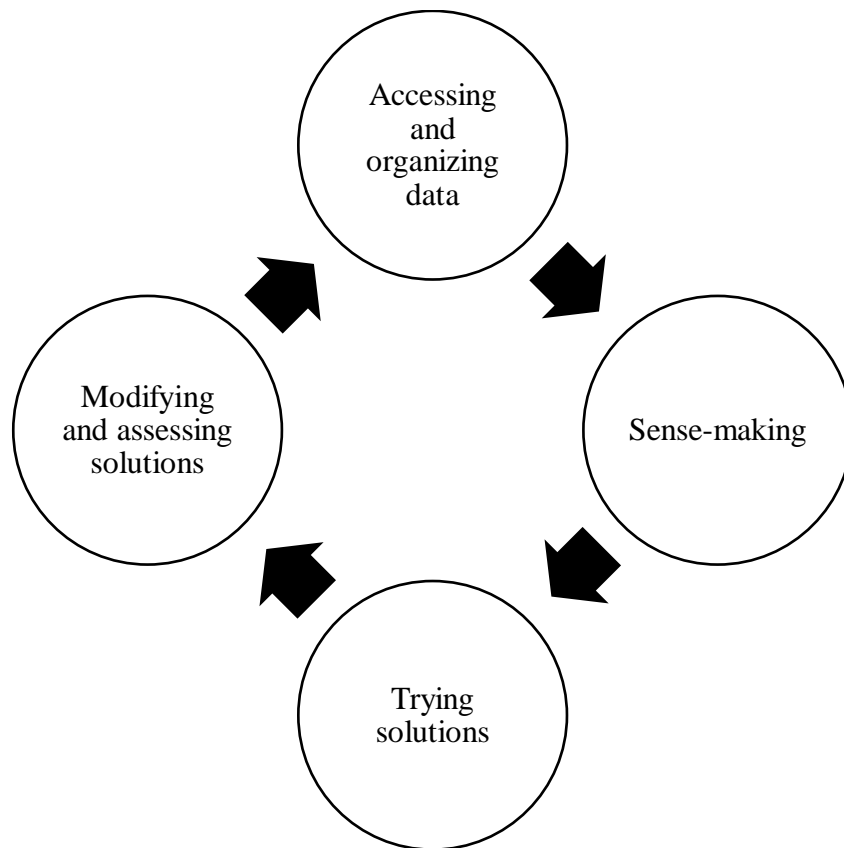
Blanc et al. (2010) used the work previously discussed by Halverson et al. (2007) in their own study with regards to a feedback system by focusing on smaller tasks when engaging in data to provide feedback. These smaller tasks are called “microtasks”. These tasks include displaying data and formulating questions. Their model of the feedback system with regards to assessment for learning includes (a) accessing and organizing data, (b) sense-making to identify problems and solutions, (c) trying solutions, and (d) modifying and assessing solutions (see Figure 5).

This enhanced framework by Blanc et al. (2010) that built upon the framework first developed by Halverson et al (2007) demonstrates how important the understanding of the concept of assessment for learning is for both the principal and the teacher prior to student benchmark testing.

### **The Practices of Feedback**

Feedback is made up of four practices as mentioned in chapter one. Those practices are assessments for learning, data driven decision making, instructional improvement, and





*Note.* Microtask Feedback system for engaging with data. Adapted from Blanc et al., (2010).

*Figure 5.* Microtasks of the Formative Feedback System.

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curriculum and instructional alignment. The four practices are the anchor to the feedback protocol principals will use to deliver the feedback to teachers.

### **Assessments for Learning**

The purpose of formative assessments in schools should determine what students should know to improve instruction and support reteaching (Stiggins & Defour, 2009). Christman et al. (2009) noted that to get greater use of the core curriculum, more work from schools was needed to respond instructionally to benchmark results.

Blanc et al. (2010) found that assessments will contribute to improved student performance if leaders use the assessments to “promote data-driven decision making within a school culture focused on strengthening instruction, professional learning, and collective responsibility for student success” (p. 206). The qualitative analysis of the study by Blanc et al. determined that benchmark data was most likely to improve instruction when principals focused on developing structures for teachers to be able to interpret the student benchmark results. To strengthen a teacher’s ability to improve student performance, the teacher must be a part of the process to change how they go about instruction.

Feedback is only effective when it is given during the process of analyzing student performance data. Providing teachers with feedback after each student benchmark allows the assessment to be used to improve instruction (Popham, 2008). Feedback helps to modify the learner’s understanding and purpose of assessments, which is to improve learning (Shute, 2007).

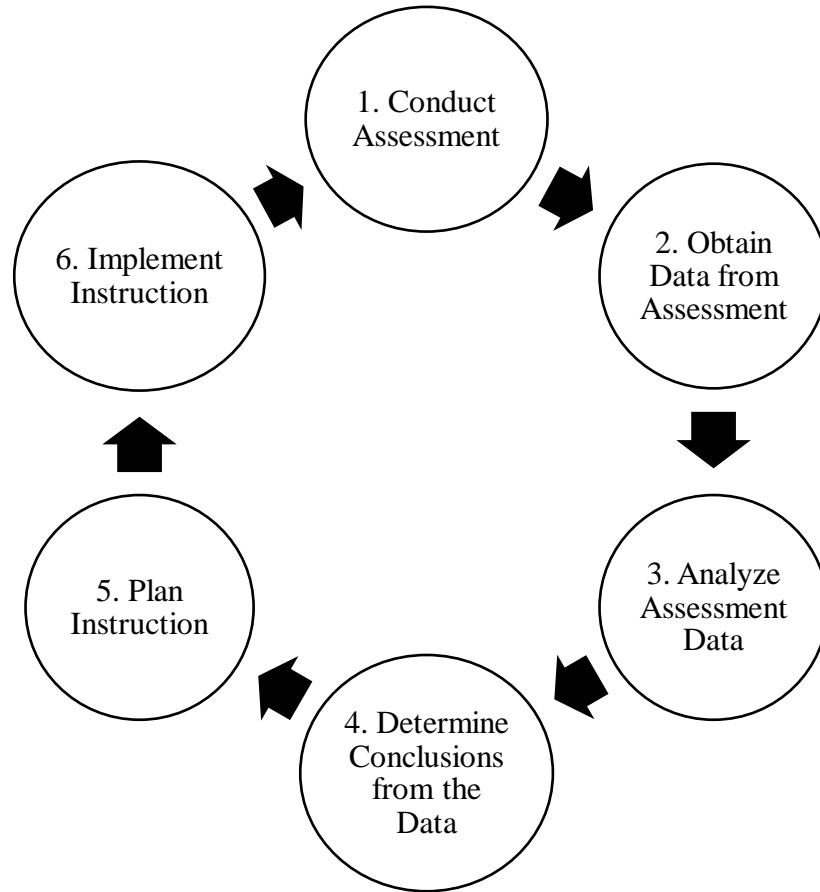
### **Data-Driven Decisions**

The use of data in giving feedback is valuable. The principal must understand how influential the teacher’s own interpretation has on the data. Noted in their research, both Earl and

Fullan (2003) and Saunders (2000) discussed that principals lack the knowledge necessary to have a clear view of how data feedback can influence the improvement of student performance. Saunders suggested that principals must be able to combine enthusiasm and the ability to put things in perspective when it relates to data.

A school leader must have the capacity to enable conversations based on data (Earl & Katz, 2006). Visscher and Coe (2003) made the argument that only schools that possess the capacity can use data and the feedback given to facilitate improvement. Earl and Katz (2002, 2006) determined three capacities for leaders using data: (1) development of an inquiry habit of mind, (2) being data literate, and (3) creating a culture of inquiry. These three capacities are necessary to use the data from student assessments to give teacher feedback. Van Petegem and Vanhoof's (2004) research determined six ways principals can better use data: (1) information has to be perceived as relevant by teachers, (2) data has to be understood, (3) teachers need to be able to make comparisons, (4) teachers need to know how to use the data, (5) teachers need to feel non-threatening when working on improvement, and (6) data needs to be gathered for the purpose of feedback. These findings align with the data-driven decision-making discussed over thirty years ago by Popham, Cruse, Rankin, Sandifer, and Williams (1985) which demonstrated that when instructional plans from the teacher are aligned with student needs, because of student assessment data, then the probability is there for the desired learning goals to be reached.

This data-driven decision-making model (DDDM) is made up of six tasks and comes out of the Easton's (2008) Cycle of Inquiry. The tasks that make up the DDDM are: conduct the assessment, obtain the data, analyze the data, determine conclusions, plan instruction, and implement instruction (see Figure 6).



*Note.* The six tasks making up the Data-Driven Decision-Making Model. Adapted from Easton’s (2008) Cycle of Inquiry.

*Figure 6.* Data-Driven Decision-Making Model.

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Data has been found to create a “culture of inquiry” as stated by Earl and Katz (2002). The problem many educators face when using data is the lack of time to analyze, engage with the data (Ingram, Louis, & Schroeder, 2004), and the results being of quality (Lachat & Smith, 2005).

In addition to time, based on the research done by Lochmiller (2016) there has not been much research completed with regards to feedback from data as it pertains to student assessments from subject content. Currently most research has used data collected by principals during observations to determine what instructional decisions need to be made.

For student performance data to be used to make data driven decisions, researchers have found that principals must have the decision-making authority to make decisions for the school based on the data (Datnow, Park, & Kennedy, 2008; Wohlstetter, Datnow, & Park, 2008). This authority is seen in the ability of the principal to work with the teacher to make the instructional improvements as they see necessary during and after the feedback session.

### **Instructional Improvement**

The primary responsibility of a principal is to improve student performance by improving teachers’ instructional practices (Heck & Moriyama, 2010; Robinson et al., 2008). Research has shown that principal leadership has a significant impact on a teacher’s instructional performance (Coldren & Spillane, 2007; Hallinger, Bickman, & Davis, 1996; Hallinger & Heck, 1998; Leithwood et al., 2004; Marks & Printy, 2003; Supovitz, Sirinides, & May, 2009). The feedback given by the principal with regards to instructional improvement must include modeling, inquiry, and praise (Lochmiller, 2016). Feedback assists in instructional improvement in the classroom. If given correctly by the principal, feedback should help teachers make determinations on their delivery of the content they are teaching (Sergiovanni & Starratt, 2007).

If teachers are knowledgeable about their content area, the better they are at supporting student understanding (Sanders, Borko, & Lockard, 1993). The content knowledge of the student is directly affected by the content knowledge of the teacher (Han, Cetin, & Matteson, 2016). Therefore, feedback from the principal must be timely, focused, and directly on the subject content taught by the teacher.

If a principal neglect to give meaningful feedback to improve instruction, teachers do not value the communication which causes disconnect as it relates to student learning (Feeney, 2007). A communication breakdown when feedback is being given will lead to a continued misalignment between curriculum, instruction, and the assessment. For principals to foster instructional improvement, an effective way to achieve this is to empower the teacher to make instructional decisions they believe will benefit the student (Blasé & Blasé, 1999).

### **Curriculum and Instructional Alignment**

The quality of instruction by the teacher is the best predictor of student learning (The National Research Council and the Institute of Medicine, 2004). Alignment to the curriculum ensures that instruction is following the content that is covered on assessments (Squires, 2012). Instructional alignment is one of the three vital signs of high-quality instruction according to Early, Rogge, and Deci (2014), who defined instructional alignment as the teacher providing the students content on time and on target for what they need as stated by the state standards and student assessments. Polikoff (2012) noted “instructional alignment is the mediating variable between the policy of SBR [standards-based reform] and the outcome of improved student learning” (p. 341).

In the current state of school accountability, the current standards are the instructional targets for teachers. If one of the purposes of assessments is to reinforce the content that is to be

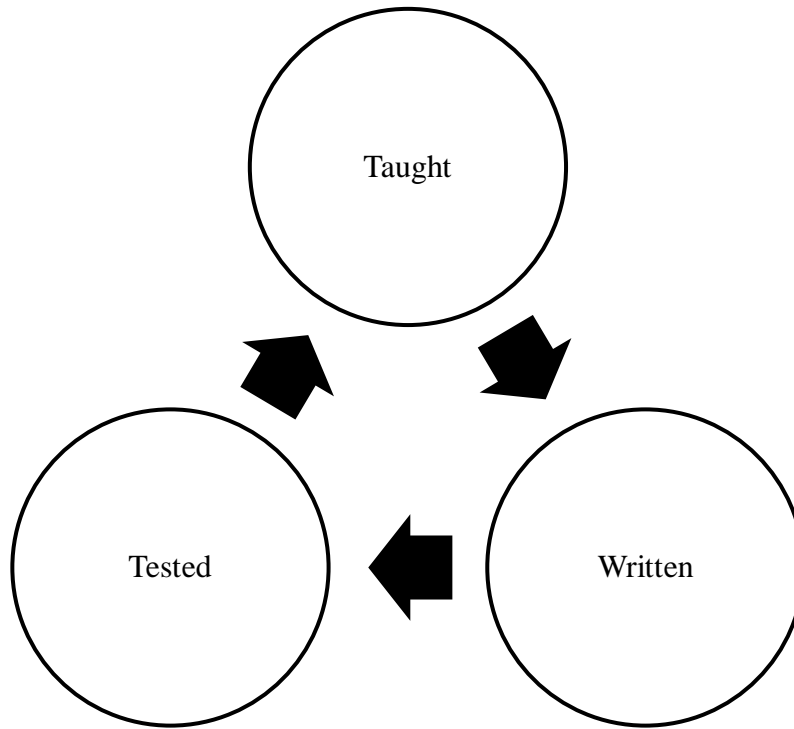
taught, then instructional alignment to the assessment should have a high correlation. The content signals the importance of what must be taught (Polikoff, 2012). When both are aligned then an agreement (Squires, 2012) has taken place. Schools where support is given regarding curriculum materials was found to reduce teacher stress while energizing and making the teachers satisfied with their jobs. (House, 1981; Singer, Marx, Krajcik, & Chambers, 2000).

There are three components of curriculum in English's (1992) alignment matrix. These components are the written, the taught, and the tested (see Figure 7). The written is the curriculum published by the state, the taught is the instruction provided by the teacher, and the tested is the assessments provided locally or by the state.

Squire's (2012) research outlined what a district needs to establish to maximize alignment. Regarding aligning to the curriculum, the recommendation was that activities performed in a classroom should align to multiple standards. The structure of the curriculum should be viewed as "tasks" that make up the objective and that only the important ones are listed to help guide teaching. Next, Squire recommended that a management system should be in place to make sure the curriculum is taught. The final part to maximize alignment is to use a standardized common assessment.

### **The Four Actions of Feedback**

Four actions are demonstrated when feedback is given by the principal. These four actions are: relationship for change, communicate effectively, create a shared vision, and establish expectations/school culture. The actions of feedback are what sets the overall direction and goal the principal is establishing for the school.



*Note.* Aligning the assessment to the curriculum and to instruction in the classroom. Adapted from Squire (2012) version of English's (1992) Alignment Matrix

*Figure 7.* Curriculum Alignment Matrix.

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## **Relationships for Change**

Even though leadership behaviors have an indirect effect on student achievement, Boberg and Bourgeois (2016) cited Bandura's (1993) research on social cognitive theory of motivation when they stated that leadership behaviors do have a direct effect on teacher motivation and behaviors. Although student performance is indirectly affected by principals, Bandura's research found that leaders can directly influence teacher's goal-directed actions.

When school leaders create a supportive environment, Bandura (1993) determined that teachers are more often going to act, innovate and try to reach specific goals when they believe in themselves. Leithwood and Jantzi (2006) found teacher's willingness to commit to improvement and trying new teaching strategies are correlated with the school leader's ability to demonstrate transformational leadership behaviors.

For a principal to provide feedback to change outcomes, they must understand they cannot overlook the attitudes teachers have regarding change (Beer & Nohria, 2000; Clegg & Walsh, 2004). Fullan (2007) made the point in saying that for change to occur in teachers, their involvement in the process is critical. Principals must understand the attitudes teachers will have towards the change taking place (Robbins & Judge, 2012). These attitudes will play a significant role in whether the goals established are reached (Faghihi & Allameh, 2012).

Principals must provide facilitative and supportive roles when they are coaching teachers with feedback. Hoy and Miskel (2001) determined this issue of coaching teachers to be a vital role played by principals. Receiving the support of the principal will allow the teacher to accept the change (Bommer, Rich, & Rubin, 2005; Park & Jeong, 2013).

## **Communicate Effectively**

Wong and Nicotera (2007) stated “educational leaders are critical to the process of improving student performance with educational accountability by preparing themselves to provide teachers with the necessary knowledge and skills to make significant improvements” (p. 39). Marques (2010) went further by saying communication within the organization is critical as it relates to the success of the organization. For principals to provide teachers with the necessary knowledge and skills they must have the ability to communicate to teachers. Stated by Cherian and Daniel (2008) and echoed by Aslanargun and Bozkurt (2012), communication by principals to teachers is important when creating a successful educational environment. Schulte, Slate, and Onwuegbuzie (2010) found communication as one of its major themes in surveys collected on teachers regarding the characteristics that make an effective school principal.

As stated earlier in this review, building a relationship between the principal and teacher is vital. Tyson (2006) concluded that communication is at the heart of successful leadership. Effective leadership must include both the relationship and the development of a “collective goal” (Chemers, 2008, p. 376) for work to progress (Chemers, 2008; Robinson, 2001). Communication by principals has been found to be one of the best exhibited behaviors when it comes to motivating teachers (Leithwood, Steinbach, & Jantzi, 2002).

Communication between a principal and teacher can be done in many ways (Young & Castetter, 2004). One of those is through one-on-one feedback conferences that ensure clarity, intent, and do not allow for any part of the communication to be misconstrued (Sarbaugh-Thompson & Feldman, 1998). This is vital, based on literature brought to light earlier in this chapter. The principal must share feedback that is direct and provides the teacher a task to perform (Pridemore & Klein, 1995). Helmer, Holt, and Thompson (2015) concluded that

principal communication effects campus morale as it relates to teacher perceptions. The method the principal chooses to communicate to teachers along with the teachers' perceptions of student academic success are of great importance.

In the feedback conferences with teachers, principals must understand that each teacher comes with their own perspectives. It is the job of the principal to effectively communicate to ensure the teacher understands what they need to do to improve student outcomes through their instruction and what they as the principal can provide as additional support because of the student benchmark data (Burns, 1978).

### **Create Shared Vision**

“The principal is tasked with the responsibility to set the vision and effectively communicate why it is important and establish a direction for the future” is how Helmer et al. (2015, p. 18) described the importance of establishing a vision for the school. Lievens, Van Geit, and Coetsier (1997) addressed the importance of a transparent vision by saying that it is the priority of a leader to inspire people to pursue the vision. A principal's ability to affect performance outcomes is tied to the school's vision and goals (Hallinger & Heck, 1998; Katterfield, 2013; Murphy, 1990; Supovitz et al., 2009). This is the reason Tracey and Hinkin (1998) noted that one of the things that makes up the four components of transformative leadership is inspiring a shared vision of the future. Power by the leader is displayed and impacts followers through the vision (Bass, 1984).

A vision that is transformative has the potential to be very important for an organization (Kose, 2011). It promotes new possibilities and a compelling vision for the future (Tucker & Russell, 2004). Kose (2008) stated that effective principals can leverage a school's vision to improve hiring practices, curriculum development, professional learning, and school

improvement. The development of the shared vision allows transformational leaders to achieve extraordinary results as stated by Abu-Tineh, Khasawneh, & Al-Omari (2009).

If teachers are going to change and align with the principal's vision they need to know how it will benefit themselves and students (Kose, 2011). Teachers must be inspired along with the encouraging of their heart by the leader in their building (Kouzes & Posner, 2009). In turn, followers are empowered by the signals the leader sends regarding their capacity to achieve that vision (Eden, 1992). Therefore, providing effective feedback to the teacher will assist principals as they communicate their vision of the school.

Kouzes and Posner (2009) built upon their earlier work when they stated that a shared vision motivates teachers to make informed decisions regarding instructional practices. Quin et al. (2015) research supported the findings of Senge (2008) that found a joint vision will encourage acceptance with regards to change efforts from the principal.

### **Establish Expectations and School Culture**

Once teachers know and understand the vision of the principal they must understand the principal's expectations. A leader accomplishes this task by providing them the encouragement and inspiration needed to attain the goals of the organization (Quin et al., 2015). This sentiment was echoed in research conducted by Supovitz and Klein (2003) concerning the benefits when school's breakdown the goals into quarterly expectations that guide the school as the teachers reached their goals.

Blanc et al. (2010) noted in their research that principal expectations made some staff feel uncomfortable, but acknowledged and respected the principal's commitment to students. Establishing clear expectations about instruction is considered key to increasing student learning (Rosenholtz, 1985; Supovitz & Poglinco, 2001).

Katterfield's (2013) research organized expectations established by principals into three areas; supervision of instructional practice, instructional expectations, and conceptual framework. Principals must discuss challenges with the teacher's instructional practices, provide teachers information to improve instruction, and encourage teachers to use different instructional strategies (Bamburg & Andrews, 1991; Fink & Resnick, 2001; Katterfield, 2013; Leithwood & Montgomery, 1982). When principals establish instructional expectations that are clear, they are giving teachers what Supovitz and Poglinco (2001) called "a tangible representation of what effective instructional planning and delivery looks like...an instructional portrait they can work toward" (p. 4).

The culture of the school must be purpose driven for sustained vitality to be reached (Holloman, Rouse, & Farrington, 2007). Principals influence performance by determining the school's learning-focused mission, structures, and culture to serve the mission (Hallinger, 2005). The role of the principal as the school leader is to "nurture and sustain a culture of collaboration, trust, learning, and high expectations" (Council of Chief State School Officers, 2008, p. 14).

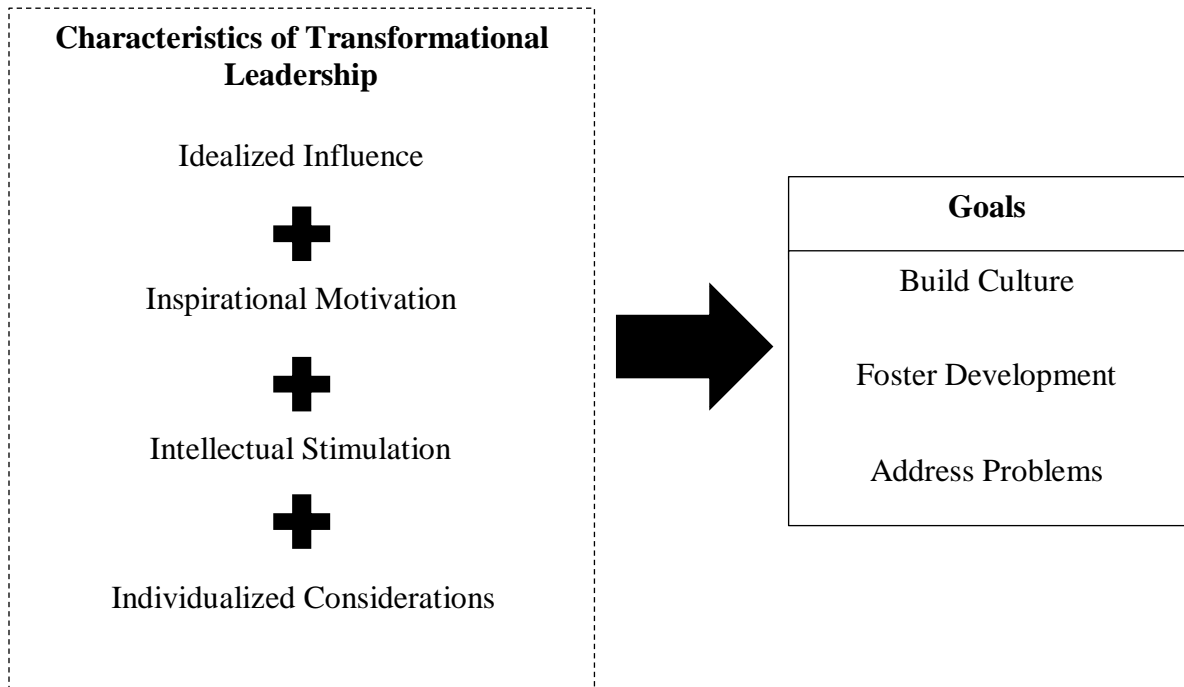
If principals and teachers are going to work to improve student performance they both have a crucial role to perform. Prior research shows that feedback is an important aspect when it comes to improving student performance, but how exactly does a principal go about providing the feedback to teachers in a way that promotes student performance. The feedback needs to improve teacher understanding of how the assessments are used for learning, support data-based decision making, ensure the alignment of instruction to the curriculum, and help teachers know how their instruction in the classroom must improve. The transformational leadership model can help accomplish these tasks.

## **Transformational Leadership**

Transformational leadership is an effort that meets the needs and helps lead followers to an advanced level of work performance and organizational involvement by displaying respect and encouraging participation (Burns, 1978). Bass (1985) determined that transformational leadership is made up of four categories. The four categories are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. The work on transformational leadership first began with Burns, continued with Bass and Avolio, and has been expanded upon by other researchers most notably Leithwood. Transformational leadership is the second framework being utilized to drive the methodology of this research (see Figure 8).

The principal must be a transformational leader who provides feedback that is influential, motivating, stimulating, and individualized. A transformational leader motivates teachers to change, improve, and be led (Balyer, 2012; Northouse, 2001). Transformational leadership has also been defined as the ability to increase commitment, capacity, and engage in meeting goals (Bass & Avolio, 1997; Balyer, 2012; Chew & Chan, 2008; Den Hartog, House, Hanges, Ruiz-Quintanilla, & Dorfman, 1997; Geijsel, Sleegers, Stoel & Kruger, 2009; Jung & Avolio, 2000; Kreitner & Kinicki, 1998; Leithwood & Jantzi, 2006; Marks & Printy, 2003; Yammarino, Spangler & Bass, 1993).

Leithwood (1992) summarized transformational principals as having three fundamental goals: (a) helping staff members develop and maintain a collaborative, professional school culture; (b) foster teacher development; and (c) assisting the staff in solving problems together more effectively. This leadership model influences the teacher's commitment to change, expectations, goal setting, intellectual stimulation, communication, supportive leadership, and



*Note.* The four characteristics of the transformational leadership framework. Adapted from the works of Bass (1985), Bass and Avolio (1995), and Leithwood (1992)

*Figure 8.* Transformational Leadership Framework.

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personal recognition (Balyer, 2012; Chew & Chan, 2008; Gronn, 1995; Leithwood & Jantzi, 2006; Leithwood et al., 2004; Nemanich & Keller, 2007).

Boberg and Bourgeois (2016) built upon the research previously done by Silins, Mulford, and Zarins (2002) and ten Bruggencate, Luyten, Scheerens and Slegers (2012) that transformational leadership influences student performance through the behaviors of the teacher and the engagement of students. Griffith (2004) found that transformational leadership behaviors have a positive, indirect effect on student achievement and engagement.

Transformational leadership is closely linked to positive organizational outcomes (Avolio, Waldman & Yammarino, 1991). Leaders who engage in transformational leadership have employees who are happier (Bono & Judge, 2003; Judge & Bono, 2000) and more committed to their organization (Podsakoff, MacKenzie & Bommer, 1996).

### **The Four Characteristics and Behaviors of Transformational Leadership**

A transformational leader possesses four characteristics; idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1984). A leader influences staff by motivating and inspiring them to achieve the goals of an organization (Bass & Avolio, 1995). Each characteristic should be identifiable when feedback is provided to the teacher by the principal.

#### **Idealized Influence**

Transformational leaders influence followers to transcend self-interest for the greater good to achieve higher performance and achieve more than they thought possible (Arnold, Turner, Barling, Kelloway & McKee, 2007; Bass, 1984; Bass, 1999; Bono & Judge, 2003). The influence a transformational leader has on an organization's culture can be seen in the employees who work in the organization (Tucker & Russell, 2004). Antonakis, Avolio, and



Sivasubramaniam (2003) characterized idealized influence as the degree to which the leader is admired, respected, and trusted that appeals to followers on an emotional level and actions that are consistent with ethics, principles, and values.

There is a connection between the influences a transformational leader exhibits and a leader who demonstrates servant leadership. Like the idealized influence of a transformational leader, servant leadership is built on the leader putting their own self-interests to the side to improve and build-up the people in the organization (McCuddy & Cavin, 2008). Collins (2001) described a level five leader as one who is a servant leader. In Collins view, the servant leader has a transformative power that lifts an organization to greatness. Greenleaf (2002) determined that a servant leader must ask the following question to determine their own success as a leader, “Do those who are served grow as persons; do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants?” (p. 27).

Boberg and Bourgeois (2016) noted that transformational leaders who prioritize instructional improvement can improve student learning. Their study questioned how a transformational leader’s behaviors could influence student achievement. In their findings, Boberg and Bourgeois confirmed that transformational leaders have an influence on student achievement. Their results revealed considerable improvements over earlier student achievement in transformational leadership models (Marks & Printy, 2003; Robinson, Lloyd, & Rowe, 2008; Scheerens, 2012). Boberg and Bourgeois (2016) state “principals can influence student emotional engagement and achievement by fostering their teachers’ collective capabilities and optimism about their roles in their students’ lives” (p. 370).

Students who do not feel teachers have the support of their principal will become emotionally disengaged (ten Bruggencate et al., 2012; Boberg & Bourgeois, 2016). They go

further to say that principals must give more attention to the engagement of their teachers both emotionally and cognitively if they hope to influence student performance. Influence from leaders has a positive affect when it is promoted by honesty, loyalty, and fairness (Bass & Steidlmeier, 1999). These values strongly influence the affective, attitudinal, and behavioral responses of individuals (Meglino & Ravlin, 1998; Rokeach, 1973). By stating the most important values and beliefs; the leader can emphasize the importance of the moral and ethical consequences of key decisions, in their own beliefs to influence the stakeholder's values (Groves, 2013). According to Sosik (2005), as expressed in Groves research, transformational leaders build shared values with their followers through "displaying behaviors that reflect the cherished values of the followers," as well as by 'shifting followers' values into alignment with the leader's personal values" (p. 224)

The influence a principal has on a teacher through feedback can be divided into two distinct areas within the area of idealized influence as a part of the overall idea of transformational leadership and principal feedback. Those two areas are goal setting and create meaning.

### **Idealized Influence and Goal Setting**

Transformational leaders influence followers by motivating and inspire them to achieve organizational goals (Bass & Avolio, 1995). Bandura's (1993) study as stated earlier in this literature review found leaders can influence goal-directed actions. If these goals are supportive to the environment, then teachers are more likely to act, innovate, and persevere toward those goals that have been set. Goal setting is an important strategy for building a culture of shared leadership (Newman, 2012). Goal setting that is challenging and difficult rather than "do your best" has a significant impact on employee motivation and results in higher performance

(Latham & Yukl, 1975; Locke, 1968). Marsh and Farrell's (2015) work found the goal-setting process prevalent in the schools they studied showing how school leaders can support teachers with data-driven decision-making.

Goal setting to improve student performance is an essential step in the feedback process. Principals must build unity around these goals and make it the responsibility of all teachers to build a culture in the school where all teachers are engaged and ensure collective ownership for success or setbacks (Spillane, Diamond, & Jita, 2003; Spillane, Halverson, & Diamond, 2004). When principals and teachers are goal setting they are focused on teaching and determining the learning priorities (Newman, 2012). The ownership of the goal otherwise known as goal commitment must be present to increase student performance. Commitment to the established goal can only be present if the goal is difficult, but attainable (Hollenbeck, Klein, O'Leary, & Wright, 1989). Hollenbeck et al. (1989) found in additional studies that with a higher level of commitment to the established goals, individuals identify strongly with the work they are performing. Spillane, Halverson, and Diamond (2004) pointed out that ensuring the ownership of the goal(s) by the teacher allows the leader to practice more effectively and efficiently. Locke and Latham (2002) stated that goals are directive and focus attention on the behaviors necessary to reach the intended goals. The increase attention allows the teacher to keep the goal in mind as they plan lessons and work directly with students (Locke & Bryan, 1969).

### **Idealized Influence and Creating Meaning.**

To help with goal setting and motivation the leader must demonstrate the ability to help teachers create meaning behind the data. Teachers need to be able to imagine the future outcomes by being motivated and inspired by the transformational leader (Bass & Avolio, 1995). Motivation by an individual is the primary focus of Locke and Latham's (2002) Theory of Goal

Setting. Earl and Fullan (2003) found that schools who gather and summarize relevant data can use it to make decisions. It will also allow these schools to be more at ease with interpreting and applying the data. If school leaders are going to be comfortable with interpreting data so teachers can create meaning from the data, teachers must be given as many opportunities as possible to interact with it (Murray, 2013). Holloman et al. (2007), quoted Fullan (1991, p. 48) as saying that “meaning fuels motivation; know-how feeds on itself to produce ongoing problem solving.”

Setting goals and creating meaning for what a teacher is doing in the classroom because of feedback provides teacher motivation and reduces unnecessary stress for the teacher. Two of the three areas of a stressed teacher are emotional exhaustion and a reduction in a sense of accomplishment. When teachers become emotionally exhausted they no longer experience positive feelings about their work which leads to a deterioration of their practice in the classroom (Maslach, 1978). A principal who understands the idea of motivation in their approach in giving feedback to a teacher promotes vitality within the teacher and energizes their work (Malik & Macintosh, 2015).

### **Inspirational Motivation**

Idealized influence and inspirational motivation are key to a leader’s ability to formulate and articulate the shared vision of the leader (Dionne, Yammarino, Atwater, & Spangler, 2004). Burns (1978) referred to motivation as one of the three main domains of a follower’s development. Recent studies have shown a connection between transformational leadership and employee motivation (Judge & Piccolo, 2004). Hersey and Blanchard (1996) said transformational leaders manifest passionate inspiration which empowers followers and intensifies motivation (Masi & Cooke, 2000).

Followers of transformational leaders show a level of energy not found in non-transformational leaders (Congor & Kanungo, 1988) and selectively increase motivation that leads to increase commitment to the vision and mission (Shamir, House, & Arthur, 1993). Leaders who demonstrate this practice of increase motivation are leaning on the self-determination theory work of Deci and Ryan (2000) that focuses on human motivation and the desire of people to grow and realize their own potential. Dutton (2003) found that positive relationships can have an energizing effect on individuals, boost moral (Dutton & Heaphy, 2003), and facilitate learning and growth (Dutton & Ragin, 2006). This commitment leads to an increase in internal motivation that replaces infrequent extrinsic incentives (Srithongrung, 2011). For an employee to be motivated by their work, the mission they are undertaking must be meaningful (Rainey & Steinbauer, 1999). This idea of the importance behind the mission was also backed in the work by Goodsell (2012) who noted the importance as it pertained to recruiting, retaining, and motivating employees. Two areas in which transformational leaders should be promoting inspirational motivation is through the idea of vitality and energizing connections.

### **Inspirational Motivation and Vitality**

Vitality is a central source for life in all living organisms (Malik & Macintosh, 2015). Clark, Boyer, and Concoran (1985) described vitality as “essential yet intangible positive qualities of individuals and institutions that enable purposeful production” (p. 3). More recent research has defined vitality in the workplace as a spirited behavior as it relates to life both mental and physical (Kark & Carmeli, 2009), the possession of enthusiasm, compassion, dedication, vigor, creativity, and regeneration (Baldwin, 1990). Ryan and Bernstein (2004) concluded vitality as “a dynamic phenomenon, pertinent to both mental and physical aspects of

functioning and thus refers to a person who is vital as; energetic, feeling alive, and fully functioning” (p. 274). If a school is to have sustained vitality, it is the responsibility of the principal to set the tone. If the principal has not formulated the purpose of the school, failed to maintain integrity, and lack personal character, then teacher burnout increases which undermines the entire school’s vitality (Holloman et al., 2007).

### **Inspirational Motivation and Energizing Connections**

For employees to experience vitality in the workplace they must experience a heightened feeling of energy that is called Energizing Connections (Dutton, 2003). This experience is developed through professional relationships. In a study, Gersick, Bartunek and Dutton (2000) found these professional relationships are more important in the lives of educators than in other professions. Malik and Macintosh’s (2015) study confirmed that the development of energizing connections has an important value in creating a sense of vitality which in turn supports a higher level of goal commitment. Malik and Macintosh (2015) went further to say that “by cultivating a socially energizing culture, managers may be able to counter the effects of an increasingly demanding work place” (p. 72). Gorton (1982) described job satisfaction as a person’s ability to meet their needs both personally and professionally as the employee. Littrell, Billingsley, and Cross (1994) found a connection in their study between high job satisfaction and principals offering both emotional and informational support. That support reduced teacher stress and improved teacher commitment.

People, in general, have a desire to want to become all that they can be in life (Maslow, 1943). Teachers need an environment that motivates them. Education, in general, is emotionally and physically taxing on teachers (Kokkinos, 2007). The principal’s responsibility is to establish a culture that provides opportunity whether it is through connections between the teacher and the

principal (Habegger, 2008) or in the teachers' satisfaction about the job they are doing in the classroom with students (Song & Alpaslan, 2015). Teachers can be motivated in their jobs if the environment created by the principal stimulates them professionally through reflective practices and their own self-esteem.

### **Intellectual Stimulation**

When teachers are involved with a variety of professional activities within the school they begin to stimulate their own professional development and the overall development of the school which leads to improvement of the entire school (Smylie & Hart, 1999). Robinson et al. (2008) found that principals of high performing schools have clear standards and give regular feedback to teachers. When done effectively, feedback stimulates reflection and has a positive impact on teachers, which leads to innovative teaching. (Blasé & Blasé, 1999). Teachers who are intellectually stimulated are willing to question old assumptions (Geijsel et al., 2009). Previous research has focused on the professional activities that stimulate teacher learning including reflection and collaboration among others (Kwakan, 2003; Meirink, Meijer, Verloop, & Bergen, 2009). Teachers can receive stimulation in their work through peer interactions in the exchange of feedback (Kohler & Ezell, 1999). When teachers ask for or receive feedback, they receive information that is looking critically at themselves to motivate performance (van Woerkom, 2004). If teachers are going to be stimulated within their jobs, they need the knowledge of how to teach well and how to improve themselves (Cochran-Smith & Lytle, 1999).

### **Intellectual Stimulation and Reflection**

Runhaar, Sanders, and Yang (2010) made the logical connection that if a leader is transformational, they can stimulate teachers to be reflective and to seek feedback. Principals who are instructional leaders provide teachers the opportunity to reflect upon and improve their

teaching that facilitates teacher growth and continuous learning which leads teachers to new insights about their teaching practices (Murphy, 1990; Supovitz & Poglinco, 2001) and decisions (Farrell, 2007, 2013, 2015; Farrell & Jacobs, 2016) through questioning and investigating (Smyth, 1992). Van Manen (1995) defined the process of reflection for teachers as self-examination and continuous learning.

Loughran (2002) concluded that reflection is important and valuable to the cognitive process and has been backed by other researchers (Bode, 1940; Boud, Keogh, & Walker, 1985; Dewey, 1933; Hullfish & Smith, 1961; Russell & Munby, 1992). A school atmosphere that is focused is one that allows for “relentless reflection” (Holloman et al., 2007, p. 438). Farrell and Jacobs (2016) drew on Dewey’s (1933) research revolving around the three most important attitudes a learner must display: being open-minded, responsible, and wholehearted. They stated that effective reflection must be accompanied by a set of attitudes with regards to teachers using reflection.

Marcos, Miguel, and Tillema (2009) summarized and broke down teacher reflection from previous works on the topic as two components that are interwoven: action and thought. This concept is exemplified when the principal comes in to assist the feedback process in the feedback sessions. Strong leaders understand that they must interact with teachers, provide feedback, and stimulate reflection (Colby, Bradshaw, & Joyner, 2002). This idea was echoed in Tuytens and Devos (2010) research where they found feedback during a teacher evaluation stimulated teacher reflection.

### **Intellectual Stimulation and Self-Esteem**

The transformational leader must embrace the role self-esteem plays in using feedback with teachers to insure a positive impact on student performance. Self-esteem is the way a person



perceives and evaluates oneself (Miller & Moran, 2012) and their beliefs about themselves (Myers, 2007). Esteem is one of the five motivations Maslow (1943) described in his hierarchy of needs. Maslow described esteem as two parts; desire for achievement and desire for recognition. In Lohan and King's (2016) review of the literature on self-esteem, they noted Gutman and Schoon's (2013) work on the three variables of non-cognitive learning attributes. Those variables are: self-efficacy defined as the belief in one's ability to succeed, global self-concept which reflects one's perceptions of past achievements, and domain specific self-concept that focuses on one's achievements in an area(s).

Self-efficacy creates a foundation for motivation and commitment (Trentham, Silern, & Brogdon, 1985; Tschannen-Moran & Hoy, 2001) and is a predictor of effectiveness (Reilly, Dhingra, & Boduszek, 2014). Researchers have found that self-efficacy improves job satisfaction (Caprara, Barbaranelli, Steca, & Malone, 2003; Chen, Goddard, & Casper, 2004; Skaalvik & Skaalvik, 2007) for teachers, who are then more likely to feel confident in their ability to reach established goals (Skaalyik & Skaalvik, 2007; Vaezi & Fallah, 2011). The topic of teacher self-efficacy is an important area that has been addressed by the research (Duffin, French, & Patrick, 2012; Woolfolk-Hoy, Davis, & Pape, 2006). High self-esteem is directly related to a person's well-being and happiness (Brown, 1998; Diener, 2000). This confidence in a teacher's own ability leads to happier and more effective teaching in the classroom (Crane, 1974; Schultz & Hausafus, 1982), which leads to teachers having the ability to accurately evaluate themselves (Vukovich & Pfeiffer, 1979).

A teacher's self-efficacy is closely aligned to broad instructional areas, motivation, and performance of students (Caprara et al., 2006; Hoy & Woolfolk, 1993). Teachers with a high sense of self-efficacy will view a student's difficulties as something that can be resolved (Garcia-

Ros, Fuentes, & Fernandez, 2015). This belief in being able to address and accomplish student difficulties was described by Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) as teacher efficacy. To maximize teacher satisfaction, principals need to support teachers in becoming more effective (Song & Alpaslan, 2015).

Runhaar, Sanders, and Yang (2010) found teachers who believed in their ability could deal with the difficulties in their job because of their self-efficacy to be reflective and seek feedback. In addition, their study found a positive relationship between being able to reflect and occupational self-efficacy. The relationship between the principal and teacher is what promotes the effectiveness of reflection on improving instruction (Schon, 1983; McAlpine, Weston, Beauchamp, Wiseman, & Beauchamp, 1999) and the self-efficacy necessary to work through tough times when instruction is not promoting improved performance (Bandura, 1994). Song and Alpaslan (2015) suggested three things to increase teacher satisfaction; (a) providing more curriculum materials, (b) build cooperative relationships, and (c) more professional development opportunities. This relationship between the principal and teacher must be individualized where trust is built and the attention the teacher is receiving is personalized.

### **Individualized Consideration**

Individualizing leadership for teachers is an important aspect to their success in the classroom. A principal's leadership includes impacting instructional practices through individualized efforts to improve instruction and student achievement (May & Supovitz, 2011). The individual learner is paramount in the learning process. In this case, the teacher is the focus of the learner-instructor transaction and is adapted to the individual's characteristics (Gogoulou, Gouli, Grigoriadou, Samarakou, & Chinou, 2007). When individualizing, the transformational leader is using motivational theories that discuss the importance of learner control. This control

gives the learner the ability to make choices, affect outcomes, and experience competence, and evoke sustained and intense effort (Lepper, 1985). Tschannen-Moran and Gareis (2015) noted May's and Supovitz's work when discussing principals individualizing teacher efforts to improve instruction which leads to student performance. A transformational leader must individualize feedback to teachers, so it is personalized and assists in building trust between the principal and the teacher.

### **Individualized Consideration and Building Trust**

Trust is a core component of leadership (Handford & Leithwood, 2013) and the development of trust at work is built by the organization's leader (Creed & Miles, 1996; Fairholm, 1994; Shaw, 1997). Handford and Leithwood (2013) called trust the "lubricant" for most organizational interactions based on the findings of Fukuyama (1995) and Luhmann (1979). Tschannen-Moran and Gareis (2015) noted that trust is increasingly being recognized as an essential element in "vibrant, well-performing schools" (p. 257). Trust is composed of multiple components and dimensions which change based on the nature and importance according to the context, relationship, tasks, situations, and people concerned (Hardy & Magrath, 1989). Building trust takes patience and time (Hoy & Tschannen-Moren, 1999). Although trust does not have one defined definition (Givens, 2008) a common focus has been on interpersonal relationships and the ability to allow oneself to be vulnerable (Mayer, Davis, & Schoorman, 1995). Tschannen-Moran and Hoy (1998) defined trust as "one party's willingness to be vulnerable to another party based on the confidence that the latter party is (a) benevolent, (b) reliable, (c) competent, (d) honest, and (e) open" (p. 334). The transformational leader's ability to build trust is essential in the relationships between themselves and each employee (Butler, Cantrell, & Flick, 1999; Gillespie & Mann, 2000; Podsakoff, MacKenzie, Moorman, & Fetter,

1990; Podsakoff et al., 1996; Simon, 1995). Geijsel, Kruger, and Sleeper's (2010) research concluded that building trust and "creating a joint focus on discovering the relevance of the data" (p. 73) in feedback are two of the learning functions in school improvement.

Trust reduces social complexity (Handford & Leithwood, 2013) and "Schools are fundamentally social institutions that depend daily on the quality of the interpersonal relations with which they are imbued" (Goddard, Salloum, & Berebitsky, 2009, p. 293). Teachers must be a part of the social arena within a school because it is an aspect of the job, are reliant on and must trust other teachers to be effective and reach the goals they have set (Bryk & Schneider, 2002; Forsyth, Adams, & Hoy, 2011; Van Maele & Van Houtte, 2014).

Trust within a school's collaborative culture affects the effectiveness the learning community has on student performance (Byrk & Schneider, 2002; Forsyth, Barnes, & Adams, 2006). Teachers' trust in leaders can be found in student achievement (Bryk & Schneider, 2002), leader-follower relationships (Podsakoff et al., 1990), and citizenship behaviors in the organization (Konovsky & Pugh, 1994; McAllister, 1995). When trust between the principal and teacher occurs, the conditions lead to inspired teachers who produce more effort and achievement (Chughtai & Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Notman & Henry, 2011; Salfi, 2011; Tschannen-Moran, 2003, 2009; Zeinabadi, 2014). As trust builds the job satisfaction of the teacher will increase (Braun, Peus, Weisweiler, & Frey, 2013). Researchers have defined job satisfaction as a person's positive and/or negative thoughts and feelings to their profession (House, 1981; Sunal, Sunal, & Yasin, 2011).

High quality teaching cannot take place in the school environment that lacks trust (Byrk & Schneider, 2002). If the trust between the leader and the employee declines, then hesitation begins to affect the employees drive to take risks which causes them to put up a greater defense

against betrayal and only look out for their own interests (Kramer & Tyler, 1996). Teachers will lose trust in their principal when they think the principal is not competent or reliable when they need resources to improve instruction was how Van Maele and Van Houtte (2014) used to describe the fragileness of trust in the leader-follower relationship. If trust within the organization is not high, the ability to help improve teacher knowledge and skills is diminished (Louis, 2006; Tschannen-Moran, 2001). Tschannen-Moran (2004) found teachers who experience distrust will begin to minimize their vulnerability to the principal which will result in an increase in disengagement.

When trust is present, cooperative behaviors; personal engagement, information sharing, and relying on others are most likely to be present in the organization (Costa & Anderson, 2011; Louis, 2007). Trust is valuable when data is shared because teachers will have a sense of vulnerability (Hallam, Smith, Hite, Hite, & Wilcox, 2015). Without that high degree of trust, teachers may not share valuable information, thus limiting their growth professionally (Cosner, 2011; Goddard, Gooddard, & Tschannen-Moran, 2007; Harris & Jones, 2010; Tschannen-Moran, 2001).

### **Individualized Consideration and Personalization**

A leader who builds trust with their teachers is one who is personalizing their interactions. This idea of personalization is the third factor as it pertains to addressing burnout and eliminating unnecessary stress for teachers. When leaders are using individualized consideration, they are treating their employees according to their individual needs and abilities (Bolkan & Goodboy, 2009). As discussed earlier, the other two factors related to preventing burnout; emotional exhaustion and reduction of personal accomplishments are addressed in inspirational motivation. When a teacher begins to no longer care about students or their own

performance in the classroom they begin to develop the components of a stressed teacher (Maslach, 1978).

A transformational leader personalizes their relationship with the teacher to demonstrate the care and respect they have for the teacher in their school. Karapinar (2015) connected his findings to previous research that found the principal and teacher establishing a relationship that is personalized is needed so they can work together to improve (Hampden-Turner & Trompenaars, 1993; Wasti, Tan, & Erdil, 2011). Learners who experience personalization in their own learning are found to experience greater outcomes and satisfaction from their work (Waldeck, 2007). Teachers who can experience an environment in the feedback session that provides personalization may lead to a stronger focus on improvement (Frymier & Houser, 2000). In addition, having the personal needs of the teacher fulfilled will likely lead the teacher to experience positive results in their classroom instruction (Brann, Edwards, & Myers, 2005; Myers & Bryant, 2004).

### **Transformational Feedback Model**

As mentioned at the beginning of this chapter a new theoretical framework was developed based on the literature review related to the importance of feedback and transformational leadership. This concept is called the Transformational Feedback Model (TFM). Based on the research related to both professional feedback and transformational leadership, this model provides a foundation for principals to use with teachers to give feedback that promotes formative feedback and the transformational leadership characteristics. The TFM can result in supportive relationships between the principals and teachers, improved instruction in the classroom, increases in student performance, and an enhanced culture of transformational leadership among teachers.

The TFM (see Appendix I) allows principals to exhibit those transformational leadership characteristics (individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation) through the four practices of feedback (assessment for learning, data driven decisions, instructional improvement, and instructional alignment) to drive the four actions of feedback (relationships for change, effective communication, shared vision, and establishing expectations and culture to promote improvement in teacher instruction, the principal-teacher relationship, and increased student performance).

This theoretical model is circular because the characteristics, behaviors, practices, and actions circulate around each other. The entire model is anchored by the four characteristics of transformational leadership which is why they are placed outside the circle. The transformational leadership characteristics are initially placed outside the circle because all four transformational leadership characteristics encompass all aspects of the TFM. The outside ring of the TFM are the behaviors associated with the transformational leadership characteristics. Two behaviors are associated with each transformational leadership characteristic. The characteristic and behaviors are as follows: (1) Idealized Influence-goal setting and create meaning; (2) Inspirational Motivation-vitality and energizing connections; (3) Intellectual Stimulation-reflection and self-esteem; (4) Individualized Consideration-building trust and personalization. The transformational leadership behaviors are what the principals should exhibit to the teacher in the feedback conferences. The eight behaviors identified by the literature serve as the foundation to the feedback being given. Principals must model these eight behaviors in their communication with the teachers both verbally and in writing.

The inner ring contains the four practices of feedback. These practices provide specific information to the teacher when feedback is provided by the principal. The four practices are not

specific to any one behavior. Each practice is used when giving feedback to demonstrate the transformational leadership characteristic behaviors. The four practices allow the feedback from the principal to be specific and support the principals' ability to foster understanding with the teacher about what they know, want to know, and need to know.

Located in the four quadrants in the center of the TFM are the four actions addressed in feedback from the principal to the teacher. These four actions are the results created when principals provide feedback to teachers that is transformational. For principals to move a school forward and get the results expected, the teacher needs to know the purpose of the feedback. Feedback begins the process of change in the classroom, allows a shared vision to inform the teacher the direction in which the school is going, communicating effectively with the teacher exactly what needs to take place instructionally in their classroom, and establishing the expectations and culture that supports instructional improvement and student performance.

The TFM is not limited solely to educational leadership. The TFM can be used by leaders and supervisors in any profession to provide feedback to an employee to improve performance. The TFM is adapted for use outside the educational setting. The only difference between the two models are the terms used for the practices of feedback. Appendix J demonstrates the flexibility of the TFM to cross occupational lines and support transformational feedback to improve performance in an organization.

### **Summary**

The principal must provide feedback to teachers for student performance to improve. The principal must exhibit those transformational leadership characteristics of: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration as outlined in the literature. Feedback by a principal must be given to support teachers' understanding that



assessments are for learning, results from the benchmark drive data decision making, lead to instructional improvement, and align the curriculum and instruction being taught. A transformational leader understands the role effective feedback practices has on the instructional supervision of the principalship that is conveyed through the feedback actions of building relationships for change, effective communication, a shared vision, and establishing expectations and culture of a school.

Since the late 1800s schools have been expected and held accountable for student performance in some way, shape, or form. At the same time schools became accountable, the principalship rose to prominence and the principal became the central figure around improving instruction and student performance (Pierce, 1935). This expectation of principals to lead schools that promotes teaching and learning still exists today in the high-stakes area of school accountability at the national and state level (National Association of Elementary School Principals & National Association of Secondary Principals, 2013).

Two theoretical frameworks are the backbone of this literature review. These frameworks are the formative feedback system (Halverson et al., 2007) and the transformational leadership model (Bass & Avolio, 1995). The work of Halverson et al. showed what feedback does when given from one person and received by another. Bass and Avolio broke down the characteristics that are necessary for leaders to lead change and move an organization forward. The aspects of both frameworks give light to the new theoretical model developed for this research study titled the Transformational Feedback Model.

Chapter two introduced the concepts of feedback and transformational leadership and how the two are intertwined as they relate to improving teacher instruction and student

performance. Chapter Three will discuss the mixed method design of the study that will be used to implement the Transformational Feedback Model.

## **CHAPTER 3: METHODOLOGY**

Chapter Two provided the theoretical frameworks and the literature addressing both formative feedback and transformational leadership. The research of both frameworks supports the researchers study design to improve student performance through principal feedback to teachers on student benchmark assessments. This chapter will provide a description of the study as it relates to the purpose, setting, participants, and the innovation called the Transformational Feedback Model (TFM). A logic map is found in this chapter to help the organization of the study followed by the instruments, data collection, and the timeline of the study.

### **Defining the Purpose of the Study**

This mixed method study will address the role principals play in improving student performance through student benchmark data feedback sessions with teachers. An embedded mixed method design will be used for this study, and it is a design in which one data set provides a supportive and secondary role in a study based primarily on the other data set. The primary purpose of this study will be to use student performance data on student benchmark assessments to test the theory of the TFM. Utilizing the four characteristics found in Transformational Leadership, and its corresponding behaviors the principals will influence positive student performance results by giving feedback to teachers focused on the feedback practices: assessments for learning, data driven decision making, instructional improvement, and curriculum and instructional alignment in order to promote the actions of feedback: relationships for change, effective communication, a shared vision between the principal and teacher, and establish expectations and a culture in the school. A secondary purpose of the study will be to gather qualitative data from feedback conferences through surveys given to principals and teachers afterwards that will explore the effects of the TFM on student benchmark performance.

The reason for collecting the secondary database is to determine if the behaviors of the TFM yields improved student performance on benchmarks.

### **Setting and Participants**

This study will take place in a central North Carolina school district. The school district serves nearly 9,000 students and has a total of sixteen schools; eight elementary, four middle school, and four high schools. The demographics of the school district are 31% African-American, 48% Caucasian, 17% Hispanic, 3% Two or More Races, and 1% Other (North Carolina Department of Public Instruction, 2016c). As a district, the percentage of economically disadvantaged students is 57% (North Carolina Department of Public Instruction, 2015a).

For this study, two of the four middle schools in the school district will participate. The two middle schools in this study are located on opposite ends of the school district. A table has been provided showing the enrollment, demographic, and economically disadvantage breakdown of each middle school (see Table 9). The participants of the study will involve the two grade six mathematics teachers at each middle school along with the principal of each middle school.

The grade six mathematics teachers selected at the two middle schools were chosen based on data from the middle schools previous two cohort performances and the regression in mathematics performance as it relates to the cohort's performance in grade five mathematics compared to grade six mathematics. In addition, these two middle schools are a part of the two high school feeder patterns described in chapter one for demonstrating the largest performance regression in the district. Middle School A located in the "East" high school feeder pattern is the only middle school that feeds into the high school in that area of the district. Middle School B located in the "West" high school feeder pattern is one of two middle schools that students can

Table 9

*Participating Middle School Breakdown*

Location	School	Enrollment	Demographics (%)					EDS
			African American	Caucasian	Hispanic	Two or More	Other	
East	A	659	25	51	19	3	2	61
West	B	569	29	56	11	3	1	44

*Note.* Adapted from data reported by the North Carolina Department of Public Instruction (2016c). EDS stands for Economically Disadvantage.

attend that feeds into the high school. The researcher chose Middle School B because the other middle school in the high school feeder pattern has only one teacher at the grade level teaching the subject content.

### **Innovation**

The innovation for this research study is to use the TFM that has been developed from the literature in chapter two to support principals in their work to improve teacher instruction and student performance. The TFM is derived from the theoretical ideas of the formative feedback system (Halverson et al., 2007) and the transformational leadership model (Bass & Avolio, 1995). The other theoretical frameworks that influenced the TFM were the Feedback Intervention Theory (Kluger & DeNisi, 1996), Goal Setting Theory (Locke & Latham, 1990), Hierarchy of Human Needs (Maslow, 1943), Self-Determination Theory (Deci & Ryan, 2000), and the Teacher Performance-Motivation Theory (Blasé, 1982).

The TFM's four practices of feedback; assessments for learning, data decision making, instructional improvement, and curriculum and instructional alignment are influenced by the three functions of Halverson et al.'s (2007) formative feedback system. The functions of the formative feedback system are: (a) informational signals that measure student performance in terms of interventions, (b) the development of sensors and processing functions to assess information signals, and (c) identifying controllers that could actuate the new information to adjust the instruction.

As the principal addresses the practices of the TFM to teachers, they must demonstrate the eight behaviors which derive from the four characteristics of Bass and Avolio's (1995) transformational leadership framework: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

These characteristics and behaviors are displayed in the feedback by the principal through the actions of: relationship for change, effective communication, developing a shared vision, and established expectations and culture with the teacher. Addressing these four actions in their feedback, principals will foster stronger relationships with their teachers that will open communication that is focused on improvement in the instructional abilities of the teacher and reducing teacher stress.

### **Logic Model**

The logic model for this study will provide a description of the process that will take place during this study. Included in each of the elements is information as it relates to the instruments and data collection procedures. A detailed description of the instruments and data collection procedures for the study are located after the elements on the logic model. The nature of the instruments being used and the collection of data will address the research questions. This study is framed with the hypothesis; principal feedback to teachers on benchmark performance will improve student performance. The research questions for this study are as followed;

1. Did individual student performance on student benchmarks improve with teachers who received structured principal feedback?
  - a. Did individual student projected achievement levels improve between benchmark 1 and benchmark 2?
  - b. Did individual student projected achievement levels improve between benchmark 2 and benchmark 3?
2. Did the overall student performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve for schools whose teachers received structured principal feedback?

- a. Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment improve from the projected achievement level on benchmark 3?
- b. Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve from the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment achievement level performance at grade five?
3. Did individual student performance in mathematics at grade six demonstrate greater improvement from teachers who received structured principal feedback (RSF) over teachers who did not receive structured principal feedback (NRSF)?
  - a. Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 1 and benchmark 2?
  - b. Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 2 and benchmark 3?
4. Did the behaviors of the Transformational Feedback Model have an impact on the principal and teacher?
  - a. Did the level of trust between the principal and teacher improve?
  - b. Did feedback from the principal become more personalized for the teacher?
  - c. Did the relationship between the principal and teacher improve?



- d. Did teacher self-esteem about their student's performance improve after feedback conferences?
- e. Are teachers able to adjust their instruction based on the principal feedback?
- f. Did teachers receive feedback from the principals that supported their established goals for the student benchmark?
- g. What do teachers learn from the principal feedback sessions that support instructional improvement?

A logic model has been developed for this study. The conventional elements of a logic model (resources, input, output, and outcomes) are provided. Additional details about the elements of the logic model including how the instruments and data collection fit into the model are found after Figure 9.

## **Resources**

This study will involve resources that will assist in providing quantitative and qualitative data. These resources will consist of human capital, student benchmark assessments, performance data from the district student benchmarks and the North Carolina End-of-Grade assessments, the feedback protocol, and principal and teacher surveys.

The human capital in this study will include the two principals and four grade six mathematics teachers at the two middle schools. Principals and teachers will generate data that will be collected through the feedback protocol developed for the study titled the Principal and Teacher Conference Handout (PATCH) during the feedback conferences and surveys completed by both following the feedback conferences. The teachers involved will have multiple class sections whose student benchmark data will be provided individually and consolidated. The

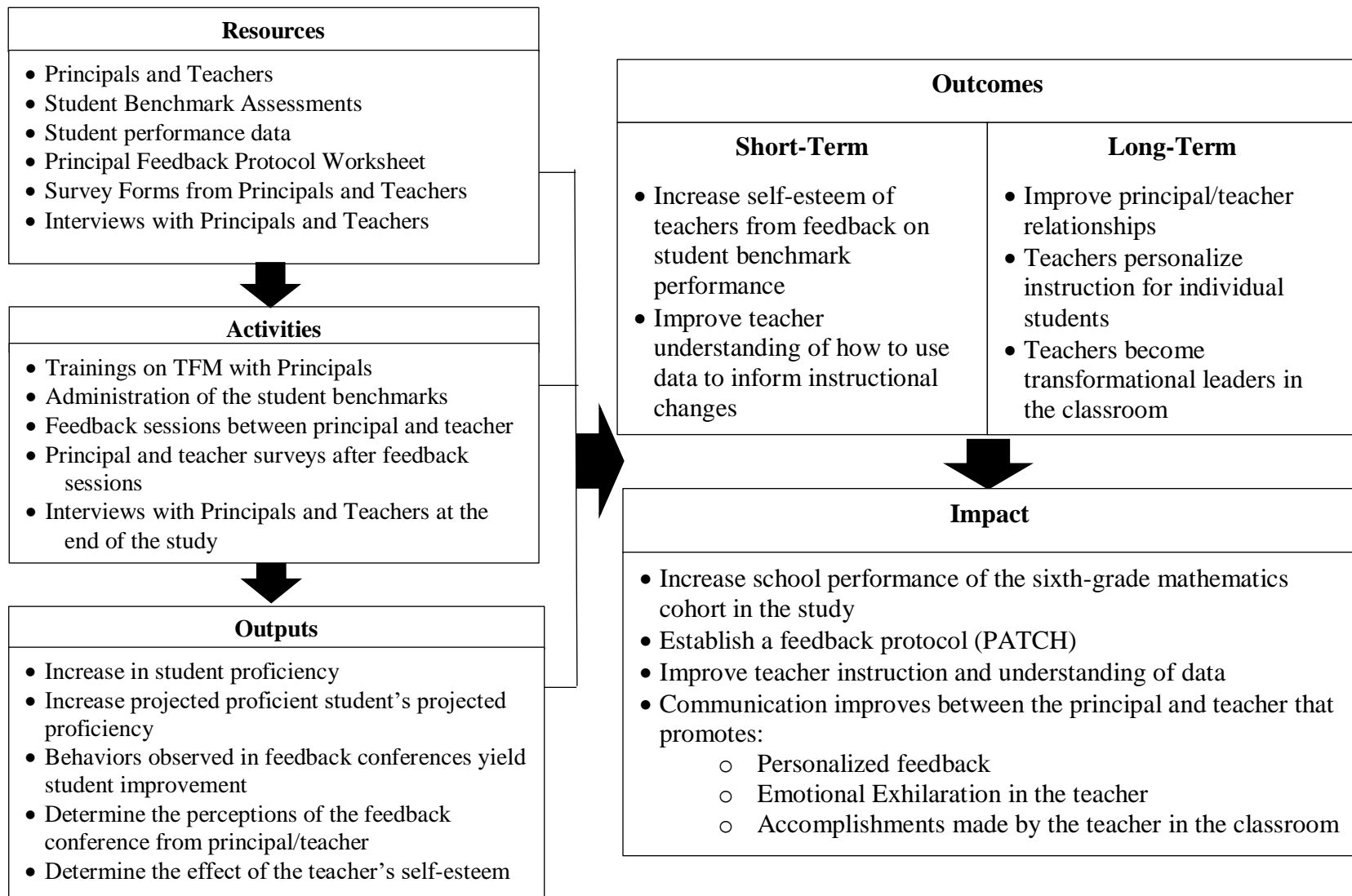


Figure 9. Principal Feedback Logic Model.

feedback given by the principal will address the overall benchmark performance data for all students instructed by the teacher.

Student benchmark assessments will be created by the vendor TE-21 that the district has contracted. A student benchmark assessment is given each nine weeks and is based on the district's pacing guide. Curriculum specialists for the district submit to TE-21 which curriculum objectives will be taught using the district pacing guide that was developed within the school district. The first student benchmark assessment assesses only the curriculum taught during the first nine weeks of school. The second student benchmark will be made up of the curriculum taught since the administration of the first student benchmark assessment and will include major concepts taught during the first nine weeks. The technical breakdown on the second student benchmark assessment after the second nine weeks is 70% of the questions are from the second nine weeks and 30% of the questions are from the first nine weeks. For the final student benchmark given within the last month of school, eleven weeks after the second student benchmark assessment, will assess the entire curriculum of the subject/grade level. The technical specifications of all three student benchmark assessments is similar to the test specifications for the North Carolina End-of-Grade assessment (North Carolina Department of Public Instruction, 2016a).

During the teacher feedback conference, each principal will use the feedback protocol, PATCH (see Appendix K). The principal will complete the PATCH to use during the feedback conference with the teacher and the teacher will receive a copy at the end of the conference. The principal will also provide the researcher a copy to use in the analysis of the study. A copy will also be kept by the principal to use as needed for any follow-up conversations or observations they have with the teacher.

The surveys principals and teachers will complete after each feedback conference will measure the eight behaviors of the TFM: vitality, connection, self-esteem, reflection, goal setting, create meaning, build trust, and personalized and the four practices of feedback: assessment for learning, data driven decision making, instructional improvement, and curriculum and instructional alignment on a rating scale.

After the three benchmark assessments and teacher feedback sessions are complete, both the principals and teachers in the study will be interviewed about their experience. The interviews will be a follow up to the questions asked on the surveys.

### **Activities**

The activities in this study will include the quantitative data collected through the student benchmark and state assessments. The qualitative data collected from the PATCH used during the feedback conferences, surveys completed after the feedback conference, and exit interviews conducted at the end of the study. The data collected from the student benchmark assessment will be displayed using reports developed by the student benchmark vendor TE-21 and the researcher of the study. All data reports provided to the principal and the teacher are the same reports that all other principals and teachers receive in the district after each student benchmark assessment.

Each principal will attend a one-on-one training conducted by the researcher on how to use the PATCH effectively and demonstrate feedback to teachers using the TFM. The trainings will last between forty-five and sixty minutes and will take place prior to the first feedback conference. During the training, the principal will be exposed to the research behind the TFM. This will include information on the formative feedback framework and the transformational leadership model framework. Following the frameworks, the professional development will

focus on the areas of the TFM and how to use the PATCH. Attention will be given to how to demonstrate the TFM behaviors in the feedback conversation, how the practices of feedback are communicated using the PATCH, and how the behaviors and practices communicate the actions a leader is communicating in their leadership. During the training, the principal will have the opportunity to practice completing the PATCH and provide a miniature version of the feedback conference using beta data reports provided by the researcher for training purposes only. The training materials used with the principals can be viewed in Appendix L.

Within one week of the student benchmark assessment or North Carolina End-of-Grade assessment data being received by the principal, a feedback conference between the principal and teacher will take place in a location agreed upon by both individuals. During the feedback conference, the principal will use the PATCH to provide feedback to the teacher. The feedback conference should be scheduled to last between twenty and thirty minutes. During the feedback conference, the teacher is encouraged to ask questions for clarity and to discuss their own thoughts about the student performance data. The teacher should also share how they are wanting to adjust their own instruction and performance goals they have for the class or themselves.

A survey will be given to both the principal and teacher following each feedback conference. This will need to be completed within twenty-four hours of the feedback conference. The survey will focus on the perceptions the principal and teacher had of the feedback, the conference, and their thoughts going forward.

At the end of the study after all three rounds of teacher feedback sessions have been completed and results have been provided from the North Carolina End-of-Grade assessment the researcher will complete an interview with each participant. The interview questions will be on the same topics as the surveys the participants will be completing throughout the study.

## **Outputs**

The outputs of this study will relate to the stated goal, which is to determine if student performance on benchmark assessments is positively affected by principal feedback given to teachers related to the student benchmark assessment results using the TFM. This study will determine if the number of students projected to be proficient from one student benchmark to the next student benchmark increases, if students already projected to be proficient on the previous student benchmark increase their projected proficient achievement level, and the perceptions of how the teacher feedback conference from both the principal and teacher point of view impacts the student performance on the next student benchmark assessment.

## **Outcomes**

The outcomes of this study are separated into short- and long-term outcomes. The outcomes are reflective of the eight behaviors of the TFM. The reason for the distinction of short and long-term goals is directly related to the scope of this study. The overall goal of the study is to see student performance increase in the first year of the implementation and if the principal and teacher are going to develop the partnership necessary for improvement to take place in the future.

The short-term outcomes will focus on the teacher's self-esteem as the result of the principal's feedback on student benchmark performance and improve the teacher's ability to reflect on the data to initiate instructional changes. These two short-term goals are important for the study because they will build the foundation for the long-term outcomes. The short-term outcomes focus is on the teacher's mind set as it relates to their self-efficacy and ability to use the data on their own. These goals will support the long-term outcome of establishing teachers who are transformational leaders in the classroom. Teachers must have strong positive feelings

about their ability to teach students and how to analyze the data feedback from student benchmarks or other data collected, reflect on the results of the data, and engage in adjusting their teaching in response to the student outcomes. This will allow for additional adjustments between student benchmark results leading to the long-term outcome of the study to personalize learning for students.

As for the long-term outcomes of the study, the outcomes are to improve the relationship between principal feedback and teacher instruction, so student learning is personalized, and teachers begin exhibiting the characteristics of transformational leadership in their classroom. For meaningful conversations about data and what is best for students, the principal and teacher need an established relationship that is built on trust and respect. The feedback conference provides the conduit for the relationship between the principal and teacher to establish a connection, establish goals, create meaning behind what they are doing, and support teacher vitality. Teachers will then be empowered in their own ability to support each student to personalize learning which will enable them to be transformative leaders in the classroom.

### **Impact**

The impact of this study will be on student performance that can be measured in quantitative data methods using results on student benchmark assessments and the North Carolina End-of-Grade assessment in grade six mathematics. Impact will also be measured using qualitative data from the analysis of the PATCH used during the teacher feedback conferences, and surveys given after the feedback conferences to the principals and teachers. This study will focus on two middle schools at grade six mathematics, but in the future, the researcher wants the TFM implemented district-wide to support all principals and teachers to improve instructional practices and student performance.

For the principals and teachers involved in this study, the impact will be to increase school benchmark performance on the grade six mathematics cohort, establish the feedback protocol called PATCH to facilitate effective conversations between the principal and the teacher through direct feedback, improving teacher instruction and teacher understanding of how to use data to improve their own instructional practices in the classroom, and improve communication between the principal and teacher through personalized feedback, emotional exhilaration within the teacher, and the recognition of accomplishments made by the teacher.

### **Instruments and Data Collection**

This mixed method design approach using a concurrent triangulation strategy will consist of both quantitative and qualitative data. Data collection will include student benchmark assessments administered by the school district and the North Carolina End-of-Grade assessment performance results in grade six mathematics, teacher feedback conference communication from the PATCH, and individual surveys completed by the principal and teacher. Each type of data collected will be analyzed to answer the questions in the study along with determining if the goals of the study are attained.

### **Quantitative Data**

The quantitative data will consist of two types of data on student performance; student benchmark assessment performance results from all three student benchmarks in grade six mathematics and student performance results from the grade six North Carolina End-of-Grade assessment in mathematics. Student performance data will be collected by TE-21 and the North Carolina Department of Public Instruction (NCDPI) and reported using reports developed by the student benchmark vendor TE-21, NCDPI, and the researcher.



## **Student Benchmark Performance Data and Reports**

The student benchmark performance data will provide teachers with specific data per student in the teacher's class. The data provided to the researcher by the vendor is shared through a File Transfer Protocol (FTP) using Citrix ShareFile software. The only people with access to this site and data is the vendor TE-21 and the researcher.

The student benchmark data Class Report (see Figure 10) from the vendor TE-21 will give teachers data on the overall assessment results for each student. This includes the percentage of questions a student correctly answered, the projected achievement level that is provided by TE-21 based on the North Carolina End-of-Grade assessment achievement level scales for the grade level and subject. Included with the projected achievement level is a "+" or "-" indicating the projection is at the top or bottom of the achievement level. If the projected achievement level does not include a "+" or "-" then the projection is found in the middle of the achievement level. Each Class Report includes the projected achievement level achieved by each student as it relates to the Depth of Knowledge and curriculum standard of each question. A handout on how to use the Class Report has been created by the researcher for the principal and teacher to use in case there are any questions regarding the report during the feedback conference (see Appendix M).

TE-21 provides a second report for principals and teachers to review called the Class Item Analysis Report. This report is a roster of all students in the class and provides the answer each student provided to each question on the student benchmark assessment. Correct answers are colored light green and incorrect answers are colored in light red. Included in the report is the correct answer to each question, the objective covered by the question, the Depth of Knowledge of each question, the percentage of students in the class who got each question correct, and the

**CLASS  
REPORT**

**NC 2015-16 BENCHMARK  
6TH GRADE ELA**

**TRADITIONAL  
1ST ADMINISTRATION**



Assessment items: 30		Total Outcomes			DoK Results			Strands			Genres					
James, P Period: 2 Total Scores: 20		Pct Corr	Proj Ach Lvl	Sugg Marks	DoK 1 n=8	DoK 2 n=15	DoK 3 n=7	Read Lit n=12	Read Info n=11	Lang n=7	Fict n=6	Nonf n=5	Poet n=4	Sci n=5	SocSt n=6	Tech n=4
Alan, Michael	43.3	2-	71-D	2	2	1	1	3	3	1	1	3	3	3	2	2
Anderson, Jarvis	40.0	1+	69-F	2	2	1	1	2	1	1	1	3	3	2	1	1
Clayton, Kendra	60.0	3-	78-C	2	4	1	2	3	5	2	1	3	3	5	3	3
Crudup, Natalie	76.7	4+	91-B	5	4	4	4	5	5	4	5	1	5	3	5	4
Davis, Maria	96.7	5+	100-A	5	5	5	5	5	5	5	5	5	5	5	5	5
Dragaj, Sestina	63.3	3	82-C	2	3	4	4	2	5	4	5	5	1	2	5	3
Dugan, Saria	66.7	3+	84-C	5	3	3	4	3	5	4	1	1	5	3	3	3
Elphman, Grace	56.7	3-	77-C	5	3	1	3	2	3	3	2	4	1	2	5	3
Field, Rodney	73.3	4	89-B	5	5	2	2	5	5	5	1	5	5	5	5	4
Groden, Shelley	53.3	2+	75-D	5	2	1	3	1	3	3	4	1	2	3	2	2
Hackett, Brian	70.0	4-	86-B	3	4	4	4	3	5	4	3	3	3	5	4	4
Jackson, Sarah	66.7	3+	84-C	5	4	2	4	3	3	4	3	4	3	3	3	3
Lance, Sean	60.0	3-	78-C	2	3	3	2	3	5	3	1	3	3	5	3	3
Montague, Shiela	90.0	5	98-A	5	5	4	5	5	5	5	5	4	5	5	5	5
Nealson, Rashawn	80.0	4+	92-B	5	5	3	5	5	3	5	4	5	3	5	4	4
Paton, Trevaugn	63.3	3	82-C	5	3	2	5	3	1	5	3	3	2	2	3	3
Peirce, Roberto	86.7	5	97-A	5	5	4	5	4	5	5	4	4	5	5	5	5
Reed, Felicia	33.3	1-	62-F	2	1	1	1	1	3	1	1	1	1	3	1	1
Sanders, Kecia	73.3	4	89-B	3	4	4	3	5	3	4	1	5	5	5	4	4
Sears, Kelli	46.7	2	72-D	1	2	2	1	3	3	1	1	3	5	3	2	2
Class, Sch, & District Summary	Tot Val Sco	Avg Pct Corr	Proj Perc Prof	Avg Sugg Marks	DoK 1 n=8	DoK 2 n=15	DoK 3 n=7	Read Lit n=12	Read Info n=11	Lang n=7	Fict n=6	Nonf n=5	Poet n=4	Sci n=5	SocSt n=6	Tech n=4
James, P	20	65.0	75.0	83-C	3.7	3.5	2.6	3.2	3.3	3.8	3.4	2.8	3.2	3.4	4.0	3.2
Northside	81	61.4	59.3	82-C	3.7	3.3	2.5	3.0	3.3	3.7	3.3	2.6	3.3	3.2	3.9	3.1
District	301	58.2	52.1	80-C	3.6	3.3	2.4	2.9	3.2	3.7	3.1	2.7	3.1	3.0	3.9	3.0

Note. This is an example of the report provided by TE-21 (2017).

Figure 10. Class report.

percentage of students in the grade level at the school who correctly answered the question (see Figure 11). A handout on how to use the Class Item Analysis Report (also includes information on the consolidated item analysis) has been created by the researcher for the principal and teacher to use in case there are any questions regarding the report during the feedback conference (see Appendix N).

Three additional reports for the principals to use and provide to the teacher to support the teacher feedback conferences will be created and provided by the researcher. The three reports created by the researcher are the Class Performance Dashboard Report, the Consolidated Item Analysis Reports, and the Class Roster Analysis Report. These three reports are developed in Microsoft Excel using Pivot Tables and formulas. The student benchmark vendor TE-21 provides the researcher a data extract from each benchmark result that gives all data collected on each student in one report by subject and grade level for the district. This extract report is used to populate the necessary data into the student benchmark reports developed by the researcher. The three reports were developed by the researcher based on data conversations with the district's superintendent, district curriculum leaders, and principals in the school district.

The Class Performance Dashboard Report is focused on students who were proficient on the previous school year on the grade five North Carolina End-of-Grade assessment or designated in a meeting before the 2016-17 school year between the principal, superintendent, and district leaders as possible proficient students at the end of the 2016-17 school year. This report is not focused on all students in the teacher's class so not all students will be populated on the report. The students that are on the report are placed into one of three categories: Core Instruction, Remediation, and Critical Care. The three categories are visualized in a Performance Triangle on the report along with the number of students in the teacher's class who meet the

<b>Teacher:</b>																
<b>Period:</b>																
<b>Subject:</b>																
<b>School:</b>																
Item Numbers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CC Standard	RL2.2	RL2.4	RI2.2	RI2.7	L2.3	RL2.2	RL2.4	RI2.2	RI2.7	L2.3	RL2.2	RL2.4	RI2.2	RI2.7	L2.3	RL2.2
Depth of Knowledge	1	2	1	3	2	2	1	1	3	2	2	1	2	3	1	2
Reading Category	Cog	CrSt	Cog	Cog	CrSt	CrSt	Cog	CrSt	Inte	Inte	CrSt	Inte	Con	Cog	Inte	Cog
Genre	Fict	Fict	Fict	Fict	Fict	Fict	Scie	Scie	Scie	Scie	Scie	Poet	Poet	Poet	Poet	Poet
Class Percent Correct	0.90	0.85	0.35	0.70	0.75	0.75	0.85	0.70	0.35	1.00	0.75	0.35	0.80	0.25	0.80	0.70
School Percent Correct	0.92	0.87	0.46	0.65	0.89	0.65	0.89	0.80	0.53	0.90	0.78	0.57	0.80	0.29	0.75	0.51
Correct Answer	D	A	C	D	B	C	B	C	B	D	A	D	B	A	C	A
student1	D	A	C	D	C	C	C	A	D	D	A	D	B	D	C	A
student2	D	A	C	D	B	C	B	C	B	D	A	D	B	C	C	A
student3	D	A	B	D	B	C	B	D	D	D	A	D	A	D	C	A
student4	D	A	A	D	B	B	B	C	D	D	A	D	B	D	C	D
student5	C	A	C	D	B	C	B	C	D	D	A	A	B	B	D	A
student6	C	A	B	D	B	B	B	D	D	D	A	A	B	A	C	B
student7	D	C	A	D	B	C	B	C	D	D	C	A	B	C	C	A
student8	D	A	B	C	B	C	B	C	B	D	A	D	A	A	C	A
student9	D	A	C	D	B	C	B	C	D	D	A	D	B	B	C	A
student10	D	A	C	C	A	A	B	C	C	D	A	D	B	C	B	D
student11	D	A	D	C	B	A	A	A	D	D	B	A	B	A	D	C
student12	D	A	A	D	B	C	B	C	D	D	A	A	B	A	C	A
student13	D	C	B	D	B	C	B	C	C	D	A	A	A	B	C	A
student14	D	A	D	C	B	A	B	C	B	D	A	A	B	C	C	B
student15	D	A	B	D	B	C	B	C	D	D	A	A	B	D	C	A
student16	D	B	B	D	B	C	B	C	B	D	D	A	B	C	C	A
student17	D	A	A	C	A	C	A	B	C	D	C	B	B	C	D	B
student18	D	A	C	D	A	C	B	C	B	D	A	A	B	A	C	A
student19	D	A	A	C	B	C	B	A	B	D	B	A	A	C	C	A
student20	D	A	C	D	A	C	B	C	B	D	A	A	B	D	C	A

Note. This is an example of the report provided by TE-21 (2017).

Figure 11. Item analysis report.

criteria for each category. The roster of students on the report is given and a checkmark is placed in the category based on the student's performance using the following criteria.

Students who fall into the Core Instruction category are students who are projected to be proficient on the grade six End-of-Grade assessment using the Class Roster Report from the student benchmark with the achievement level three or higher. These students are not requiring additional instructional support then what is being provided to the entire class of students.

The Remediation category are students who have a projected achievement level of two plus up to three minus. These students need additional remediation in addition to the core instruction they are receiving to strengthen their skills so their projected achievement level on the next student benchmark assessment is a level three or higher.

The final category is called Critical Care. Students who are in this category received a projected achievement level two or lower and were designated as students who were expected to be proficient at the beginning of the school year. These students will need a plan to provide additional instructional support to fill in the gaps in their learning which is causing the student to perform under the expected performance based on data from the Grade Five End-of-Grade mathematics assessment.

Additional data is included on the Class Performance Dashboard (see Appendix O) as it relates to the established classes performance goal, class performance on the student benchmark assessment, the grade level goal on the subject, the grade level performance on the student benchmark assessment, and previous benchmark performance results that will be populated on the report after the second and third student benchmark assessment. The Class Performance Dashboard was developed through conferences with principals that were led by the district's superintendent (P. Mubenga, personal communication, July 19-20, 2016). A handout on how to

use the Class Performance Dashboard Report has been created by the researcher for the principals and teachers to use in case there are any questions regarding the report during the feedback conferences (see Appendix P).

The Consolidated Item Analysis Report takes the data provided by TE-21 on the Class Item Analysis report (see Appendix Q) and groups the student benchmark questions by objective and gives both the percentage of students instructed by the teacher who got each question correct and the overall average of correct answers on the overall objective. This report is created in Microsoft Excel using Pivot Tables. The report can be given with all the teacher's sections together or set up to compare each section the teacher teaches in the subject. The report will be given to the principal and teacher both ways to support the teacher feedback conference. As stated previously, a description of how to use the Item Analysis Reports is in Appendix N.

The Class Roster Analysis report (see Appendix R) will only be provided to the principal and teacher after the second and third student benchmark assessment results. The report will provide multiple data points. The Class Roster Analysis report was developed through communication between the researcher and the district's superintendent (P. Mubenga, personal communication, February 16, 2016). The first data point will be an overall comparison of the teacher's overall class benchmark performance from the first benchmark to the second benchmark and from the second benchmark to the third benchmark. The second data point will provide the class's trending data on how many students achieved a higher projected achievement level (Upward), stayed at the same projected achievement level (Flat), or moved down in their projected achievement level (Downward). The third data point is an achievement level breakdown that compares the number and percentage of students at each projected achievement

level on each student benchmark assessment. The final data point is a class roster that lists every student and their projected performance level on each benchmark. Projected achievement levels are color coded based on the following criteria: Level 1; dark red, Level 2; light red, Level 3; yellow, Level 4; light green, and Level 5; dark green. Any student who did not participate in the student benchmark assessment has no achievement level and is colored white. The column after the projected achievement level for each student is a trending column. Using the criteria described above about the trending data point each student has an arrow that represents one of the three trending directions. The trending arrows are: upward (▲), flat (►), and downward (▼). These arrows are used to calculate the trending data points. The researcher has developed a handout for the principal and teacher to refer to during the feedback conference if needed to help understand and use the report (see Appendix S).

### **End-of-Grade Performance Data and Reports**

The North Carolina End-of-Grade assessment data is populated in a couple of reports that display the student performance results. The two reports for this study that will be used and given to the principal and teacher as it relates to this study are the Class Roster Report (see Figure 12) and the Achievement Level Performance Report (see Figure 13). The Class Roster Report will list all the students instructed by the teacher along with their performance on the grade six mathematics End-of-Grade assessment by achievement scale score and achievement level. Also included in the report is the quantile level and percentile rank of the scale received by the student based on the 2013 statewide test data for North Carolina in the grade level/subject assessment. The Achievement Level Report gives the number of students who achieved each performance level along with the overall number of students and percentage of students in the class who received a level three or higher and designated as Grade Level Proficient by the

PUBLIC SCHOOLS OF NORTH CAROLINA END-OF-GRADE TESTS  
Grade ELA/Reading and Mathematics Class Roster

LEASchCode =  
InstrName =  
TestDates =

HdrSchoolName =  
ClassPeriod =

Student Name	Reading Scores <sup>1</sup>				Mathematics Scores <sup>2</sup>			
	Scale Score	Lexile ¶	2013 Pctl Rank <sup>3</sup>	Ach. Level	Scale Score	Quantile ¶	2013 Pctl Rank <sup>3</sup>	Ach. Level
1	440	750L	12	1	450	890Q	50	2
2	450	985L	39	2	446	800Q	36	2
3	464	1310L	86	4	464	1185Q	92	5
4	442	795L	16	2	447	825Q	39	2
5	459	1195L	72	4	453	950Q	62	4
6	455	1100L	57	4	453	950Q	62	4
7	472	1500L	98	5	461	1125Q	86	5
8	462	1265L	81	4	454	975Q	65	4
9	456	1125L	60	4	453	950Q	62	4
10	458	1170L	68	4	456	1015Q	72	4
11	457	1145L	64	4	449	865Q	47	2
12	443	820L	18	2	441	695Q	20	1
13	465	1335L	88	5	461	1125Q	86	5
14	439	725L	11	1	439	655Q	14	1
15	443	820L	18	2	450	890Q	50	2
16	444	840L	20	2	439	655Q	14	1
17	457	1145L	64	4	446	800Q	36	2
18	433	585L	4	1	448	845Q	42	2
19	455	1100L	57	4	455	995Q	69	4
20	450	985L	39	2	441	695Q	20	1
21	461	1240L	77	4	453	950Q	62	4
22	455	1100L	57	4	456	1015Q	72	4
Class Mean	452.7				450.7			

<sup>1</sup> There are 56 items on the reading test.

<sup>2</sup> There are 60 items on the mathematics test. Eleven of the 60 items are gridded response items.

<sup>3</sup> The percentile ranks were established from 2013 statewide test data.

¶ For more information on the Lexile and Quantile Measures, visit  
<http://www.ncpublicschools.org/accountability/lexilequantileinfo>

*Note.* Example of the Class Roster Report. Created by NCDPI through WinScan program (North Carolina Department of Public Instruction, 2014b).

*Figure 12.* Class roster report.





standards set in the grade level and subject by the North Carolina Department of Public Instruction.

All data from the North Carolina End-of-Grade Assessment is housed on the computer provided by the North Carolina Department of Public Instruction (NCDPI). The computer and scanner used to score and receive results is in the office of the researcher whose job in the district is the Director of Testing and Accountability. The office can only be accessed by the researcher and includes its own security system to enter the office. Only two keys in the school district can be used to gain access to the office where the computer is located. The researcher is in possession of one key and the other key is in another office in case the original key has been lost. The program used to scan the North Carolina End-of-Grade assessments and view the data results is called WinScan which was developed by NCDPI (see Appendix T). The WinScan program will be used by the researcher to scan all North Carolina End-of-Grade assessments, match all data to the correct student, edit the data for any issues discovered by the program, and to upload the data to a secure server at NCDPI by way of Secure File Transfer Protocol (SFTP). The data transfer is completed over a Secure Shell (SSH) data stream. Access to the data is only granted to employees at NCDPI who are in the Accountability Services Division who met the requirements established by NCDPI and the researcher, who is the sole school district designee who is allowed access to the data on the Secure Shell.

### **Qualitative Data**

The qualitative data will consist of two types of data collected. A copy of the feedback protocol, PATCH completed by the principal, surveys the principals and teachers will complete following the teacher feedback conference, and interviews conducted at the end of the study.

## **Feedback Protocol**

The feedback protocol named the PATCH as discussed earlier in this chapter will be used by the principal to provide direct feedback and give structure to the feedback conferences with the teachers. The protocol has four sections that following the four processes of feedback as discussed in the literature review in chapter two. The four processes that form the feedback protocol are; assessment for learning, data driven decisions, instructional improvement, and curriculum alignment. These processes align with the research discussed in chapter two about effective feedback using Sadler's (1989) research; (a) a goal for the teacher to reach, (b) an understanding of where his or her class is currently performing on the data, and (c) how the teacher can move from his or her current performance to his or her desired goal.

The topic section titled "Assessment for Learning" asks four questions that the principal will answer with bullet points. Each question allows the teacher to provide their own input while the principal and teacher are discussing the feedback. The questions are: "What did we learn from the assessment results?", "What is our goal for the next benchmark?", "What do we need to do moving forward to reach our goal(s)?", and "What were/are factors effecting instruction in your classroom?" The principal is asked to provide multiple remarks to each question and include any additional thoughts from the teacher.

Sections two through four are focused on each of the remaining three practices of feedback: data, instruction, and curriculum. Each section allows the principal to rate and/or provide comments regarding the three processes.

A rating scale accompanies the areas of instruction and curriculum. The purpose of the rating scale is to give principals a way to set the direction of the feedback as it relates to the practice of feedback. An example of the rating scale is: (a) above target, (b) on target, and (c)

below target. By checking a box on the rating scale, the feedback becomes more direct and increases the chances for the feedback to be effective. A comments section is provided and will be used by the principal to give additional information to the teacher to support instructional improvement and curriculum alignment.

Feedback needs to communicate current student performance. The “Data Results” section of the PATCH includes a highlights and trends section to allow the principal to communicate to the teacher conclusions on the student benchmark data along with positive outcomes and missed opportunities as it relates to the student benchmark data. In the “Instruction” section of the PATCH is a practice and improvement area. Each area includes a rating scale along with a comments section for the principal to complete. The rating scale allows the principal to provide a generalization of the teacher’s instruction based on the student benchmark results. The comments section allows the principal to be more specific and allows the teacher to synthesize the information to make the necessary improvements in their instruction. The “Curriculum” section as with the “Instruction” section includes two areas: alignment and improvement. Each area has a rating scale and comments section. As with the “Instruction” section, the rating scale is to provide a generalization of the teacher’s instructional alignment to the curriculum and the comments allow the principal to give direct feedback to support the teacher in adjusting the curriculum alignment in their instruction.

### **Teacher Feedback Conferences**

As discussed earlier, the teacher feedback conferences will take place no more than one week after the student benchmark performance or the North Carolina End-of-Grade performance data has been provided to the principal from the researcher. The feedback conferences should take no more than twenty to thirty minutes and take place within one week of the data being

made available. The reason for the established times is related to giving immediate feedback (Shute, 2008) in a timely manner that is direct and gives the teacher specific things to do to improve student benchmark performance and bring closure to the feedback process after the North Carolina End-of-Grade assessment results. The principal will use the PATCH to structure the feedback conference. The location of the feedback conference will take place in a designated location agreed upon by both the principal and teacher. When the conference is over the principal will make a copy of the PATCH for the teacher to refer to later.

### **Feedback Conference Surveys**

To measure the impact, the feedback conference had on both the principal and teacher a survey will be provided to each. The teacher survey is eighteen questions (see Appendix U) and the principal survey is thirteen questions (see Appendix V). The principal and teacher surveys will be provided four times between November 2016 and May 2017 after each of the four teacher feedback conferences. The surveys consist of questions measuring the principal and teacher's perceptions and feelings after the teacher feedback conference. The items on the survey were rated using a scale specific to the question being asked. These scales were match to the question that were balanced on a bipolar scale using consistent labels. The surveys measure the eight behaviors of the transformational feedback framework: vitality, connection, self-esteem, reflection, goal setting, create meaning, build trust, and personalized and the four processes of feedback. All surveys will be administered within twenty-four hours of the feedback conference while thoughts, attitudes, and take ways are still fresh in the minds of the principal and teacher. This survey will be completed after each teacher feedback conference. Each teacher will complete the survey three times during the study and principals will complete each survey after

each teacher feedback conference which will total the survey responses from each principal to six times during the study.

Surveys will be administered using Qualtrics Surveys through East Carolina University and the data collected will be housed through the researcher's Qualtrics account provided by East Carolina University. Each of the three surveys will be the same, but data collected will be housed by benchmark so data from the survey from one teacher feedback conference will be separated from the survey data from another teacher feedback conference. This will allow the researcher to analyze the data based on current results and across the entire three teacher feedback conferences. Principals and teachers will have to sign in to their district email account and their names and a timestamp of when the survey is being completed will be collected. The purpose of their names being identified by the researcher is to connect the survey results with the teacher's student benchmark assessment results. The timestamp when the survey was completed will be kept knowing if the survey was completed within twenty-four hours of the conference.

### **Participant Interviews**

Interviews will be conducted with all participants once all data has been received from the North Carolina End-of-Grade assessment. These interviews will provide all participants the opportunity to add additional information not gathered from the three survey results. Each interview will be conducted in a one-on-one environment and the interview will be recorded for data analysis using the NVivo program. The NVivo program allows for audio recordings to be uploaded and transcribed (QSR International, 2016). The transcriptions allow the researcher to code themes found in comments made in the interviews by the participants. Questions developed for the interview will follow along with the topics on the surveys (see Appendix W and X).

### **Timeline of the Study**

The timeline of this study will span from August 2016 through July 2017. During this time, three student benchmark assessments and one North Carolina End-of-Grade assessment will be completed. After each student benchmark assessment and North Carolina End-of-Grade Assessment, data will be collected on the student benchmark assessment, completion of the PATCH, feedback conferences, and surveys will be conducted. During and after the data collection process the data will be analyzed. A summary of the actions and procedures being undertaken during the time of the study has been provided in Table 10.

### **Summary**

The methodology of this study will involve an embedded mixed method design using a Concurrent Triangulation Strategy to test the Transformational Feedback Model. Both quantitative and qualitative data will be used to determine if the goals set forth in the study were accomplished. Data will be collected over three student benchmark assessments and the North Carolina End-of-Grade assessment. Data from the student benchmark performance and North Carolina End-of-Grade performance, the feedback protocols, surveys and interviews will be analyzed from one student benchmark to the next over all three student benchmarks and the North Carolina End-of-Grade assessment to determine the impact the principal feedback had on the teacher's instruction and student performance on the student benchmark assessments and on the North Carolina End-of-Grade assessment in grade six mathematics.

Table 10

*Timeline of the Study*

Sequence	Actions	Procedures
August to September 2016	<ul style="list-style-type: none"> <li>*Establish principals and teachers for the study</li> </ul>	<ul style="list-style-type: none"> <li>*Training for Principals</li> </ul>
October to November 2016	<ul style="list-style-type: none"> <li>*Train Principals on using the Feedback Protocol</li> <li>*Administration of first student benchmark</li> <li>*Provide Principals student performance data reports</li> <li>*Principals schedule feedback conferences with teachers</li> <li>*Principals complete feedback protocol and discuss with teacher in conference</li> <li>*Principals and Teachers complete survey</li> </ul>	<ul style="list-style-type: none"> <li>*Gather data from student benchmark assessments</li> <li>*Produce student benchmark performance reports</li> <li>*Collect copy of PATCH and Survey Results</li> <li>*Analyze data collected</li> </ul>
January to February 2017	<ul style="list-style-type: none"> <li>*Administration of second student benchmark</li> <li>*Provide Principals student performance data reports</li> <li>*Principals schedule feedback conferences with teachers</li> <li>*Principals complete feedback protocol and discuss with teacher in conference</li> <li>*Principals and Teachers complete survey</li> </ul>	<ul style="list-style-type: none"> <li>*Gather data from student benchmark assessments</li> <li>*Produce student benchmark performance reports</li> <li>*Collect copy of PATCH and Survey Results</li> <li>*Analyze data collected</li> </ul>
May 2017	<ul style="list-style-type: none"> <li>*Administration of third student benchmark</li> <li>*Provide Principals student performance data reports</li> <li>*Principals schedule feedback conferences with teachers</li> <li>*Principals complete feedback protocol and discuss with teacher in conference</li> <li>*Principals and Teachers complete survey</li> </ul>	<ul style="list-style-type: none"> <li>*Gather data from student benchmark assessments</li> <li>*Produce student benchmark performance reports</li> <li>*Collect copy of PATCH and Survey Results</li> <li>*Analyze data collected</li> </ul>
June to August 2017	<ul style="list-style-type: none"> <li>*Administration of North Carolina End-of-Grade assessment</li> </ul>	<ul style="list-style-type: none"> <li>*Collect copy of PATCH and Survey Results</li> <li>*Analyze data collected</li> <li>*Interview all Participants</li> <li>*Develop conclusions from data</li> </ul>



## **CHAPTER 4: RESULTS**

The purpose of this study was to determine if structured principal feedback sessions with teachers on student benchmark assessments improved overall student assessment performance. In determining if the structured principal feedback sessions made a positive impact on student assessment performance in mathematics, results were examined from student benchmark assessments, North Carolina End-of-Grade assessments, surveys from the participating principals and teachers, and interviews with the principals and teachers.

### **Research Questions**

The study was anchored by four research questions to determine the effect of structured principal feedback sessions with teachers on student benchmark assessment performance. Both qualitative and quantitative data was used in answering these questions.

1. Did individual student performance on student benchmarks improve with teachers who received structured principal feedback?
2. Did the overall student performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve for schools whose teachers received structured principal feedback?
3. Did individual student performance in mathematics at grade six demonstrate greater improvement from teachers who received structured principal feedback (RSF) over teachers who did not receive structured principal feedback (NRSF)?
4. Did the behaviors of the Transformational Feedback Model have an impact on the principal and teacher?

## **Review of Methodology**

This mixed method study involved the quantitative data from three student benchmark assessments in mathematics, overall North Carolina End-of-Grade assessment results from grade five mathematics from the 2015-16 school year, North Carolina End-of-Grade assessments results from grade six mathematics from the 2016-17 school year, and surveys completed by participants after each round of principal feedback conferences. The qualitative data came from interviews conducted with each participant in the study. Participants included the two principals of the middle school and the two grade six mathematics teachers at each of the schools.

To address the first and third research questions, data was collected from each of the three student benchmark assessments. The data consisted of only students who participated in each of the three student benchmark assessments. Only evaluating the data from students who participated in all three student benchmark assessments allowed the researcher to compare each individual student's result on each of the three student benchmark assessments. The total number of students whose data was used in the study was three hundred and sixty-six. There were also one hundred and sixty-eight students from the other two middle schools in the participating district who made up the control group used to compare the results from the two participating middle schools.

The second research question was answered using the overall student data from the 2015-16 school year as it related to grade five mathematics performance on the North Carolina End-of-Grade assessment and the 2016-17 grade six mathematics performance on the North Carolina End-of-Grade assessment.

For the fourth research question, survey questions (see Appendix U and V) developed by the researcher were given to each participant after each of the three principal feedback

conferences. Survey questions were asked based on the components of the Transformational Feedback Model (TFM).

### **Introducing the Analysis**

The results of this study are separated into the four research questions developed for the study. Both quantitative and qualitative data will be used to answer each question as needed. Each research question will be present with the results from the quantitative and qualitative data collection. After the findings of each research question are provided, additional findings will be identified as it relates to the study. All data sources used in this study were triangulated to provide legitimacy and to validate the findings from the quantitative and qualitative data sources (Creswell, 2009).

For the quantitative data, the findings are presented and supported through data collected on the three student benchmark assessments in grade six mathematics, student cohort results from North Carolina End-of-Grade assessments in grade six mathematics, and three cycles of participant surveys conducted after each round of principal feedback conferences that followed the student benchmark results being provided to the schools. The qualitative data, discoveries are presented and supported through themes and quotes from participants during interviews conducted at the end of the study.

### **Reliability of Participant Surveys**

The principal feedback conference survey used to evaluate both principal and teacher perceptions about their participation and feelings from the feedback conferences are based on the behaviors and practices found in the Transformational Feedback Model (TFM). The same survey questions were administered to each of the participants. Each participant completed the survey

after each of the three rounds of principal feedback conferences. Surveys were conducted, and data collected using the Qualtrics site through East Carolina University.

An item reliability was conducted on the quantitative data from the surveys. Cronbach's  $\alpha$  was computed using the software JMP to determine the reliability of the questions. Based on the responses to the survey instrument by the principals and teachers, the reliabilities to the questions are found in Table 11 and 12. In Table 11 the questions are categorized based on the Transformational Leadership characteristic and corresponding behaviors. For Table 12 the survey questions are categorized by the practices of feedback. The overall reliability of the survey results was .76. These reliability coefficients are considered acceptable (Nunnally, 1978) and attest to the reliability of the survey instrument.

#### **Collection of Quantitative Data from Benchmark and State Assessment Results**

The researcher examined data collected on each of the three student benchmark assessments administered by the school district that were created by the district benchmark vendor TE-21 based on the district's curriculum pacing guide for grade six mathematics. The data from each of the student benchmark assessment results were compared. Individual student results from the benchmark assessments were compared to each other based on the projected achievement level provided to the district through the data results from TE-21. Data was separated by school and individual teachers. In addition, the researcher compared the student benchmark assessment data of the two other middle schools located in the school district to be used as a control group and used to compare the results achieved by the two middle schools in the study.

District and school data results from the North Carolina grade five mathematics results from the 2015-16 school year and the North Carolina grade six mathematics results from the

Table 11

*Principal and Teacher Survey Reliability for Transformational Leadership Questions*

Transformational Leadership			
Question	Characteristic	Behavior	$\alpha$
Q3	Individualized	Build Trust	0.75
Q4		Personalized	0.74
Q5	Motivate	Connections	0.73
Q6		Vitality	0.75
Q7	Stimulate		0.77
Q8		Self-Esteem	0.82
Q9		Reflection	0.77
Q10	Influence	Goal Setting	0.74

*Note.*  $\alpha$ = Cronbach's Alpha.

Table 12

*Principal and Teacher Survey Reliability for Practices of Feedback Questions*

Question	Practices of Feedback	$\alpha$
Q12	Assessment for Learning	0.74
Q13	Data Driven Decisions	0.70
Q14	Instructional Improvement	0.73
Q15	Curriculum Alignment	0.70

*Note.*  $\alpha$ = Cronbach's Alpha.

2016-17 school year. The researcher used the results from the grade level cohort to compare overall student performance from grade five mathematics to grade six mathematics. Data results used for comparison came from data available through the North Carolina Department of Public Instruction website (North Carolina Department of Public Instruction, n.d.a).

### **Qualitative Data Analysis Procedures**

In this mixed method study the researcher interviewed all participants at the end of the study. The qualitative data source are the interview questions (see Appendix W and X) created based on the components of the Transformational Feedback Model. Each interview contained the same sixteen questions for principals and sixteen questions for teachers and mirrored the questions asked of the participants in the surveys. All questions were written prior to the study. Interviews were conducted either during the school day or after school based on the time the participant was available. The location of the interview was also determined by the participant. All interviews lasted between nine and twelve minutes and were completed within two weeks of the last principal feedback conference.

The researcher recorded the participant interviews with five of the six participants. A common time could not be found between the researcher and the sixth participant, but the participant provided written answers to all interview questions. The researcher transcribed all five interviews and employed NVivo to assist in coding the interviews. The researcher took the five transcriptions and the written responses from the sixth participant and categorized the responses into themes which informed the assertions made by the researcher.

### **Reporting Results of the Participant Interviews**

Themes and assertions arose from the qualitative data collected from the participant interviews. In the analysis of the qualitative data three themes came out of the interviews. The

themes and theme related components were: (a) focus- data and instruction, (b) personal growth-self-esteem and self-reflection, and (c) support-relationship and trust. Table 13 displays the themes, theme-related components, and assertions from the participant interviews. Following Table 13 is an in depth description of the qualitative data from the interviews that brought to light the assumptions through the themes and theme-related components.

The assertions were made based on the themes and theme-related components generated from the participant interviews. In the interviews, both principals and teachers shared the impact the principal feedback conferences had on their work. Below are descriptions of each assertion and descriptions of the theme-related components along with quotes from the participant interviews.

#### **Assertion 1-Focus**

Principal feedback conferences give the principal and teacher the opportunity to meet and look specifically at the student benchmark assessment results to inform them if their instructional practices are working, did they reach their intended goals, and determine next steps.

The first theme that came to light from the participant interviews was how both the principal and teacher could focus on their job to improve student performance and teacher instruction because of the principal feedback conferences. Two theme-related components emerged from the theme of focus. They were data and instruction.

Both the teachers and principals noted how the principal feedback conferences helped them stay focus on the goals they had set for themselves. One of the principals said in their interview that “having a goal gives us all a sense of what we need to shoot for”. They went on to discuss that the goals set by them helped set their instructional pace, the purpose of the benchmarks, to keep staff motivated, and help change behaviors. A participating teacher



mentioned in their interview that “I really started focusing on smaller groups”. These were students from the student benchmark assessment results who were projected to be an achievement level of a two or three on the North Carolina End-of-Grade assessment.

A teacher from the other middle school explained in their interview that, “I really narrowed it down to a few students that I really wanted to get bumped up...I just wanted to see them improve”.

### **Assertion 2-Personal Growth**

Teachers want to improve their instruction and can demonstrate improvement when their self-esteem is high, and they reflect upon their own instruction and data results.

The second theme that came out of the interviews with the participants was how they acknowledged the personal growth they observed about themselves or the other person during the conferences. The theme-related components that arose were self-esteem and self-reflection.

In the interviews, the teachers shared that they experienced growth professionally and the principals shared how they witnessed teacher growth regarding instruction practices. One teacher commented who is in their first-year teaching math that they were not sure if they were going to be able to teach math effectively that “Every time I got my feedback I showed improvement so, maybe math is my thing”. A principal commented in their interview that in the feedback conference they along with the teacher were, “able to talk about what went well and what didn’t go well and plan for the future”. The other Middle School principal noted in their interview that the feedback conferences caused them to “think a little bit about what each teacher needed”. The principal also explained that by the end of the school year the teachers were coming into the principal feedback conferences ready to discuss what they had self-reflected on based on the

student benchmark assessment results and what they needed to get better at regarding their own instructional practices.

### **Assertion 3-Support**

Principals want to support their teachers and can be supportive by building a personal relationship built on trust with the teachers.

The third theme that came out of the interviews was support. Both the principals and teachers discussed how the feedback conferences provided the necessary support needed for teachers to enhance their instruction. Within the theme, the two theme-related components were relationship and trust.

The principals appreciated the fact that the feedback conferences allowed them as the principal and leader of the school to show their teachers that they were there for support. One principal felt the conferences showed the teachers their role as the principal was to listen and encourage. The other principal said the feedback conferences allowed the teacher to bring up some challenges they may be facing that as the principal were not aware of in the past. The principal went on to say that they could learn from the teacher the areas “they felt like they needed more help”. A teacher said that they felt like they could rely on the principal for help when they could not get from a fellow teacher about the curriculum or an instructional practice. That same teacher felt scared to ask their principal questions last year but felt more comfortable this year after the first feedback conference.

### **Linking to the Transformational Feedback Model**

The themes, theme-related components, and assertions found in the interviews can be linked to the TFM created based on the literature for this study. Table 14 has been created to show the connections between the data collected from the interviews and the TFM.

Table 13

*Themes, Theme-related Components, and Assertions from Participant Interviews*

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Themes	Theme-related components	Assertions
Focus	Data Instruction	Principal feedback conferences give the principal and teacher the opportunity to meet and look specifically at the student benchmark assessment results to inform them if their instructional practices are working, did they reach their intended goals, and determine next steps.
Personal Growth	Self-Esteem Self-Reflection	Teachers want to improve their instruction and can demonstrate improvement when their self-esteem is high, and they reflect upon their own instruction and data results.
Support	Relationship Trust	Principals want to support their teachers and can be supportive by building a personal relationship built on trust with the teachers.

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Table 14

*Themes, Theme-related Components, and Assertions from Participant Interviews Connection to the TFM*

Assertion	Theme-related components	Characteristics	Transformational Feedback Components		
			Behaviors	Practices	Actions
1. Focus	Data Instruction	Inspirational Motivation Idealized Influence	Goal Setting Create Meaning Connection	Data Driven Decisions Assessment for Learning	Expectations and Culture Shared Vision
2. Personal Growth	Self-Esteem Self-Reflection	Intellectual Stimulation Inspirational Motivation	Vitality Self-Esteem Reflection	Instructional Improvement Curriculum Alignment	Relationship for Change Communicate Effectively
3. Support	Relationship Trust	Individualized Consideration Inspirational Motivation	Trust Personalized	Instructional Improvement	Relationship for Change Communicate Effectively

*Note.* TFM is the Transformational Feedback Model developed from the literature for this study.

## **Research Question #1 Findings**

Did individual student performance on student benchmarks improve with teachers who received structured principal feedback?

To answer this question, data was analyzed from the perspective of the increase in number of students who were deemed projected proficient, the overall percentage of students projected to be proficient, and the percentage of students whose projected achievement level improved from benchmark one to benchmark two.

Data results showed that yes student performance improved from Benchmark One to Benchmark Two when you analyze the number of students whose projected achievement level improved.

### **Research Question #1a Findings**

Did individual student projected achievement levels improve between benchmark 1 and benchmark 2?

Student benchmark assessment results for students whose teacher received structured principal feedback increased. The total number of students who increased their projected proficiency was fifteen. The overall percentage of students who were projected to be proficient improved by four and one tenth percentage points from sixty-one and seven tenth percent to sixty-five and eight tenths percent.

The two middle schools in the district who did not participating in the study had thirteen students increase their projected proficiency. They also increase their overall projected proficiency by seven and eight tenth percentage points from forty-four and six tenths percent to fifty-two and four tenths percent.

Looking at the two middle schools in the study individually, neither one demonstrated a decrease in student projected proficiency. Middle School One's overall projected student proficiency in mathematics stayed the same from Benchmark One to Benchmark Two, which was sixty-two and seven tenths percent. Middle School Two's overall projected student proficiency in mathematics increased from sixty and eight tenths percent on Benchmark One to sixty-nine and one tenth percent on Benchmark Two.

Data was analyzed from the perspective of the percentage of students whose projected proficiency level increased, decreased, or stayed the same. The middle schools whose teachers received structure principal feedback had forty and two tenth percent of students improve their projected achievement level and twenty-two and one tenth percent of students maintain their projected achievement level from Benchmark One to Benchmark Two. The total percentage of students whose projected achievement level either stayed the same or improved was sixty-two and three tenths percent.

Compared to the two middle schools in the district not participating in the structured principal feedback conferences with teachers saw only sixteen and one tenth percent of their students have their projected achievement level to stay the same from Benchmark One to Benchmark Two. These two middle schools did see a larger percentage of students improve their projected achievement level. Fifty-two and four tenths percent of the students in their schools improved their projected achievement level (see Table 15).

### **Research Question #1b Findings**

Did individual student projected achievement levels improve between benchmark 2 and benchmark 3?

Table 15

*Comparison of Middle Schools on Benchmark One to Benchmark Two in Mathematics*

Group	Total Students	Moved Up		Stayed Same		Moved Down	
		#	%	#	%	#	%
Study	366	147	40.2	81	22.1	138	37.7
Middle School 1	185	58	31.4	41	22.2	86	46.5
Middle School 2	181	89	49.2	40	22.1	52	28.7
Control	168	88	52.4	27	16.1	53	31.5
Middle School 3	57	20	35.1	13	22.8	24	42.1
Middle School 4	111	68	61.3	14	12.6	29	26.1

Student benchmark assessment results for students whose teachers received structured principal feedback had an overall composite decrease from Benchmark Two to Benchmark Three. The total number of students who decreased their projected proficiency was eight. The overall percentage of students who were projected to be proficient decreased by two and one tenth percentage points from sixty-five and eight tenths percent to sixty-three and seven tenths percent.

The two middle schools in the district who did not participate in the study had eleven students increase their projected proficiency. They also increase their overall projected proficiency by six and five tenth percentage points from fifty-two and four tenths percent to fifty-eight and nine tenths percent.

Looking at the two middle schools in the study individually, neither one demonstrated a decrease in student projected proficiency. Middle School One's overall projected student proficiency in mathematics improved slightly from Benchmark Two to Benchmark Three, which was sixty-four and nine tenths percent. Middle School Two's overall projected student proficiency in mathematics decreased from sixty-nine and one tenth percent on Benchmark Two to sixty-two and four tenths percent on benchmark three.

When analyzing the data from the perspective of the percentage of students whose projected proficiency level increased, decreased or stayed the same the middle schools whose teachers received structure principal feedback had forty and four tenths percent of students improve their projected achievement level and nineteen and nine tenths percent of students maintain their projected achievement level from Benchmark Two to Benchmark Three. The total percentage of students whose projected achievement level either stayed the same or improved was sixty and three tenths percent.



Compared to the two middle schools in the district not participating in the structured principal feedback conferences with teachers saw nineteen and six tenths percent of their students have their projected achievement level to stay the same from Benchmark Two to Benchmark Three. These two middle schools did see a slightly larger percentage of students improve their projected achievement level as compared to the middle schools in the study. Forty-one and one tenths percent of the students in their schools improved their projected achievement level (see Table 16).

### **Research Question #2 Findings**

Did the overall student performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve for schools whose teachers received structured principal feedback?

To answer the second research question, data was examined from the 2015-16 North Carolina End-of-Grade mathematics at grade five, 2016-17 North Carolina End-of-Grade mathematics at grade six, and student benchmark assessment results from benchmark three.

Data results showed student performance was similar when comparing benchmark three for grade 6 mathematics to the North Carolina End-of-Grade mathematics assessment at grade six. When comparing the overall coverall cohort performance comparison from the 2015-16 North Carolina End-of-Grade mathematics assessment from grade five and the 2016-17 End-of-Grade Mathematics assessment from grade six you notice an increase in student performance.

### **Research Question #2a Findings**

Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment improve from the projected achievement level on benchmark 3?

Table 16

*Comparison of Middle Schools on Benchmark Two to Benchmark Three in Mathematics*

	Total Students	Moved Up		Stayed Same		Moved Down	
		#	%	#	%	#	%
Study	366	148	40.4	73	19.9	145	39.6
Middle School 1	185	92	49.7	31	16.8	62	33.5
Middle School 2	181	56	30.3	42	22.7	83	44.9
Control	168	69	41.1	33	19.6	66	39.3
Middle School 3	57	36	63.2	9	15.8	12	21.1
Middle School 4	111	33	29.7	24	21.6	54	48.6

The overall student achievement level performance stayed the same when comparing the benchmark three results to the North Carolina End-of-Grade mathematics assessment as a district, combining the two middle schools in the study together, and the two middle schools separately. The same cannot be said with the other two middle schools who were in the control group. These two middle schools' projected achievement proficiency decreased between benchmark three and the North Carolina End-of-Grade mathematics assessment.

At the district level on benchmark three, the districts composite was fifty-eight and seven tenths percent compared to fifty-seven and one tenth percent on the North Carolina End-of-Grade mathematics assessment. This was a decrease of only one and six tenths of a point.

Analyzing the middle schools in the study, the percentage of students who were projected to be proficient was fifty-nine and three tenths and on the North Carolina End-of-Grade mathematics assessment the proficiency was sixty and five tenths. An increase of one and two tenths of a point. This result was in stark contrast to what was studied when the results of benchmark three and the North Carolina End-of-Grade mathematics assessment for the middle schools making up the control group.

The projected proficiency on benchmark three for those middle schools in the control group was fifty-seven and one tenth percent. On the North Carolina End-of-Grade mathematics assessment the percentage of students who were proficient was forty-nine and four tenths percent. That is a decrease of seven and seven tenths points (see Table 17).

When evaluating the data from the school level, Middle School One saw a slight decrease in their performance comparison from benchmark three to the North Carolina End-of-Grade mathematics assessment. Their projected performance based on benchmark three was sixty and

Table 17

*Comparison of Projected Achievement Level on Benchmark Three to the Results on the North Carolina End-of-Grade Assessment in Mathematics for the District*

Group	Proficiency		Difference
	Benchmark 3	EOG	
District	58.7	57.1	-1.6
Study	59.3	60.5	1.2
Control	57.1	49.4	-7.7

*Note.* Adapted from results of district data from the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher. Retrieved from <http://www.ncpublicschools.org/accountability/reporting/>

five tenths percent and on the North Carolina End-of-Grade mathematics assessment their actual performance was fifty-nine and six tenths. A decrease of nine tenths of a point.

Middle School Two experienced an increase in performance. On benchmark three the projected performance was fifty-eight and one tenth percent and on the North Carolina End-of-Grade mathematics assessment it was sixty-one and six tenths percent. An increase of three and five tenths points.

Similar results were not found looking at the middle schools individually who made up the control group. Middle School Three showed a decrease of nine and four tenths of a point from benchmark three to the North Carolina End-of-Grade mathematics assessment. On benchmark three their projected performance was fifty-five and six tenths percent and on the North Carolina End-of-Grade mathematics assessment their proficiency was forty-six and two tenths percent.

Middle School Four results also decreased. Their results decreased by six and eight tenths of a point from benchmark three to the North Carolina End-of-Grade mathematics assessment. On benchmark three their projected performance was fifty-eight percent and on the North Carolina End-of-Grade mathematics assessment their proficiency was fifty-one and two tenths percent (see Table 18).

### **Research Question #2b Findings**

Did the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment at grade six improve from the overall student achievement level performance on the North Carolina End-of-Grade Mathematics assessment achievement level performance at grade five?

Table 18

*Comparison of the Projected Achievement Level on Benchmark Three to the Results on the North Carolina End-of-Grade Mathematics Assessment for the District Middle Schools*

Group	Middle School	Proficiency		
		Benchmark 3	EOG	Difference
Study	One	60.5	59.6	-0.9
	Two	58.1	61.6	3.5
Control	Three	55.6	46.2	-9.4
	Four	58.0	51.2	-6.8

*Note.* Adapted from results of district data from the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

The overall student achievement performance in mathematics for the district cohort improved between grade five mathematics and grade six mathematics on the North Carolina End-of-Grade assessment. The performance composite on the 2015-16 North Carolina End-of-Grade assessment was fifty-four and nine tenths percent. On the 2016-17 North Carolina End-of-Grade assessment was fifty-seven and one tenth percent. This was an increase of two and two tenths of a point.

This is an improvement in performance proficiency as it relates to previous cohorts as discussed in chapter one. The previous two cohorts showed a decrease in performance from grade five to grade six mathematics on the North Carolina End-of-Grade assessment. Cohort one who completed grade five and grade six mathematics assessments in 2013-14 and 2014-15 school years had a performance decrease of nine and one tenth points. Cohort two completed the grade five and grade six mathematics assessments in 2014-15 and 2015-16 school years had a performance decrease of six and one tenth points (see Table 19).

The state of North Carolina saw decreases in the same cohorts on the North Carolina End-of-Grade mathematics assessment as did the school district participating in this study in previous school years. Cohort one's performance decreased by seven and nine tenths percent from 2013-14 to 2014-15 and cohort two's performance decreased by five and nine tenths percent from 2014-15 to 2015-16. The present cohort for North Carolina that just completed the grade six mathematics decreased by negative seven and three tenths percent from 2015-16 to 2016-17 (see Table 20).

Table 19

*School District Cohort Performances in Mathematics from Grade Five to Grade Six*

Cohort	Grade Level		Difference
	Grade Five	Grade Six	
Cohort 1	49.9	40.8	-9.1
Cohort 2	49.1	43.0	-6.1
Cohort 3	54.9	57.1	2.2

*Note.* Adapted from results of district data from the 2014-15 through the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).



Table 20

*North Carolina Cohort Performance in Mathematics from Grade Five to Grade Six*

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Cohort	Grade Level		Difference
	Grade Five	Grade Six	
Cohort 1	56.4	48.5	-7.9
Cohort 2	57.5	51.6	-5.9
Cohort 3	60.4	53.1	-7.3

---

*Note.* Adapted from results of district data from the 2014-15 through the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

The sixth-grade cohort in the school district showed an increase in performance on the North Carolina End-of-Grade mathematics assessment from the performance when the cohort was in grade five. At the same time, the North Carolina sixth grade cohort decreased in their performance as compared to the performance the pervious school year in grade five.

The two prior cohorts for the school district demonstrated achievement gaps in their performance on the North Carolina End-of-Grade mathematics assessment as compared to North Carolina cohorts in both grade five and grade six. The achievement gaps were six and five tenths in 2013-14 and eight and four tenths in 2014-15. The school district cohort that has been the focus of the study in 2015-16 had an achievement gap of five and five tenths points compared to the North Carolina cohort on the North Carolina End-of-Grade mathematics assessment (see Table 21).

The two prior cohorts for the school district demonstrated achievement gaps in their performance on the North Carolina End-of-Grade mathematics assessment as compared to North Carolina cohorts in grade six. The achievement gaps were seven and seven tenths in 2014-15 and eight and sixth tenths in 2015-16. The school district cohort that has been the focus of the study in 2016-17 performance was above the North Carolina cohort on the North Carolina End-of-Grade mathematics assessment by four points (see Table 22).

### **Research Question #3 Findings**

Did individual student performance in mathematics at grade six demonstrate greater improvement from teachers who received structured principal feedback (RSF) over teachers who did not receive structured principal feedback (NRSF)?

Overall student performance did not improve more for students whose teachers received RSF in comparison to students whose teachers NRSF. Comparing individual student projected

Table 21

*Achievement Gap Between the North Carolina Cohort and the School District Cohort at  
Grade Five Mathematics*

Cohort	North Carolina	School District	Achievement Gap
Cohort 1	56.4	49.9	-6.5
Cohort 2	57.5	49.1	-8.4
Cohort 3	60.4	54.9	-5.5

*Note.* Adapted from results of district data from the 2014-15 through the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

Table 22

*Achievement Gap Between the North Carolina Cohort and the School District Cohort at  
Grade Six Mathematics*

Cohort	North Carolina	School District	Achievement Gap
Cohort 1	48.5	40.8	-7.7
Cohort 2	51.6	43.0	-8.6
Cohort 3	53.1	57.1	4.0

*Note.* Adapted from results of district data from the 2014-15 through the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

achievement levels from benchmark one to benchmark three, only twenty-eight and one tenth percent of students increased their achievement level from students whose teachers RSF, while forty and five tenth percent of students increased their achievement level from students whose teachers NRSF.

Comparing the two groups as it relates to the percentage of students who were not projected proficient on benchmark one to projected proficient on benchmark three the middle schools in the study had eleven and five percent of students while the middle schools in the control group had nineteen and six percent of students become projected proficient (see Table 23).

### **Research Question #3a Findings**

Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 1 and benchmark 2?

The middle schools in the control group was twelve and two tenths points higher than the middle schools in the study group in the percentage of students who had their projected achievement level improve from benchmark one to benchmark two. The middle schools participating in the study had forty and two tenths percent of students increased their projected achievement level. The other two middle schools who make up the control group had fifty-two and four tenths percent of students increased their projected achievement level.

### **Research Question #3b Findings**

Did individual student projected achievement levels demonstrate greater improvement from teachers RSF compared to teachers NRSF between benchmark 2 and benchmark 3?

Reviewing the results of how students performed on benchmark two and benchmark three the middle schools in the control group did slightly better at improving students projected

Table 23

*Projected Achievement Level Change Comparison Between Benchmark One and Benchmark*

*Three in Mathematics*

Projected Achievement Level Change	Group	
	Study	Control
Increase Level	28.1	40.5
Not Proficient to Proficient	11.5	19.6
Proficient to Not Proficient	9.5	5.4

*Note.* Projected Achievement Level is determined by the third-party vendor TE-21. Projections are based on the North Carolina End-of-Grade assessment achievement level scales for the grade level and subject.

achievement level. Forty-one and one tenth percent of students from the two middle schools in the control group improved their projected achievement level. The middle schools in the study had forty and four tenths percent of their students improve their projected achievement level from benchmark two to benchmark three. The difference between the two groups was seven tenths of a point.

#### **Research Question #4 Findings**

Did the behaviors of the Transformational Feedback Model have an impact on the principal and teacher?

The Transformational Feedback Model (TFM) identifies specific behaviors necessary to provide transformational feedback that establishes relationships for change, allows for effective communication, the creation of a shared vision, and the ability of the principal to establish their expectations and the school culture they want in the school. The behaviors that make up the TFM are trust, personalization, vitality, connection, self-esteem, reflection, goal setting, and create meaning.

Based on the surveys and the participant interviews the researcher pronounced the behaviors as making an impact on both the principal and teacher. The difficulty is that there is no way to quantify the impact using a numerical value. Based on the interviews, behaviors were seen in the teachers based on the feedback they were provided by the principal.

#### **Research Question #4a Findings**

Did the level of trust between the principal and teacher improve? Trust between the principals and teachers did not improve over the three feedback conferences. All the teachers participating in the study already had a healthy sense of trust in their principal prior to the study. Teachers said trust was either somewhat trustworthy or very trustworthy in all three surveys. One

teacher said trust was somewhat trustworthy then entire year. Another teacher changed from very trustworthy to somewhat trustworthy.

The two principals in the study saw their levels of trust with their teachers differently. The principal of Middle School One had developed different levels of trust with their two teachers. For one teacher, the trust changed from somewhat to neither trustworthy not no trust. The principal of Middle School Two felt their relationship with both teachers was very trustworthy. This was contradictory to one of the teacher's survey results all year. That teacher's trust in the principal decreased over the school year. In interviews, a principal noted that the conferences helped them get to know the teachers better. The principals said the feedback conference allowed them to demonstrate to the teachers that their principal listens, responds, and encourages them. A comment from a principal regarding how trust was built in the feedback conferences was, "teachers were able to open up a little bit more".

#### **Research Question #4b Findings**

Did feedback from the principal become more personalized for the teacher? In surveys, the teachers expressed the feedback they received from the feedback conferences became less personal for them as the school year progressed. After the first benchmark, the teachers said the feedback was either personal or very personal. On the second benchmark, two teachers said the feedback was somewhat personal, while the other two teachers said their feedback conference was personal or very personal. The third feedback conference one teacher thought the feedback was neither personal nor impersonal while the other three teachers thought the feedback from the principal was somewhat personal, personal, or very personal. Reviewing the principal surveys, both principals thought the feedback they provided was personalized at each conference.



#### **Research Question #4c Findings**

Did the relationship between the principal and teacher improve? In the teacher surveys, the teachers noted that their relationship with their teacher did not change. The teachers at Middle School One rated their relationship with their principal as very good all year while the teachers at Middle School Two rated their relationship as good the entire year. The teachers responded with very positively when describing their relationship between themselves and the principal as it related to the feedback received after the second and third feedback conferences. A teacher commented that the feedback interviews allowed “[the principal] can be honest as a principal about what I needed to do in my classroom”.

For both principals, they believed the relationship between themselves and the teachers changed in a positive direction from benchmark one to benchmark three. A principal summarized the relationship building aspect of the feedback conference by saying, “[The conferences] made our relationship a bit more positive because they could see that it wasn’t just about getting the numbers and reaching their goal, but really helped them grow as teachers”.

#### **Research Question #4d Findings**

Did teacher self-esteem about their student’s performance improve after feedback conferences? Teachers noted in their surveys that self-esteem did not change because of their student’s performance. Majority of the time the teachers felt good about their student’s results before and after the feedback conferences. In teacher interviews, one teacher said their self-esteem went up because the reports helped them “see how the kids we had singled out, how they had improved”. Another teacher noted that they experienced, “a big change because at the end of last year, I was in the red in growth” and this year they are expecting to meet or exceed growth based on the performance of the students in their classes.

The principal of Middle School One noted that they saw a positive change in their teacher's self-esteem. They noticed the confidence level of one of the teachers "went up tremendously". The principal noted the reason for this positive change in the teacher because they could see their scores grow from benchmark to benchmark. The principal of Middle School Two did not see a change in the teacher's self-esteem.

#### **Research Question #4e Findings**

Are teachers able to adjust their instruction based on the principal feedback? All teachers after each feedback conference said yes, they would be able to adjust in their instruction based on the feedback. Comments made by teachers in interviews were, "I was really focused on the ones that were right there on the bubble and I worked hard with them" and the conference "was very supportive and what I needed to do in the classroom with my instruction".

The principal of Middle School One saw a change in instruction while the principal of Middle School Two saw a change with one teacher, but not the other teacher on the second and third benchmarks. Principal of Middle School One noted that the feedback conference, "was just specifically geared toward them [teachers] and areas where they did very well in and areas where they needed extra help". The principal of Middle School Two noted in their interview that, "it's really hasn't impacted core instruction, but the remediation it's really impacted using data".

#### **Research Question #4f Findings**

Did teachers receive feedback from the principals that supported their established goals for the student benchmark? Three out of four teachers felt somewhat or very confident in the feedback supporting their established goals. One teacher reported that the feedback conferences was neither confident, or not confident in supporting their established goals. The principal of Middle School One was confident with both teachers which the principal of Middle School Two

was only confident with one teacher. A teacher from Middle School One noted in their interview that goal setting, “helps me to see where I need to take them [students]”.

#### **Research Question #4g Findings**

What do teachers learn from the principal feedback sessions that support instructional improvement? Teachers commented that the feedback conferences with their principals helped them determine which students should be in their remediation groups. They also found that keeping the instructional strategies they added in place helped their benchmark scores improve.

Principals noted in the surveys that teachers are trying to use the strategies discussed to differentiate instruction. Also noted was that principals did notice some of their teachers showed a decline in their performance in the classroom as it relates to their instructional practices. One teacher at Middle School Two said in their interview that, “I would not say that my instruction in my regular math class changed. It mainly focused me on the group of students in my remediation group and who needed the extra help”.

#### **Additional Findings**

After reviewing all the data collected from the study, additional findings were found based on the data. The additional findings are consistency and improvement over time. The middle schools in the study showed a consistency in their data from the results of the first student benchmark assessment to the North Carolina End-of-Grade Mathematics assessment. The other finding from the data was improvement over time. The middle schools in the study showed improvement from one year to the next.

#### **Consistency**

Both middle schools participating in the study showed consistency in their data when comparing the results of benchmark one to benchmark two and benchmark two to benchmark

three. In both comparisons, the middle schools saw forty percent of the students demonstrated an increase in their projected achievement level.

Even though the two middle schools in the control group had a greater percentage of students who increased their projected achievement level compared to the two middle schools in the study, the two middle schools in the control group experienced a drop of eleven points in the percentage of students whose projected achievement level increased when comparing results between Benchmark One and Benchmark Two to results from Benchmark Two to Benchmark Three.

The middle schools in the study only had seven students whose achievement level reduced after Benchmark Three compared to thirteen students from the control group who had projected achievement levels reduced (see Table 24).

### **Improvement Over Time**

Improvement by both middle schools participating in the study occurred over time. Twenty-eight and one tenth percent of the three hundred sixty-six students increased their projected achievement level performance from benchmark one to benchmark three. Eleven and five tenths percent of the three hundred sixty-six students who were not proficient on benchmark one were proficient on benchmark three.

Table 24

*Comparison of the Projected Achievement Level Change Between Benchmarks*

Group	Total Students	Comparison	Projected Achievement Level					
			Increased		Neutral		Decreased	
			#	%	#	%	#	%
Study	366	B1 to B2	147	40.2	81	22.1	138	37.7
		B2 to B3	148	40.4	73	19.9	145	39.6
Control	168	B1 to B2	88	52.3	27	16.1	53	31.5
		B2 to B3	69	41.1	33	19.6	66	39.2

Nine and six tenths percent of the three hundred sixty-six students decreased their projected achievement level performance from Benchmark One to Benchmark Three. Fifty-two and two tenths percent of the three hundred sixty-six students had their projected achievement level on benchmark one and benchmark three stay the same.

### **Structured Feedback Sessions and Improved Student Performance**

The essential question of the study was to determine if structured feedback sessions with teachers on student benchmark data improved overall student assessment performance. Student performance improvement can be measured using student proficiency data on the North Carolina End-of-Grade Mathematics assessment and student growth data results from EVAAS. Both measurements provide insight into how the student cohorts performed from the middle schools in the study.

Student cohort performance proficiency on the North Carolina End-of-Grade Mathematics assessment at both middle schools in the study improved. The student cohort from the two middle schools in the study showed improvement in the percentage of students expected to be proficient on benchmark three to the North Carolina End-of-Grade Mathematics assessment compared to the student cohort in the control group. Students in the cohort improved in the percentage of students who expected to be proficient on benchmark three to the North Carolina End-of-Grade Mathematics assessment by one and seven tenths percentage points compared to negative seven and seven tenths percentage points by the students in the control group.

Comparing student cohort growth performance using EVAAS (see Appendix Y) from the Grade Five to Grade Six the student cohort in the study demonstrated growth at both middle schools that participated in the study. The individual school cohort growth for Middle School One had a growth measure of five tenths which means there is evidence that students made the

growth they were expected to make in the school year. Middle School Two had a growth measure of three and five tenths which means there is evidence that students made significant more growth than expected to make in the school year. The other middle schools in the district who were the control group showed growth measures of two and seven tenths which means there is evident that students made the growth they were expected to make in the school year and two and four tenths which means there is evidence that students made significant more growth than expected to make in the school year (see Table 25).

The previous two cohorts at Middle One showed a growth of negative one and two tenths which means there is evidence that students made the growth they were expected to make in the school year for the 2014-2015 school year and negative two and seven tenths which means there is evidence that students made significant less growth than expected to make in the school year for the 2015-2016 school year. Those same two cohort years at Middle School Two showed a growth of five and eight tenths which means there is evidence that students made significant more growth than expected to make in the school year for the 2014-2015 school year and five and five tenths which there is evidence that students made significant more growth than expected to make in the school year for the 2015-2016 school year (see Table 26).

The study made an immediate impact on the percentage of students who were proficient at the end of the school year at both middle schools. As for the evidence of growth the results were mixed. Middle School One demonstrated an improvement in growth by the Grade Six cohort compared to previous Grade Six cohorts. For Middle School Two the growth dropped with the current Grade Six cohort as compared to the previous two Grade Six cohorts.

Table 25

*EVAAS Growth for District Grade Six Mathematics Cohorts by Middle School for 2016-2017*

Group	School	EVAAS Growth Measure
Study	Middle School 1	0.5
	Middle School 2	3.5
Control	Middle School 3	2.7
	Middle School 4	2.4

*Note.* Adapted from results of middle school EVAAS Growth data from the 2016-17 school year. Growth results are based on the SAS EVAAS using performance results on the North Carolina End-of-Grade Assessments (SAS EVAAS, n.d.)



Table 26

*EVAAS Growth for Grade Six Mathematics by Previous Cohorts*

School	Cohort	
	2014-2015	2015-2016
Middle School One	-1.2	-2.7
Middle School Two	5.8	5.5

*Note.* Adapted from results of middle school EVAAS Growth data from the 2014-15 and 2015-16 school years. Growth results are based on the SAS EVAAS using performance results on the North Carolina End-of-Grade Assessments (SAS EVAAS, n.d.)

## **Summary**

The qualitative and quantitative data collected provided mixed results as it related to the four research questions, the results combined show that the feedback conferences had a positive effect on student performance as it relates to consistency and improvement over time. Chapter five will provide conclusions based on the results as it relates to the literature that lead to the Transformational Feedback Model, implications for policy, organizational management, and human resource management. Also included will be recommendations for future research regarding principal feedback.

## **CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

Many schools face extremely high levels of external pressure to improve student performance. Student benchmark assessments provide schools a way to assess how well the students have learned the taught curriculum throughout the school year. Administering student benchmark assessments alone will not lead to improved student performance. Individualized feedback to teachers provides the internal accountability and self-awareness necessary for schools to produce these improved student performance outcomes. For schools to effectively meet the student performance requirements, school leaders need to provide personal attention to teachers through timely or “right on time” feedback. An example of such timely feedback is after teachers receive student performance data on student benchmark assessments.

School leaders are a group of staff members not limited to school administrators within a school who are placed in a leadership role and are able to give feedback to teachers on their instructional practices. To provide individualized feedback that is purposeful in a conference, school leaders can communicate with teachers using the Transformational Feedback Model (TFM). This model enables school leaders to demonstrate the four transformational leadership characteristics; individualized, influence, motivation, and stimulation. The behaviors are promoted through the four behaviors of the TFM; trust, vitality, reflection, and goals. The characteristics are demonstrated through the three practices of feedback from the TFM; alignment, data, and improvement. The three practices drive the four actions of feedback of TFM; agents of change, effective communication, shared vision, and developing a culture to promote improvement in teacher instruction, the leader-follower relationship, and increased student performance.

The focus of this study was to examine at the impact principal feedback given to teachers focused around student benchmark assessment results had on: (a) student performance on the proceeding student benchmark assessments, (b) the overall North Carolina End-of-Grade mathematics assessment results, and (c) teacher instruction. The rationale behind the development of this study was based on initial observations with principals in district-wide data meetings in a central North Carolina school district regarding how they, as principals, were using student benchmark assessment data to inform and improve instructional practices within the schools.

### **Background**

The central North Carolina school district that participated in this study began using student benchmark assessments in all North Carolina End-of-Grade and End-of-Course assessment grades and subjects to improve student performance at the start of the 2015-16 school year. During the first year of implementing student benchmark assessments, a pattern began to appear in responses from principals during district-wide data meetings after the first two student benchmark assessments. This pattern was that principals were not meeting with teachers to discuss the student benchmark data and offer specific feedback to support instructional improvement in the classroom.

The lack of communication and the absence of a “professional exchange” on the part of principals was evident in the lack of consistent improvement on the student benchmark assessment results. Through the initial observations made during these district-wide data meetings, principals were not comfortable and did not understand the student benchmark performance data or know how to discuss the student benchmark performance results with their teachers. Principals were not communicating with their teachers the purpose of the student

benchmark assessments or how to use the benchmark data to improve instructional practices. The lack of comfort and communication on the part of the principals led to many teachers not understanding the importance of the student benchmark assessments, how to interpret the student benchmark data, how to make instructional improvements based student benchmark performance, or how to ensure alignment between the North Carolina Standard Course of Study and their instruction.

### **The Transformational Feedback Model**

Encouraging a school leader's involvement in student performance and teacher instruction is critical to the quality of the school's academic program because it builds a school culture and establishes school-wide expectations for the use of student benchmark data (Bryk et al., 1998). School leaders can foster a feedback culture and establish the expectations for the use of student benchmark assessment data. School leaders must demonstrate strong leadership by having their "fingerprints" on the data (Supovitz & Klein, 2003). This level of engagement in the "professional exchange" will allow the school leaders to help teachers move from a limited view of assessment data to a more thoughtful view of assessments and their instruction thus individualizing the instructional experience for teachers and students.

School leaders need an understanding of both Transformational Leadership and Formative Feedback to build a culture within the school that uses student assessment data to improve student performance, teacher instruction, and instructional practices. Modeling transformational feedback is how school leaders can create a culture within a school necessary for improvement. For a transformational feedback culture to be present in a school, school leaders must demonstrate through their own practices the characteristics of Transformational Leadership and the identified behaviors associated with those characteristics. In addition to

demonstrating the characteristics and behaviors of Transformational Leadership, school leaders must demonstrate practices associated with Formative Feedback to convey the actions of feedback identified in transformational feedback.

Leaders must provide a way to transition teachers from being passive in their use of data to inform instruction to being intentional in their use of data and using their own reflections to inform instructional practices. A cultural transformation in the school will occur once teachers skillfully use their data and their own reflections to take the initiative to improve their instructional practices and the instruction provided to students.

Promoting teachers in their initiative, a positive leader-follower relationship needs to be fostered that is focused on improvement and engagement in the process of improvement. School leaders can initiate this cultural change within a school by providing individualized feedback that is purposeful using the TFM. The TFM provides a foundation for school leaders to use with teachers to move them from using data only to inform instruction, to using their data and their own reflections to inform instructional practices. This model will also allow teachers to skillfully use their data and their own reflections to take the initiative to improve their instructional practices and the instruction provided to students.

The TFM allows supportive relationships between the school leaders and teachers to develop which leads to improved instruction in the classroom, increases in student performance, and an enhanced culture of transformational leadership among teachers (see Appendix Z).

### **Study Results in Relation to the Literature and the TFM**

This research study was to investigate and address the impact principal feedback has on student performance and teacher instruction using the TFM that came out of the theoretical

frameworks of Transformational Leadership (Bass & Avolio, 1995) and the Formative Feedback System (Halverson et al., 2007). Results from the quantitative and qualitative data sets can complement each other providing commonality among the two types of data (Greene, 2007). The quantitative and qualitative data collected in this study complemented one another to support the elements of the TFM.

The TFM is separated into characteristics, behaviors, practices, and actions of transformational feedback. School leaders need to demonstrate all four areas when they are working with teachers as they discuss the student performance data in feedback conferences. A description of each area of transformational feedback is provided.

### **Characteristics of Transformational Feedback**

The use of the TFM in feedback conferences all school leaders to develop the four characteristics of transformational feedback. The characteristics of transformational feedback serve as the foundation of transformational feedback. These characteristics are demonstrated by school leaders in their daily interactions with teachers and other staff members throughout the school organization. These characteristics are influence, inspire, stimulate, and individualize.

### **Behaviors of Transformational Feedback**

The use of the TFM in feedback conferences allows school leaders to develop the four behaviors of transformational feedback. The behaviors of transformational feedback promote and establish a connection between the leader and follower through personalized feedback. These behaviors are trust, vitality, reflection, and goals.

### **Practices of Transformational Feedback**

The use of the TFM in feedback conferences allows school leaders to develop the three practices of transformational feedback. The practices of transformational feedback focus on

expanding the teacher's understanding of the interconnectedness of the assessment, curriculum, and instructional practices. These practices are alignment, data results, and improvement.

### **Actions of Transformational Feedback**

The use of the TFM in feedback conferences allows school leaders to develop the four actions of feedback. The actions of transformational feedback initiate engagement for the teacher in the process to be agents of change, effective communicators, share a common vision, and developing a culture.

### **Results in Relation to the Characteristics of Transformational Feedback**

Transformational leaders provide feedback that is influential, motivating, stimulating, and individualized. Balyer (2012) and Northouse (2001) both noted that transformational leaders motivate teachers to change, improve, and accept leadership. A school leader who influences their staff by motivating and inspiring them supports the achievement of the goals of an organization (Bass & Avolio, 1995).

**Influence.** Idealized influence allows the leader to be admired, respected, and trusted by their followers on an emotional level and actions that are consistent with ethics, principles, and values (Antonakis et al., 2003). School leaders must give attention to their teachers both emotionally and cognitively to influence student performance (ten Bruggencate et al., 2012; Boberg & Bourgeois, 2016).

In this study, teachers reported on all three rounds of surveys that they felt either very confident or somewhat confident that the feedback they received from the principals supported the goals established for their student's performance on the student benchmark assessments. Teachers also reported that the principal's feedback helped to create meaning between the student benchmark assessments and their instructional practices. Principals encouraged to



teachers to continue what they were doing and what they needed to stay focused on in their classroom. The teachers expressed a level of confidence in the feedback because it was specific to their situation, and the teachers also admired, respected, and trusted what their principal was communicating to them in those feedback conferences.

**Inspire.** School leaders must be able to recruit, retain, and motivate employees (Goodsell, 2012). To accomplish this goal, the employee must be motivated by their work and their work has to be meaningful (Rainey & Steinbauer, 1999). As noted, the relationships with the principals were reported as positive and a connection was recognized between themselves and the principal. These two areas allowed the teachers to accept the feedback and make the adjustments in their instruction through remediation and differentiation.

**Stimulate.** Blasé and Blasé (1999) found that feedback stimulates reflection and has a positive impact on teachers and their ability to be innovative. Stimulation also leads to the willingness to question old assumptions (Geijsel et al., 2009). In the interviews, teachers showed a willingness to make the necessary adjustments with their instruction. They showed the ability to be self-reflective and open to new ideas from the principals. The principals noted the ability of their teachers to take the feedback they were given and reflect upon changes needing to be constructed.

The feedback conferences allowed the principal of Middle School One to do their own self-reflection and figure out what each teacher needed individually. A teacher from Middle School One reflected on their instruction and realized they had spent too much time on one aspect of the curriculum that was not going to have many questions assessed. They also took less time with their instruction and support for students on an aspect of the curriculum that was

assessed with a larger amount of questions on the student benchmark assessment and on the North Carolina End-of-Grade assessment.

**Individualize.** May and Supovitz (2011) noted the leadership of school leaders includes the impact on instructional practices through individualized efforts to improve instruction and student achievement. For school leaders to develop a relationship that is individualized, the relationship must be built on trust and personalization. The school leader must communicate feedback to the teacher in a way that demonstrates their support for the teacher's efforts to improve student performance and their own instructional practices.

As noted previously the teachers in the study responded on surveys that they had a good level of trust with their principals. The difference in the two middle schools was the personalization the teachers at each middle school felt their principals gave in their feedback. Middle School One showed a larger increase in their overall school performance from the 2015-16 school year to the 2016-17 school year on the North Carolina End-of-Grade assessment. If you compare their performance from student benchmark assessment one to student benchmark assessment three, Middle School One showed a larger increase in the percentage of students projected to be proficient on the North Carolina End-of-Grade assessment. Their projected achievement level proficiency improved by three and one tenth points while Middle School Two improved by only one and four tenths points.

The four characteristics of the TFM; influence, inspire, stimulate, and individualize support school leaders to motivate and inspire teachers in feedback conferences. This study supports the idea that teachers who are motivated and inspired to change will improve and accept leadership.

## **Results in Relation to the Behaviors of Transformational Feedback**

The four behaviors of transformational feedback were observed in the interviews and surveys given to participants. In the original TFM there were eight behaviors identified. In the updated TFM those eight behaviors have been condensed into four behaviors. The four behaviors are goals, vitality, reflection, and trust. These four behaviors encompass what came out of the data collected. The four behaviors removed from the TFM; personalization, connection, self-esteem, and create meaning are still relevant, but do not have as much influence on the TFM as those four remaining behaviors; trust, vitality, reflection, and goals.

**Goals.** Goal setting is essential to feedback for it sets the direction for improvement; student performance and teacher instruction. Goals are directives for principals and teachers to focus their attention on what behaviors are necessary to reach the intended goal (Locke & Latham, 2012). Newman (2012) echoed those thoughts about goal setting by determining that goal setting allows the principal and teacher to focus their attention on teaching and learning priorities. Maintaining the established goals in mind allows the teacher to focus their instructional plans and their work with students (Locke & Bryan, 1969).

In the study, teachers felt somewhat or very confident in the feedback supporting their established goals. Principals had confidence in their teachers to reach the established goals. A teacher is quoted in their interview saying that goal setting, “helps me to see where I need to take them [students]”.

**Vitality.** Vitality is an “essential yet intangible positive qualities of individuals and institutions that enable purposeful production” is how Clark et al. (1985, p. 3) described vitality. In the work environment, vitality was described by Kark and Carmeli (2009) as a spirited

behavior as it relates to life both mental and physical. Sustained vitality is the responsibility of the principal to set the tone.

All the principals and teachers participating in this study marked their surveys as having positive relationships and said their relationship was good. Without the vitality, teacher burnout increases, and the school's vitality is undermined (Holloman et al., 2007).

**Reflection.** Reflection is valuable to the cognitive process (Loughran, 2002). The ability to reflect has been found by many researchers (Bode, 1940; Boud, Keogh, & Walker, 1985; Dewey, 1933; Hullfish & Smith, 1961; Russell & Munby, 1992). A school atmosphere that is focused is one that allows for "relentless reflection" (Holloman et al., 2007, p. 438). Marcos, Miguel, and Tillema (2009) summarized teacher reflection into two components that are interwoven: action and thought. This concept is exemplified when the principal comes in to assist the feedback process in the feedback sessions.

After each feedback conference, every teacher confirmed they would be able to adjust in their instruction based on the feedback. The principals at both middle schools witnessed a change in teacher instruction. Teachers commented that the feedback conferences with their principals helped them determine which students should be in their remediation groups. One teacher said the feedback supported them by getting them to reflect and focus on students who needed remediation and what they needed to improve.

**Trust.** Trust in a school determines the strength of the school's collaborative culture which affects the school's effectiveness on student performance (Byrk & Schneider, 2002; Forsyth, Barnes, & Adams, 2006). Student achievement (Bryk & Schneider, 2002), leader-follower relationships (Podsakoff et al., 1990), and citizenship behaviors in the organization (Konovsky & Pugh, 1994; McAllister, 1995) are a result of the trust a teacher has for a principal.

When trust between the principal and teacher occurs, the conditions lead to inspired teachers who produce more effort and achievement (Chugtai & Buckley, 2009; Forsyth & Adams, 2014; Handford & Leithwood, 2013; Notman & Henry, 2011; Salfi, 2011; Tschannen-Moran, 2003, 2009; Zeinabadi, 2014).

In the study, teachers responded in their surveys that trust between themselves and the principal was already good prior to the study. All teacher participants had worked with the school's principal for at least one year prior to the study taking place. In interviews, a principal noted that the conferences helped them increase their professional knowledge of the teacher. The principals said the feedback conference allowed them to demonstrate to the teachers their ability to listen, respond, and encourage. A comment from a principal regarding how trust was built in the feedback conferences was, "teachers were able to open up a little bit more".

The four updated behaviors of the TFM; trust, vitality, reflection, and goals promote and establish a connection between the leader and follower through personalized feedback. When school leaders demonstrate these behaviors in feedback conferences, they build a relationship with the teacher to support instructional improvement.

### **Results in Relation to the Practices of Transformational Feedback**

A formative feedback system was developed by Halverson et al. (2007) to help educators engage with their student performance data. The feedback gives teachers information that provides them specific information and support from the principal to understand what they need to do in the classroom to change instructional practices and delivery to improve student performance.

Blanc et al. (2010) took the aspects of the work done by Halverson et al. (2007) and broke down the feedback system into smaller tasks. Based on the research of Halverson et al. and

Blanc et al., practices and actions of feedback were identified as part of the Transformational Feedback Model. The practices are alignment, data, and improvement. The actions are agents of change, communicate effectively, create a shared vision, and developing a culture.

Based on the Principal and Teacher Communication Handout (PATCH), surveys, and interviews from the participants, the practices of feedback were implemented in the principal feedback conferences. The feedback protocol structured the feedback conferences to focus the conversations around the practices of feedback. The updated TFM has three practices. These practices of feedback are alignment, instruction, and data. The original TFM had four practices, but after the study the assessment for learning and curriculum alignment were combined into one practice called alignment for learning.

**Alignment.** The principals and teachers understood the purpose of benchmarks based on their interviews prior to the study. Assessments are supposed to “promote data-driven decision making” (Blanc et al., 2007, p. 206). In the interviews, a teacher commented, “we’ve used our data better this year than we’ve ever used it”. Another teacher commented that they liked how the data were broken down to understand what they did not spend enough time instructing while spending too much time on an area of the curriculum that was not assessed heavily.

In reviewing the feedback protocols completed, principals used the assessment for learning section to identify what they learned based on the results, specific goals for the teachers to obtain, and what needed to be done by the teacher to improve student performance. On one PATCH, the principal noted to the teacher that twenty-five percent of their students showed a decline between the first two benchmarks and that the teacher needed to work on differentiating their instruction to target students with projected achievement levels of two and three. This

information from the PATCH was mentioned by the teacher in their interview with the researcher.

**Improvement.** Lochmiller (2016) wrote that feedback given by school leaders to improve instruction must include modeling, inquiry, and praise. The interviews and the PATCH did not yield direct data to say that instructional improvement occurred. Teachers in the interviews seemed indifferent about their instructional improvement. The researcher did not get any sense in talking with the teachers they were given specific praise for their instructional improvement. What was gleaned from the interviews and discussed earlier was the fact the principals and teachers spent more time on how to remediate the students who were falling behind and how to differentiate their instruction. The teachers did comment on how they felt positive about results they did get from the students, but not from any direct praise from their principal.

The modeling aspect of instructional improvement came from the principal getting the district instructional coaches involved with each teacher and focus their work on the information discussed in the feedback conferences. Understanding that the principal does not have the time to model instructional practices with every teacher, the use of the instructional coach in the school is valuable in the improvement of the instruction. The principals and teachers seemed open to the assistance. The instructional coach realizes what the focus of the improvement needed to be to improve results. In the interviews, teachers were open to the support the instructional coaches provided.

The curriculum determines the importance of what is taught in a classroom (Polikoff, 2012). When the content taught aligns with the curriculum and what is assessed then there is an agreement (Squires, 2012). During feedback conferences, the principals noted to the teachers on

their PATCH that their alignment was on target. This concept was echoed in the interviews from teachers who commented that the alignment of the district pacing guide and the student benchmark assessments was more effective this year.

This alignment structure led the teachers to keep their instructional pacing and alignment with the approved curriculum and district pacing guide. The researcher observed from each of the teachers and principals in the interviews that the data received after each student benchmark assessment was a true reflection of the student's understanding of the curriculum and what the teachers had instructed. During the prior year, teachers and principals from these schools along with the other two middle schools took issue to the alignment of the student benchmark assessment and the district pacing guide.

Having the alignment between the approved curriculum, the taught curriculum, and the student benchmark assessments the principals and teachers trusted the data results. They were willing to make improvements and get help from the instructional coaches to improve their instructional practices.

**Data.** School leaders must have the capacity to lead conversations with teachers based on data (Earl & Katz, 2006). Both principals used the established goals from the beginning of the school year on the class roster report provided to each teacher from the researcher (Appendix R). Those established goals allowed the principal to start the feedback conversation with the teacher about their data results. In the teacher interviews, teachers commented that the data portion of the feedback conference and PATCH helped in establishing remediation groups. Principal comments on the PATCH focused teachers on remediating and how they could differentiate their instruction for select students.



A connection can be made based on how the principals focused their feedback conversations around remediation and differentiated instruction. Additional findings were discussed in chapter four regarding consistency. Unlike the middle schools in the control group whose projected achievement level performance dropped from benchmark three to the results on the North Carolina End-of-Grade assessment, the middle schools in the study were consistent in the percentage of students whose projected achievement level was proficient on benchmark three to the North Carolina End-of-Grade assessment.

The practices of feedback focus on the expansion between assessments, curriculum, and instruction. These practices structure the feedback conferences for the school leader to focus their feedback on specific areas the teacher needs to improvement.

### **Results in Relation to the Actions of Transformational Feedback**

Using the surveys and interviews from the participants, the actions of feedback were the results of the principal feedback conferences. The actions of feedback arise from the feedback and provides the direction and goal the principal has for the school. The actions found in the TFM have been updated in their name from the original version to reflect what was found because of the study.

**Agents of change.** School leaders must be aware and supportive in their role as the person who is giving the feedback. They must know how important the attitudes of the teacher with regards to change (Beer & Nohria, 2000; Clegg & Walsh, 2004). At the same time, the teachers must be able to receive the support of the principal and accept the changes needed (Bommer et al., 2005; Park & Jeong, 2013).

The relationship the principals had with each teacher was good. Some were better than others based on the surveys and interviews. Reflecting on the interviews, the researcher sensed

that that a teacher's self-esteem about their instruction is related to the relationship they have with their principal. The stronger the relationship the teacher has with the school leader and belief that the school leaders are supportive of the teacher than the teacher has a better outlook on their own abilities. This relationship building is supported by the research of Hoy and Miskel (2001) who said the principal must play the role of supporter and facilitator in their relationship with the teacher. The relationship for change must be built on the idea that the school leader wants the teacher to improve and the teacher understanding from the school leader's actions that they want to see them grow and become a better teacher.

**Effective communication.** School leaders must be able to communicate with their teachers. The ability to communicate is critical in the success of an organization (Marques, 2010). The PATCH allowed the principal to put down on paper what they needed the teacher to know based on the student benchmark results to improve student performance and their own instruction. In the interviews, the teachers discussed how they brought the PATCH back to their classroom to review and make the necessary adjustments. In many cases the teachers had the handouts with them in the interview as they answered the researcher's questions.

**Create shared vision.** School leaders can affect outcomes through their vision and goal for the school (Hallinger & Heck, 1998; Katterfield, 2013; Murphy, 1990; Supovitz et al., 2009). Creating a shared vision is not something that can be measured. The researcher got an impression from the interviews with teachers that they understood what the principal was wanting the school to achieve. During the conferences, goals were discussed and reviewed each time which helped the principal's vision be attainable. If you look at the overall results for the two middle schools on the North Carolina End-of-Grade mathematics assessment the progress the students in grade six mathematics made in relation to the results when they were in grade five mathematics was

impressive. The current cohort increased their performance by two and two tenths of a point. The previous two cohorts as discussed in chapter four demonstrated negative progress compared to grade five results the previous school year. The decreases were negative nine and one tenths points and negative six and one tenth points.

**Developing a culture.** A school culture that is purpose driven allows for a sustained vitality to be reached (Holloman et al., 2007). For the school culture to have established expectations the school leaders must provide teachers with the encouragement and inspiration to reach those goals (Quin et al., 2015). Teacher interview comments alluded to understanding the expectations of the principal. Both principals are in their second year and to judge the effect on the school culture is difficult.

To measure the culture of the school, an analysis of the overall school composite and school performance grade has been made. In their second year as principals, both have seen improvement across all grade levels and subjects.

The principal of Middle School One has moved the school from being a school designated as Low Performing with a School Performance Grade of “D” based on the guidelines established by the North Carolina General Assembly (North Carolina General Assembly, 2013c) to a School Performance Grade of “C”. Middle School One’s overall composite has increased by twelve and eight tenths of a point from forty-seven and three tenths percent to sixty and one tenth percent in the last two school years.

The principal of Middle School Two has moved the school from two tenths of a point from being designated as Low Performing based on the guidelines established by the North Carolina General Assembly to a school within two points of being designated as a “B” school based on the School Performance Grades established by the North Carolina General Assembly

(North Carolina Department of Public Instruction, 2015c) over the past two school years. The school's composite score has increased by six and three tenths points from fifty-eight and one tenth percent to sixty-four and four tenth percent (see Table 27).

The actions of feedback; agents of change, shared vision, effective communication, and developing a culture allow the school leader to initiate engagement with the teacher in the process necessary to become a transformational instructor. These four actions are the result of the feedback conference.

### **Lessons Learned through the Research Process**

This study has provided me the opportunity to expand my own skill set as it relates to supporting school leaders when they receive student benchmark assessment results to support data decision making and data literacy. These lessons can be viewed from the aspect of implementation of the Transformational Feedback Model and my own professional growth as it relates to the study. Overall, the major lesson learned from the research process as the overseer of student performance data in the school district, there must be meaningful and focused conversations with school leaders as it relates to instructional leadership regarding the four actions of feedback.

When the researcher process started the focus was on supporting the principals and their relationships with individual teachers to promote positive change in student performance through feedback conversations. What the research showed was the overseer of student performance data in the district has a role in supporting school leaders in their quest to build positive and productive relationships with the teachers in their schools. The reports developed for this research in addition to the reports provided by our student benchmark assessment vendor TE-21 and those provided by the Accountability Services Division of the North Carolina Department of

Table 27

*North Carolina End-of-Grade Comparison from 2015-16 to 2016-17*

	School Year		Difference
	2015-16	2016-17	
Middle School One	47.3	60.1	12.8
Middle School Two	58.1	64.4	6.3

*Note.* Adapted from results of district data from the 2015-16 through the 2016-17 school year. Performance results are based on the Grade Level Proficiency (GLP). GLP refers to students whose performance on the North Carolina End-of-Grade or End-of-Course attained an achievement level of three or higher (North Carolina Department of Public Instruction, n.d.a).

Public Instruction help school leaders and teachers to determine if the students in the classroom perform as expected, above expectation, or below expectation. In addition, the reports create help ease the stress the school leaders and teachers have about data and allows them to focus on the important aspects of feedback conferences or data talks; the instructional practices.

### **Updated TFM**

Based on the results from the study updates to the TFM have been made. Earlier in the chapter the updated TFM was provided after analyzing results as it related to the literature. This updated model allows flexibility in its use. Chapter two provided two models; one for education and another for other occupations. After updating the model, the current version can be used for any occupation. This new model provides focus around the leader-follower relationship and supports the transition necessary for someone professionally to go from a consumer practitioner to a reflective practitioner to an entrepreneurial practitioner. For this dissertation, the focus is on the TFM and its use in the leader-follower relationship as it pertains to education.

The characteristics of Transformational Leadership still anchor the TFM. The characteristics have been simplified to individualized, inspire, stimulate, and influence. As the leader in the relationship, the leader must create a relationship built on those four characteristics. The relationship the leader fosters must exhibit the four behaviors which promote and establish a connection through personalized feedback. The leader establishes trust and vitality to promote reflection and goals. School leaders must demonstrate those behaviors and participate in the three practices that focus on the expansion between assessments, curriculum, and instruction. These behaviors are done through feedback that discusses alignment for learning, data, and improvement for the individual teacher. The behaviors and practices are in place to transition the teacher from a consumer practitioner to a reflective practitioner. These behaviors and practices

lead to the four actions in the TFM that initiate engagement in the process and allow the teacher to become a highly reflective practitioner who takes the necessary risks to improve their teaching as it relates to their instruction.

### **Updated PATCH**

Another revision made was to the PATCH protocol (see Appendix AA). The protocol has been updated based on the changes to the TFM. This updated protocol keeps the leader focused on providing the individualized feedback specific for the follower so professional growth has an opportunity to take place.

**Reflection, goals, and data.** Reflecting on the four questions at the beginning of the PATCH under Assessments for Learning, they have been split into two new headings based on the updated behaviors. The two behaviors are reflection and goals. There are two other behaviors not represented on the PATCH because trust and vitality are promoted through the feedback while reflection and goals are established in the feedback conference. The reflective section is at the top of the protocol while the goal section was placed at the end of the protocol. The reasoning behind the move was so the goal could be established and discussed at the end of the conference and all topics could be discussed and a goal could be established with clarity. The data results section did not change from the original version to the new version.

**Alignment and improvement.** The original two sections titled instruction and curriculum were adjusted. The information being discussed in those two sections were reconfigured to be titled Alignment and Improvement. The Alignment section is broken down into curriculum and assessment and adjustments. The Improvement section looks at instructional delivery and pacing.

The PATCH is geared specifically towards feedback conferences between school leader and teachers. For the protocol to work in a noneducation occupation a couple of terms would need to be revised. These revisions would need to remove the terms assessment, instruction, curriculum, and benchmark. To allow for the flexibility to work in other occupations the protocol has been renamed the Feedback and Communication Transcript (FACT) and an updated version is available (see Appendix AB).

### **Implementation**

During the study, a couple of valuable lessons were learned as it relates to implementing new structures into schools to support our school leaders and teachers. Those lessons are:

- a. Data reports and their connection with goal setting. The school leader and teacher must understand what is realistic to expect data wise from each other based on the academic levels of the students that make up the class.,
- b. School leaders must be taught the importance of providing individualized feedback to teachers. Principals in the study viewed the feedback conferences as another task that needed to be completed instead of the valuable time they get to sit down with their teachers and convey the four actions that come out of the TFM.
- c. Both school leaders and teachers need the data reports to be modeled to demonstrate all the different ways they can use the reports provided by the benchmark vendor TE-21, the North Carolina Department of Public Instruction, or created by myself in my current role in the district. The modeling must be done on multiple occasions, so they are able to internalize how to use the reports and be able to ask follow-up questions that lead to improvement. These reports are not stand-alone data points to only review and analyze at the feedback conferences or at grade level PLCs. These



reports should be a part of evaluations, professional development plans, and school improvement meetings.

### **Professional Growth**

Several lessons have been learned because of this study as it pertains to my own professional growth and my understanding of leadership within schools and school districts.

Those lessons are:

- a. Convey to school leaders the importance of the individual feedback conference as it relates to their leadership within the school. The individual feedback conferences are there for the school leader and teacher to work together as a team to improve student performance, improve instruction, improve professionally, and enjoy the work that they are doing with students to make a difference.,
- b. Demonstrate with school leaders how the benchmark reports are connected and will make the data analysis and decision making easier for them to make the data decisions necessary for positive change. Gulek (2003, p. 42) discusses the necessity for “school practitioners to become assessment literate to make maximum use of test results”. In my current role, more time needs to be spent with all school leaders within each school demonstrating the use of the reports and how they can better inform their decision making.,
- c. Never take for granted what school leaders or teachers communicate regarding their understanding or use of data in the building. Data makes people uncomfortable and in my role, school leaders and teachers need to be made comfortable in analyzing data collected and being honest about what they are doing in their school to get those positive or negative results.

## **Limitations of the Study**

As with any research study, there are limitations that should be noted regarding practice and research. There was a clear limitation in the study because there were only two principals and four teachers. Given this limitation, implementing this study with more teachers within the schools would have strengthened the study.

The data from Middle School Two was diminished when it was learned that the principal conducted one of the feedback conferences with both teachers at the same time instead of one-on-one as instructed. Also, at the same school one of the teacher interviews could not be coordinated so the teacher provided the researcher written responses to the interview questions.

A portion of the research data was from the PATCH and surveys given to the participants. The researcher wanted the feedback conferences completed within one week of the data being provided to the principal and surveys completed within twenty-four hours of the feedback conferences. There were a couple of conferences that took place outside of the first week of receiving the data and surveys were not always completed within the twenty-four-hour window. These two delays may have caused some thoughts and feelings the participants had during the feedback conference to dissipate or not be recorded.

Lastly, the researcher initially wanted to compare individual student achievement levels from the North Carolina End-of-Grade assessment in grade five mathematics from 2015-16, the student benchmark assessment projected achievement level in mathematics from all three student benchmark assessments from 2016-17, and the North Carolina End-of-Grade assessment in grade six mathematics from 2016-17 to determine the impact the principal feedback conferences had on individual students. To get permission to use the individual student achievement levels from the North Carolina End-of-Grade assessment required permission from Duke University's Center

for Child and Family Policy's North Carolina Education Research Data Center for the official data collected by North Carolina Department of Public Instruction. The turnaround time to receive the data is between nine and ten months. This scenario would not work with the researcher's timeline and completion of the dissertation.

### **Recommendations for Practice**

Through the implementation of the Transformational Feedback Model (TFM) the researcher learned that school leaders and teachers both want to experience success. For school leaders, they want to see students to be instructed by strong instructional leaders in the classroom and want their teachers to enjoy their work and improve their craft. Teachers also want the students they teach to learn and demonstrate improvement. They also want to be feel satisfaction in their job performance and be noticed by their school leaders for the work they are doing in their classroom.

The feedback conferences provide (a) the school leaders the opportunity to sit down with the teacher to discuss student assessment results and develop a plan of action to improve or continue moving forward, (b) the teacher the opportunity to reflect on their own practices to adjust their instruction, and (c) allow both school leaders and teachers the opportunity to have conversations focused on the teacher and how they can be supported.

Using the PATCH gives the feedback conferences structure. School leaders can provide the teacher a written communication of what was discussed in the conference, so the teacher can reflect on what the school leader has provided as feedback orally after the conference is completed. This written communication allows the teacher to have time to internalize the information conveyed to them without getting upset or discouraged.

To support the implementation of the feedback conferences and the TFM, three areas should be considered by a state and/or district. Those areas are (a) policy development, (b) organizational management, and (c) human resource management. Further discussion of what needs to be considered and put into place within the organization are discuss in length below.

### **Policy Development**

Implementing feedback conferences into all schools across North Carolina as a policy would benefit teachers and students. Many districts in North Carolina already use a third-party vendor to provide district-wide student benchmark assessments and the North Carolina Department of Public Instruction, starting in the 2017-2018 school year will begin to offer districts if they would like three benchmark assessments called NC Check-Ins to support districts in their efforts to improve teacher instruction and student performance (North Carolina Department of Public Instruction, 2017a).

The idea of this policy is to improve student performance and teacher instruction in the classroom with the help of specific feedback to teachers on their student's performance on benchmark assessments. The benefit of this policy is that it gives school leaders and teachers the opportunity to reflect on what is going well, what needs to improve, and how to go about improving with regards to instruction. By sitting down one-on-one to discuss the teacher's benchmark results, the benchmark becomes a valuable tool in the improvement of the teacher and not just another way to play "gotcha" with teachers.

**Benefits and burdens.** This policy provides both benefits and burdens to those effected by the policy. Teachers would be getting the benefit of individualized feedback from benchmark data. The burden would be on the school leaders to have the one-on-one conferences with each

teacher in their school after each round of benchmark results. In addition, both the school leader and the teacher may view the feedback conferences as just another task that must be completed.

**Implied or stated goals achieved.** The two goals in using assessments is to assess students so that school leaders and teachers (a) have an accurate picture of where each student is in his or her understanding of the intended curriculum, and (b) how well the teacher's taught curriculum aligns with the intended curriculum. Having school leaders sit down and have individualized conferences with each teacher to give feedback, my policy can ensure that the teacher understands how well he or she did in relation to his or her stated goals.

**Tools intended to change the behavior.** One of the most effective ways for people to change is to be given individualized and specific feedback on how they can improve. The problem of practice-oriented policy implemented addresses that need. During the feedback conferences, school leaders can give the teacher suggestions that may bring about positive change in his or her instruction which may lead to improved student performance.

**A means to an end.** The suggested policy brief (see Appendix AC) provides a means to an end. Schools today must continue to improve performance every year or face scrutiny from district leadership. This policy supports a structure that provides the opportunity for school leaders and teachers to continuously improve and refine their craft to benefit students. Feedback has one of the highest effect sizes of any intervention oriented to improving student learning (Hattie, 2009). Giving teachers the feedback on benchmark assessments so they can improve their instruction is vital for teacher growth. In general people want to grow and improve at their job. Giving feedback boosts teacher vitality and reduces teacher burnout.

**Implementation structure.** The implementation structure of this policy is concentrated at the school level. School leaders are responsible for carrying out the policy of feedback after

benchmark assessment data has been provided. School leaders already do something similar with post conferences after observations. In this case, after benchmark results have been given, school leaders could upload their feedback into a system like the teacher evaluation instrument already used by North Carolina (North Carolina Department of Public Instruction, n.d.a). This way, the feedback is kept for documentation and would help show that school leaders have provided additional support if there is a case in which a school or district is looking at dismissal of a teacher based on performance.

### **Organizational Management**

Morgan (2006) compared organizations to cultures. For an organization to be successful, a culture must be cultivated by its leader. In schools, the “tilling and developing” (Morgan, 2006, p. 116) of the culture is done by the school leaders. The problem of practice of this study is focused on establishing a culture within the school by school leaders to use results on student benchmark assessments to provide timely, individualized feedback to teachers on their instruction. For the culture of the organization to develop and grow the TFM is a way to support the leader in their campaign to progress the organization by developing, growing, and spreading the culture necessary for success.

**Developing a culture.** School leaders lack the understanding of how to use student benchmark assessment (Stiggins, 2002). To develop a successful school culture that uses student benchmark assessment data correctly, school leaders must be the data and instructional leader. School leaders must understand how to improve instruction and be able to communicate the change needed for improvement, have a vision of what instruction and curriculum alignment looks like, effectively discuss how to accomplish the goals of the teacher and the school, and

what the culture and expectations of a school that focuses on improving teacher instruction and student performance.

Providing feedback to teachers links the data results teachers receive on student performance results to the actions of feedback to improve instruction and student performance in the classroom. Giving structured and specific feedback on the part of the school leader builds capacity in the teacher so they can use the feedback to improve their own instructional practices which will lead to student performance improvement.

***Fertilizing trust.*** The environment must be positive for trust to grow. Trust builds the relationships necessary for organizations to prosper. The establishment and cultivation of trust is “an essential element in vibrant, well-performing schools” (Tschannen-Moran & Gareis, 2015a, p. 257). To fertilize trust, the school leaders in the building must understand how to develop trust between themselves and the follower. Trust takes time and develops through strong communication.

Time is needed to establish trust, so goals can be reached (Tschannen-Moren, 2014). Trust builds in the feedback conferences through strong communication between the leader and the follower. Trust was found in the survey results and backs up previous research (Gregory, 2017; Tschannen-Moran, 2014; Tschannen-Moran & Gareis, 2015b). Feedback conferences carve out time for the leader and follower to have that conversation that is individualized and opens strong lines of communication between both individuals. The leader needs to value the feedback conferences and the time necessary to communicate and not see feedback conferences as another task that must be completed. The same can be said for the teacher and the value they place on the feedback conferences and not seeing these feedback conferences as another task to complete. The teacher needs to understand the value of the feedback conferences and how it

facilitates the building of trust between them and the school leader necessary for their work and the work of the entire organization to produce increases in student performance.

***Cultivating leaders.*** Leaders in schools are not limited to school administrators. Anyone in a school has the capacity to be a leader (Gregory, 2017). When teachers begin to exhibit leadership behaviors the instruction in their classroom is boosted which leads to increases in student performance. There is a relationship between the culture of a school and the leadership exhibited by teachers. Schools where teachers are leaders are ones that have cultures that are supportive and collaborative (Demir, 2014).

The leader must demonstrate support in their communication and their actions as well as allow the teacher to understand the partnership is a collaborative relationship and not a one-way street where the leader gives and the follower receives. Practices that develop teacher leaders is related to the positive connection found between the culture of a school and teacher leadership (Cansoy & Parlar, 2017).

***Growing a culture.*** Our schools need leaders who can grow a positive culture through their action and interactions with teacher because they understand their behavior in the school will be modeled by the teachers they lead. School leaders need to give feedback that gives teachers areas to work on, but more importantly give them positive reinforcement on what they are doing well with their data, their instruction, and their curriculum alignment. Positive reinforcement has influence on the motivation and performance of employees (Morgan, 2006) which leads to the growth of the individual and the organization.

School leaders must be able to use the student assessment data collected on student performance to have structured, timely conversations with teachers to discuss the student



assessment data and to develop a road map to improve student performance results on the next student benchmark assessment, thereby developing the culture they want to cultivate.

School leaders need to understand that the culture they establish tells everyone inside the organization and whoever from the outside interacts with the organization what they as the leaders believe. The vitality of the organization's health impacts the viability of the organization. A strong indicator of the health of the culture in an organization is the strength found in the school leader's ability to build relationships and establish trust.

A leader who is growing the "right culture" is one who sees importance in interpersonal relationships. Fullan (2002) argued that relationships build a foundation for year two and beyond for a leader. He went further in asserting the importance of relationship building when he suggested that leaders who can motivate and energize teachers can make a lasting effect on the overall outlook of the organization.

**Spreading a culture.** School leaders cannot spread the culture they desire for the school by themselves. They must empower teachers and they will do the work to spread the culture necessary for high achievement. Just like growing a culture, the leader must understand their practices are observed and modeled by the teachers. Teachers who are empowered as a result of the TFM and the feedback conferences will begin to demonstrate the same behaviors, practices, and actions in their classroom with their students.

### **Human Resource Management**

No matter the business sector the organization is in, the organization must be made up of skilled employees (Pil & Leana, 2009). For schools to have the skilled leaders and teachers, they must possess specific characteristics. Those characteristics are being reflective practitioners,

collaborators, trusting, and capacity building. To possess these skills the organization must invest in the human capital that are school leaders and teachers and the leader-follower relationship.

**Leader-follower relationship.** Leaders and followers must have a relationship in which they both work together where a leader will lead and a follower will follow. The leader-follower relationship needs personalized feedback for the follower on the strengths and weaknesses that are specific to them so they as professionals can grow, improve, and demonstrate mastery of their craft. The TFM is built upon this leader-follower relationship and the ability of both parties to build the relationship. Being able to reflect on the work done from their own perspective allows both parties to be agents for change. To be agents of change the leader-follower relationship must involve collaboration and trust. Collaborating makes both the leader and the follower part of the decision-making process which gives each a vested interest in the results. Trust must exist in the relationship because without it there is no relationship that is productive and focus on a goal for improvement.

**Collaborators.** The leader-follower relationship becomes stronger when both members of the relationship collaborate. Building collaboration between school leaders and teachers allow the two parties to communicate effectively and have a clear understanding of the expectations and culture school leaders want the organization to exhibit.

School leaders and teachers must work together to support the students in the school. The benefit of this collaboration for teachers is invaluable. Having the ability to work with their leader will bring about stronger ties and lead to higher achievement (Pil & Leana, 2009).

**Trust.** Trust is at the root of any strong relationship that has a goal of helping students succeed (Goddard, Tschannen-Moran, & Hoy, 2001). Trust increases team effectiveness and collaboration (Hallam et al., 2015). Any relationship that is built to make a difference must

include a high level of trust. Without a high level of trust, teams are not able to improve outcomes. A leader-follower relationship must take place in an atmosphere that is trustworthy, so teachers are vulnerable enough to discuss issues going on in their classroom and seek guidance from their leader.

**Professional educator systems.** All educators in North Carolina are evaluated based on the professional educator evaluation system. All three systems; superintendents and district leadership, principals and assistant principals, and teachers intended purpose is to assess performance in relation to the standards and to serve as a development model for individual growth and development for the practitioner (North Carolina Department of Public Instruction, n.d.d). The TFM supports the standards and sub-standards established to shape districts and school.

***Superintendents and district leadership.*** School boards evaluate superintendents in North Carolina on the professional educator evaluation system. A superintendent who uses the TFM as they work with district leaders and principals will demonstrate the seven standards. The seven standards are (a) strategic leadership; (b) instructional leadership; (c) cultural leadership; (d) human resource leadership; (e) managerial leadership; (f) external development leadership; and (g) micro-political leadership. Under each standard are sub-standards that make up the actions that must be demonstrated to promote the standard (see Appendix AD). Table 28 shows how the behaviors, practices, and actions of the TFM meet the standards and sub-standards of the evaluation process.

***Principals and assistant principals.*** Superintendents evaluate principals and principals evaluate assistant principals in North Carolina on the professional educator evaluation system. A principal or assistant principal who uses the TFM as they work with teachers will demonstrate

Table 28

*North Carolina Superintendent Evaluation Process and the Connection to the TFM*

Standard	Evaluation		Transformational Feedback Model Components		
	Sub-Standards		Behaviors	Practices	Actions
Strategic	<ul style="list-style-type: none"> <li>*District Strategic Plan</li> <li>*Leading Change</li> <li>*Distributive Leadership</li> </ul>		<ul style="list-style-type: none"> <li>*Reflection</li> <li>*Goals</li> </ul>	<ul style="list-style-type: none"> <li>*Data</li> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Effective Communication</li> </ul>
Instructional	<ul style="list-style-type: none"> <li>*Teaching and Learning</li> </ul>		<ul style="list-style-type: none"> <li>*Trust</li> <li>*Reflection</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Developing a Culture</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>*Collaborative Work Environment</li> <li>*Acknowledge Failures; Celebrates Accomplishments and Rewards</li> <li>*Efficacy and Empowerment</li> </ul>		<ul style="list-style-type: none"> <li>*Trust</li> <li>*Vitality</li> <li>*Reflection</li> </ul>	<ul style="list-style-type: none"> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Shared Vision</li> <li>*Developing a Culture</li> </ul>
Human Resource	<ul style="list-style-type: none"> <li>*Professional Development/Learning Communities</li> <li>*Recruiting, Hiring, and Mentoring Staff</li> <li>*Teacher and Staff Evaluation</li> </ul>		<ul style="list-style-type: none"> <li>*Trust</li> <li>*Vitality</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> </ul>	<ul style="list-style-type: none"> <li>*Developing a Culture</li> </ul>

Table 28 (continued)

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Managerial	<ul style="list-style-type: none"> <li>*School Resources and Budget</li> <li>*Conflict Management and Resolution</li> <li>*Systemic Communication</li> </ul>	<ul style="list-style-type: none"> <li>*Reflection</li> <li>*Trust</li> </ul>	*Alignment	<ul style="list-style-type: none"> <li>*Developing a Culture</li> <li>*Effective Communication</li> </ul>
External Development	<ul style="list-style-type: none"> <li>*Parent and Community Involvement and Outreach</li> <li>*Federal, State, and District Mandates</li> </ul>	<ul style="list-style-type: none"> <li>*Trust</li> <li>*Goals</li> <li>*Vitality</li> </ul>	*Improvement	<ul style="list-style-type: none"> <li>*Effective Communication</li> <li>Shared Vision</li> </ul>
Micro-political		<ul style="list-style-type: none"> <li>*Trust</li> <li>*Reflection</li> <li>*Vitality</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Improvement</li> </ul>	*Agents of Change

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Table 29

*North Carolina Principal and Assistant Principal Evaluation Process and the Connection to the TFM*

Standard	Evaluation	Transformational Feedback Model Components		
	Sub-Standards	Behaviors	Practices	Actions
Strategic	<ul style="list-style-type: none"> <li>*School Vision</li> <li>*Leading Change</li> <li>*School Improvement Plan</li> <li>*Distributive Leadership</li> </ul>	<ul style="list-style-type: none"> <li>*Reflection</li> <li>*Goals</li> <li>*Trust</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Data</li> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Effective Communication</li> <li>*Shared Vision</li> </ul>
Instructional	<ul style="list-style-type: none"> <li>*Learning and Teaching, Curriculum, Instruction, and Assessment</li> <li>*Instructional Time</li> </ul>	<ul style="list-style-type: none"> <li>*Trust</li> <li>*Reflection</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Developing a Culture</li> </ul>
Cultural	<ul style="list-style-type: none"> <li>*Collaborative Work Environment</li> <li>*School Culture and Identity</li> <li>*Acknowledge Failures; Celebrates Accomplishments and Rewards</li> <li>*Efficacy and Empowerment</li> </ul>	<ul style="list-style-type: none"> <li>*Trust</li> <li>*Vitality</li> <li>*Reflection</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Improvement</li> </ul>	<ul style="list-style-type: none"> <li>*Agents of Change</li> <li>*Shared Vision</li> <li>*Developing a Culture</li> </ul>

Table 29 (continued)

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Human Resource	<ul style="list-style-type: none"> <li>*Professional Development/Learning Communities</li> <li>*Recruiting, Hiring, and Mentoring Staff</li> <li>*Teacher and Staff Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>*Trust</li> <li>*Vitality</li> </ul>	*Alignment	*Developing a Culture
Managerial	<ul style="list-style-type: none"> <li>*School Resources and Budget</li> <li>*Conflict Management and Resolution</li> <li>*Systemic Communication</li> <li>*School Expectations for Students and Staff</li> </ul>	<ul style="list-style-type: none"> <li>*Reflection</li> <li>*Trust</li> </ul>	*Alignment	<ul style="list-style-type: none"> <li>*Developing a Culture</li> <li>*Effective Communication</li> </ul>
External Development	<ul style="list-style-type: none"> <li>*Parent and Community Involvement and Outreach</li> </ul>	<ul style="list-style-type: none"> <li>*Trust</li> <li>*Goals</li> <li>*Vitality</li> </ul>	*Improvement	<ul style="list-style-type: none"> <li>*Effective Communication</li> <li>*Shared Vision</li> </ul>
Micro-political		<ul style="list-style-type: none"> <li>*Trust</li> <li>*Reflection</li> <li>*Vitality</li> </ul>	<ul style="list-style-type: none"> <li>*Alignment</li> <li>*Improvement</li> </ul>	*Agents of Change

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the seven standards. The seven standards are (a) strategic leadership; (b) instructional leadership; (c) cultural leadership; (d) human resource leadership; (e) managerial leadership; (f) external development leadership; (g) micro-political leadership. Under each standard are sub-standards that make up the actions that must be demonstrated to promote the standard (see Appendix AE). Table 29 shows how the behaviors, practices, and actions of the TFM meet the standards and sub-standards of the evaluation process.

### **Fiscal Management**

For the TFM and the feedback conferences to be implemented in a district or across the entire state with fidelity, there would have to be a professional development component. For the professional development to be effective, school leaders would need to be trained on the behaviors, practices, and actions of the TFM, the value of feedback, the way people receive, except, and perceive feedback, and the structure of the feedback conferences. This initial professional development would take two to three days to complete which would provide time for the school leaders to understand all aspects and can practice giving feedback and understanding how the receiver accepts the feedback both emotionally and intellectually. Follow-up professional development would be necessary throughout the first year of implementation to ensure fidelity and support school leaders as they begin their feedback conferences. Two to three follow-up sessions would be necessary. These follow-up sessions would allow school leaders to share experiences and what worked, did not work, or help they needed to improve the feedback conference experience for the teacher.

### **Recommendations for Stakeholders**

Implementing the Transformational Feedback Model at all levels within a school district is a way for states, districts, and school leaders to provide leadership that promotes change,



vision, communication, and establishing expectations and a culture of high performance. The TFM works at any level of leadership and will support the relationship of the leader and the follower as well as meet the professional standards in the evaluation process for superintendents, school administrators, and teachers.

### **State Leaders**

Legislators, State Boards, and State Superintendents seek to improve teaching and student achievement. Through policy and funding, state leaders can address the different aspects of teaching and instruction. One-way state leaders can support reform to improve teaching and learning in schools and districts is through the implementation of the TFM and the current teacher bonus money.

State leaders have implemented merit pay over the last couple of school years. As the leaders of the educational system, state leaders could use the TFM to promote teacher professional growth as part of SB 169: Teacher Excellence Bonus Expansion (North Carolina General Assembly, n.d.e) using district approved student benchmark assessments or the North Carolina Department of Public Instruction created NC Check-Ins. Merit pay would incentivize both school leaders and teachers to work on improving instruction and student performance.

### **School Boards, Superintendents and District Leadership**

In today's educational environment it is vital that school boards, superintendents and district leaders hire leaders that can lead districts and schools to continuous improvement. Unfortunately, it is becoming difficult to fill all those open positions with leaders who have the skills necessary to move schools forward (Ash, Hodge, & Connell, 2013).

School leaders must understand how to transform schools to promote learning and improved student performance (Waters, Marzano, & McNulty, 2004). Ash and Hodge (2012)

listed five critical practices effective school leaders must be doing in their school. Those critical practices are (a) focus on the direction, (b) build a powerful organization, (c) give life to data, (d) ensure student-focused vision and action, and (e) lead learning. All five critical practices identified by Ash and Hodge are woven into the TFM.

Superintendents and district leaders need to model the components of the TFM when they are working with school leaders at the building level. The TFM promotes the leader-follower relationship and giving people regardless of their position within the organization the opportunity to receive feedback to improve is valuable.

### **School Administrators**

This study has been focused on the school leaders and the implementation of the TFM. For school leaders to conduct feedback conferences with every teacher would be an impossible task depending on the size of the staff and the day to day events that take place at a school. Other school leaders in the building like the assistant principal should implement this model into their own leadership skill set. Assistant principals are an extension of the principal. Using the TFM, the assistant principal or another school leader in the building can help promote the culture the principal is trying to create.

Assistant principals are hopefully going to become leaders of a building. They need to understand how a leader can be effective and improve the performance and instruction of a school. Using the TFM will support the assistant principal in what to do to be effective and bring about necessary change in their school when they become a principal.

### **Teachers**

Teachers want to improve their craft and make a difference in a student's life. Unfortunately, the job of a teacher is stressful, and support is necessary. The support teachers

need is from school leaders. The TFM provides the support that teachers need to be energized to come to work, be open to new ideas, and provided the focus and direction needed to improve.

School leaders need to take the time to meet with teachers and develop a relationship that the teacher can build trust with them. Through the research and the study, the level of trust the teacher and principal had for one another was a determining factor in the success the teacher felt. Teachers need to know the school leaders are there to support them from the first day to the last day of the school year as it relates to improving student performance and instructional practices.

**Instructional coaches.** Instructional coaches work directly with school administrators to ensure curriculum alignment and instructional practices are in place for teachers to be successful and students to perform at a high level. Coaches are viewed as leaders in the school and are an important aspect with relation so the feedback conferences.

Instructional coaches are vital to the vision the district and school leaders are seeking for their organization or school. As you get to larger and larger schools, it becomes more difficult for school administrators to have enough time to meet one on one with every teacher on a consistent basis to facilitate the feedback conferences. The larger school does not exclude the administrators from this process, but is understood that the administrators focus will be on teachers instructing core subject areas that are apart of state and/or federal accountability reporting.

Instructional coaches in many instances have stronger relationships with teachers because they are not an evaluator and are able to know the teacher on a more personal level. This relationship allows the instructional coach to easily make a connection that establishes trust and vitality in their relationships with individual teachers. Coaches can then give individualized

feedback that promotes reflection and goal setting in a comfortable setting without the teacher fearing that they are being evaluated by their administrator.

Besides providing feedback using the TFM, the instructional coach can also be a support tool for the teacher after a feedback conference with a school administrator and help the teacher with alignment, instructional improvement, and interpreting data results.

**Mentors.** The role of mentors is another vital piece for school administrators in their work to develop a school of high performance. The mentor is a support pillar for the teacher to lean on as they learn the craft of teaching. The mentor's role in the feedback conferences is one to support the teacher afterwards. They can help move the teacher from understanding the feedback from an emotional perspective and begin to interrupt and reflect on the feedback from an intellectual perspective.

At the same time mentors can also sit down with school administrators to learn additional information the administrator may be observing or believes is vital for the teacher to improve instructionally discussed in the feedback conference that needs to be a focus of mentoring sessions.

**Teacher leaders.** North Carolina's Professional Standards for Teachers (North Carolina Department of Public Instruction, n.d.e) expect teachers to be leaders. Standard One is titled Teachers Demonstrate Leadership. Teachers are to demonstrate leadership in the school and in the teaching profession. The TFM allows teachers to move across the continuum from a teacher just learning their craft to a teacher who is reflecting on their craft and adjusting to becoming highly reflective and using their knowledge to lead other teachers.

Teacher leaders who are highly reflective in their work are using data to focus their instruction to improve their own effectiveness and the effectiveness of their colleagues,

establishing meaningful and positive relationships with the other teachers in the school and demonstrating and supporting other teachers in their own personal growth as educators.

## **Higher Education**

Colleges and universities have a role in supporting educators in understanding how to use student performance data. Many school administrators and teachers come out of higher education programs without the ability to use data effectively to make instructional changes in the classroom. If more graduates understand how to use student performance to make instructional changes, there would be more students in classrooms getting instruction that is individualized to meet the needs they have in the classroom.

**Principal Preparation Programs.** Graduate schools need to include course work that requires future school administrators to understand and use data to make instructional decisions. Many school administrators go into assistant principal and principal positions and do not understand data and how to have discussions using the results from student performance data.

Principal preparation programs spend time working with future graduates on instructional supervision and practices. During these courses, time needs to be spent on how to make changes to instructional practices or determining which areas of classroom instruction need to be addressed based on student performance data. These programs should spend as much time instructing on how to understand the student performance data as it relates to instruction as they do with evaluating teacher instruction.

**Teacher Preparation Programs.** Undergraduate programs for teachers need to prepare teachers on the skills necessary to review, reflect, and make instructional changes to their own teaching practices based on the student performance data collect. Beginning teachers need to know that student performance data allows them to understand if students understood concepts

taught which were assessed and if they need to make instructional changes within their classroom to better meet the needs of their students.

By taking the time in these preparation programs to teach data literacy, school administrators and teachers will have the skills needed to make more informed decisions about instruction based on student performance data. This approach will allow new teachers to have better success in their first couple of years in the profession and lead to more teachers staying in the profession and not suffering from burnout. School administrators would be able to demonstrate instructional leadership success from the start of their administrative careers and establish trust with their teachers that is a vital part of transformational improvement within the school.

### **Recommendations for Future Research**

Future research is needed based on the lessons learned from this study. For action research to strengthen then it needs replication in several different contexts (Stringer, 2007). The researcher recommends future studies that include: (a) using a larger sample size which may include multiple grade levels, subjects, and school levels, (b) studying the use of deliberate practice using the research of Ericsson (2004) as part of implementing the feedback given by the school leader during the feedback conferences to improve teacher instructional practices, and (c) the individual impact the feedback conferences had on student's whose teacher received the structured feedback.

In reflecting on the entire study, additional support and professional development is recommended for school leaders prior to the start of the implementation to ensure their understanding of feedback and the importance of the one-on-one feedback conference has over discussing feedback in groups. This approach may have helped the principals and teachers not

think the feedback conference was just another task to complete, but the task to complete that would greatly benefit their instruction.

### **Closing Word**

Our students and teachers need transformational leadership that can provide them with the necessary support to make the education of our students one that is fulfilling. We are losing effective teachers every year to dissatisfaction, burnout, and career changes. District and school leaders need a way to provide those teachers in our classrooms support to improve the performance of their students and provide them with the satisfaction that what they are doing in the classroom is working or improving.

Using data does not improve results, how organizations use data to improve instruction improves performance. The purpose of feedback is to provide direction to achieve or maintain a high level of performance (Dean et al., 2012). The same thing can be said about the role of leaders in a school. They are the one who provides direction for achievement and to maintain a high level of performance throughout the entire building.

It is the belief of the researcher that leaders must provide a way to move teachers through three stages of a practitioner. Those three stages are consumer, reflector, and entrepreneur. The TFM allows teachers to move across the practitioner continuum from a consumer to a reflector to an entrepreneur.

Consumer practitioners use data and other observations to inform instructional practices. Practitioners who are consumers are passive in their development. Being a consumer practitioner does not mean the teacher cannot learn. The teacher has not had the opportunity or modeling necessary to move beyond the consumer stage. A school leader is the person who can provide the

support necessary to change how the consumer practitioner interacts with their data, begins to reflect on their instruction, and uses feedback from leaders to support and enhance reflections.

Reflective practitioners use data, their own observations, and observations of others to inform instructional practices. Expert professionals exhibit the ability to reflect on their practice (Schon, 1983). Leaders of organizations need to incorporate reflection as a part of the employees training and development. Reflection allows an individual to improve the depth and relevance of their understanding (Moon, 2004) and allows the individual to be a reflective practitioner.

Being reflective practitioners, school leaders and teachers can understand the change that needs to take place. By understanding the change, school leaders and teachers can make clear and decisive decisions regarding the data and adjust instructional practices. Once teachers become highly-skilled reflective practitioners who routinely use data, personal and leader observations, and additional vital information gathered, the leader can empower the teacher to become an entrepreneurial practitioner who takes the initiative and risk to push their own limits to improve their practices and the instruction received by the student within the parameters set by the leader, district, or other agencies.

To be an entrepreneurial practitioner means the person and in this case the teacher, can be creative as it relates to their instruction. Creativity in this arena means the teacher is pushing the limits of their ability to meet the individual needs of each student in ways they never thought about or have been done to support the individual student's learning. Teacher leaders who are entrepreneurial in their work are using data to focus their instruction to improve their own effectiveness and the effectiveness of their colleagues, establishing meaningful and positive relationships with the other teachers in the school and demonstrating and supporting other teachers in their own personal growth as educators.



To promote the entrepreneur practitioner, the teacher must have a positive leader-follower relationship for improvement, a focus on improvement, and be engaged in the process of improvement. The way in which the school leaders go about this cultural change within a school is through providing individualized feedback that is purposeful using the Transformational Feedback Model.

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## APPENDIX A: INSITUTIONAL REVIEW BOARD APPROVAL



**EAST CAROLINA UNIVERSITY**  
**University & Medical Center Institutional Review Board Office**  
4N-70 Brody Medical Sciences Building · Mail Stop 682  
600 Moye Boulevard · Greenville, NC 27834  
Office 252-744-2914 [☎](mailto:irb@ecu.edu) · Fax 252-744-2284 [☎](mailto:irb@ecu.edu) · [www.ecu.edu/irb](http://www.ecu.edu/irb)

### Notification of Initial Approval: Expedited

**From:** Social/Behavioral IRB  
**To:** [David Cooper](mailto:David.Cooper@ecu.edu)  
**CC:** [Hal Holloman](mailto:Hal.Holloman@ecu.edu)  
**Date:** 12/20/2016  
**Re:** [UMCIRB 16-001959](#)  
Principals using the Transformational Feedback Model to Support Student Performance

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 12/20/2016 to 12/19/2017. The research study is eligible for review under expedited category #6, 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
A.Cooper_Dissertation v8.0_IRB COPY.docx	Study Protocol or Grant Application
Consent Letter_A.Cooper-Principal.docx	Consent Forms
Consent Letter_A.Cooper-Teacher.docx	Consent Forms
Data Collection Sheet.xlsx	Data Collection Sheet
PATCH Protocol	Additional Items
Principal Interview Questions	Interview/Focus Group Scripts/Questions
Survey Questions_Principal.docx	Surveys and Questionnaires
Survey Questions_Teachers.docx	Surveys and Questionnaires
Teacher Interview Questions	Interview/Focus Group Scripts/Questions

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

## **APPENDIX B: DISTRICT PERMISSION TO CONDUCT RESEARCH STUDY**

November 17, 2016

Dr. Pascal Mubenga

Superintendent, Franklin County Schools

53 W. River Rd., Louisburg, NC 27549

RE: Permission to Conduct Research Study

Dear Dr. Mubenga:

I am writing to request permission to conduct a research study within the Franklin County Schools. I am currently enrolled in the Educational Leadership Program at East Carolina University, under the direction of Dr. Harold Holloman, Ph. D., and in the process of writing my dissertation. The study is entitled Principals using the Transformational Feedback Model to Support Student Performance.

I hope that you will allow me to conduct this study using the principals at Bunn Middle School and Cedar Creek Middle School and the two teachers at each school who teach grade six mathematics. Due to the nature of the study, the principals will participate in a training on giving feedback to teachers using the student benchmark results from the district-wide student benchmarks. If interested, the principals and teachers will participate in a total of three feedback conferences with each taking place after results from the student benchmarks are provided. After each feedback conference both the principal and teacher will participate in a survey on their experience and feelings of the feedback conference. At the end of the study, the principals and teachers will be interviewed on the impact the Transformational Feedback Model had on the feedback as it relates to improving student performance and teacher instruction.

The principals and teachers who volunteer to participate will also be given a consent form to sign and returned to the primary researcher (copy enclosed).

If approval is granted, participants will be contacted and provided the consent form. Times will be set up with the principals participating in the study to be trained on the Transformational Feedback Model and using the feedback protocol both of which were developed for this study. Principals and teachers participating will be provided an outline of what is expected and a timeline of events. Each feedback conference between the principal and each individual teacher will take no more than twenty minutes. Individual student results from each benchmark and their End-of-Grade results from the prior school year (grade five) and at the end of the 2016-2017 school year (grade six) will be collected as a part of the study. Once results from student benchmarks are provided to the principals they will need to take time prior to the feedback conference to complete the feedback protocol using the benchmark data reports provided by the benchmark vendor, TE-21 and the researcher to help structure the conference.

The surveys participants will complete after the feedback conference should take no more than ten minutes to complete. The survey results will be pooled for the study and individual results of student performance on benchmarks and state assessments along with principal/teacher surveys

will remain absolutely confidential. Should this study be published, only pooled results will be documented. No costs will be incurred by the school district, the participating schools, or the individual participants.

Your approval to conduct this study will be greatly appreciated. I will follow up with a conversation later next week and would be happy to answer any questions or concerns that you may have at that time. You may contact me at my email address: [cooperd04@students.ecu.edu](mailto:cooperd04@students.ecu.edu).

If you agree, kindly sign below and I will pick up the letter from your office when it is ready.

Sincerely,



D. Ashley Cooper

East Carolina University

Approved by:

Dr. PASCAL MWBENGA

Name (Print)

SUPERINTENDENT

Position Title

Pascal Mubenga

Signature

11-21-16

Date

## APPENDIX C: IDENTIFICATION OF LOW-PERFORMING SCHOOLS

### § 115C-105.37. Identification of low-performing schools.

(a) Identification of Low-Performing Schools. – The State Board of Education shall identify low-performing schools on an annual basis. Low-performing schools are those that receive a school performance grade of D or F and a school growth score of "met expected growth" or "not met expected growth" as defined by G.S. 115C-83.15.

(a1) Plan for Improvement of Low-Performing Schools. – If a school has been identified as low-performing as provided in this section and the school is not located in a local school administrative unit identified as low-performing under G.S. 115C-105.39A, the following actions shall be taken:

(1) The superintendent shall proceed under G.S. 115C-105.39.

(2) Within 30 days of the initial identification of a school as low-performing by the State Board, the superintendent shall submit to the local board of education a preliminary plan for improving both the school performance grade and school growth score, including how the superintendent and other central office administrators will work with the school and monitor the school's progress.

(3) Within 30 days of its receipt of the preliminary plan, the local board shall vote to approve, modify, or reject this plan. Before the local board votes on the preliminary plan, it shall make the plan available to the public, including the personnel assigned to that school and the parents and guardians of the students who are assigned to the school, and shall allow for written comments.

(4) The local board shall submit a final plan to the State Board within five days of the local board's approval of the plan. The State Board shall review the plan expeditiously and, if appropriate, may offer recommendations to modify the plan. The local board shall consider any recommendations made by the State Board and, if necessary, amend the plan and vote on approval of any changes to the final plan.

(5) The local board of education shall provide access to the final plan on the local school administrative unit's Web site. The State Board of Education shall also provide access to each low-performing school plan on the Department of Public Instruction's Web site.

(b) Parental Notice of Low-Performing School Status. – Each school that the State Board identifies as low-performing shall provide written notification to the parents and guardians of students attending that school within 30 days of the identification that includes the following information:

(1) A statement that the State Board of Education has found that the school has "received a school performance grade of D or F and a school growth score of "met expected growth" or "not met expected growth" and has been identified as a low-performing school as defined by G.S. 115C-105.37." The statement shall include an explanation of the school performance grades and growth scores.

(2) The school performance grade and growth score received.

(3) Information about the preliminary plan developed under subsection (a1) of this section and the availability of the final plan on the local school administrative unit's Web site.

(4) The meeting date for when the preliminary plan will be considered by the local board of education. G.S. 115C-105.37

(5) A description of any additional steps the school is taking to improve student performance. (1995 (Reg. Sess., 1996), c. 716, s. 3; 1997-221, s. 20(b); 1997-443, s. 8.45; 1998-59, s. 1; 2001-424, s. 29.4(a); 2015-241, s. 8A.4(b).)

## **APPENDIX D: IDENTIFICATION OF LOW-PERFORMING LOCAL SCHOOL**

### **ADMINISTRATIVE UNITS**

#### **§ 115C-105.39A. Identification of low-performing local school administrative units.**

(a) Identification of Low-Performing Local School Administrative Units. – The State Board of Education shall identify low-performing local school administrative units on an annual basis. A low-performing local school administrative unit is a unit in which the majority of the schools in that unit that received a school performance grade and school growth score as provided in G.S. 115C-83.15 have been identified as low-performing schools, as provided in G.S. 115C-105.37.

(b) Plan for Improvement of Low-Performing Local School Administrative Units. – Once a local school administrative unit has been identified as low-performing under this section, the following actions shall be taken:

(1) The superintendent shall proceed under G.S. 115C-105.39.

(2) Within 30 days of the identification of a local school administrative unit as low-performing by the State Board, the superintendent shall submit to the local board of education a preliminary plan for improving both the school performance grade and school growth score of each low-performing school in the unit, including how the superintendent and other central office administrators will work with each low-performing school and monitor the low-performing school's progress and how current local school administrative unit policy should be changed to improve student achievement throughout the local school administrative unit.

(3) Within 30 days of its receipt of the preliminary plan, the local board shall vote to approve, modify, or reject this plan. Before the local board votes on the plan, it shall make the plan available to the public, including the personnel assigned to each low-performing school and the parents and guardians of the students who are assigned to each low-performing school, and shall allow for written comments.

(4) The local board shall submit a final plan to the State Board within five days of the local board's approval of the plan. The State Board shall review the plan expeditiously and, if appropriate, may offer recommendations to modify the plan. The local board shall consider any recommendations made by the State Board and, if necessary, amend the plan and vote on approval of any changes to the final plan.

(5) The local board of education shall provide access to the final plan on the local school administrative unit's Web site. The State Board of Education shall also provide access to each low-performing local school administrative unit plan on the Department of Public Instruction's Web site.

(c) Parental Notice of Low-Performing Local School Administrative Unit Status. – Each local school administrative unit that the State Board identifies as low-performing shall provide written notification to the parents and guardians of all students attending any school in the local school administrative unit within 30 days of the identification that includes the following information:

(1) A statement that the State Board of Education has found that a majority of the schools in the local school administrative unit have "received a school performance grade of D or F and a school growth score of "met expected growth" or "not met expected growth" and have been identified as low-performing schools as defined by G.S. 115C-105.37." The statement shall also include an explanation of the school performance grades and school growth scores.

(2) The percentage of schools identified as low-performing.

- (3) Information about the preliminary plan developed under subsection (b) of this section and the availability of the final plan on the local school administrative unit's Web site.
- (4) The meeting date for when the preliminary plan will be considered by the local board of education.
- (5) A description of any additional steps the local school administrative unit and schools are taking to improve student performance.
- (6) For notifications sent to parents and guardians of students attending a school that is identified as low-performing under G.S. 115C-105.37, a statement that the State Board of Education has found that the school has "received a school performance grade of D or F and a school growth score of "met expected growth" or "not met expected growth" and has been identified as a low-performing school as defined by G.S. 115C-105.37." This notification also shall include the school performance grade and school growth score the school received and an explanation of the school performance grades and school growth scores. (2015-241, s. 8A.4(c).)



## APPENDIX E: NCDPI SCHOOL PERFORMANCE GRADES UPDATE

### PRESENTATION

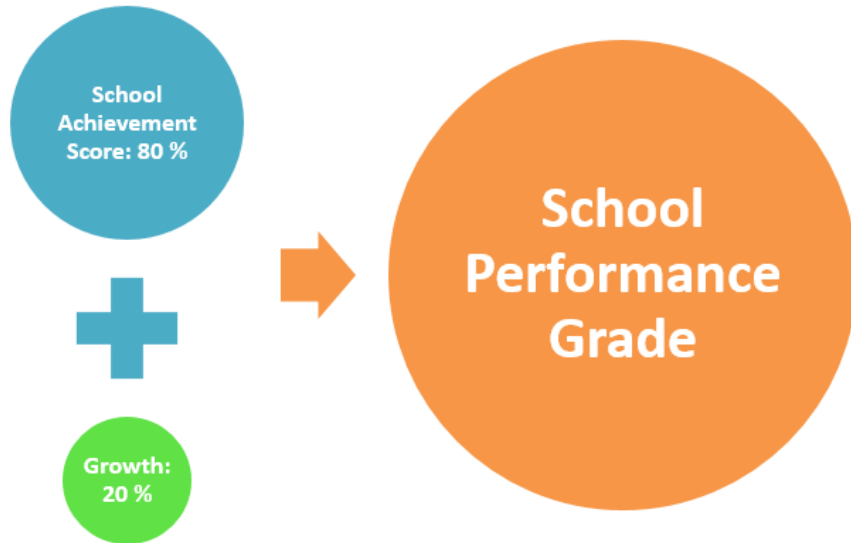


## School Performance Grades

- School Performance Grades
  - General Assembly law in 2012
  - The 2013 General Assembly session delayed reporting until no earlier than August 1, 2014
  - Based on the 2013-14 school year data



## School Performance Grades



## School Performance Grades - Indicators

### Elem/Middle



- EOG Mathematics
- EOG ELA/Reading
- EOG Science
- EOCs (middle)

### High Schools



- Math I
- English II
- Biology
- Math Course Rigor
- Graduation Rate
- The ACT
- ACT WorkKeys



## School Achievement Score

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- **Test Scores:** Percent of students who score at or above Achievement Level 3
  - End-of-Grade Tests
  - End-of-Course Tests
- **Graduation Rate:** Percent of students who graduate in four years (Cohort Graduation Rate)
- **Math Course Rigor:** Percent of graduates who successfully complete Math III (Algebra II, Integrated Math III, Math III)
- **ACT:** Percent of 11<sup>th</sup> grade students who score 17 or above (the UNC System's minimum composite score requirement)
- **ACT WorkKeys:** Percent of graduates that are CTE Concentrators and achieve a Silver Certificate or above



## Growth

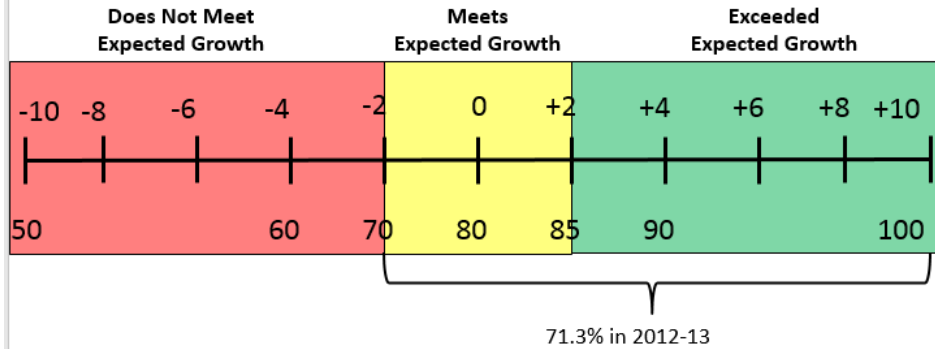
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- **Education Value-Added Assessment System (EVAAS)**
  - End-of-Grade Tests
  - End-of-Course Tests
- SPG Uses School Accountability Growth Index
- Reported for each school
  - Exceeds Expected Growth
  - Meets Expected Growth
  - Does Not Meet Expected Growth



## Growth Conversion

- Index range constrained at -10 to +10
- Index value converted to 50-100 point scale



## Elementary/Grade School: Achievement Calculation

3-8 Reading	+	3-8 Math	+	5&8 Science	+	Algebra I	+	Biology	+	English II	=	Points
% Proficient		% Proficient		% Proficient		% Proficient		% Proficient		% Proficient		
<hr/>												
		# of Available										
		Indicators										
73.1%	+	83.6%	+	60.1%	+	93.8%	+	0%	+	0%	=	77.7
(294/402)		(336/402)		(98/163)		(30/32)		(0/0)		(0/0)		
<hr/>												
		4										

$$73.1 + 83.6 + 60.1 + 93.8 = 310.6 \text{ and } 310.6 \div 4 = 77.65 \approx 77.7$$



## Elementary/Grade School: Grade Letter Determination

$$\left( \begin{array}{c} \text{Achievement} \\ \text{Score} \end{array} \times 0.8 \right) + \left( \begin{array}{c} \text{Growth} \\ \text{Points} \end{array} \times 0.2 \right) = \begin{array}{c} \text{School} \\ \text{Performance} \\ \text{Grade Points} \end{array}$$

$$\left( 77.7 \times 0.8 \right) + \left( 91.3 \times 0.2 \right) = 80.5$$

$$(62.2) + (18.3) = 80.5$$

80.5pts=letter grade of "C"



## High School: Achievement Calculation

$$\begin{array}{ccccccc} \text{Algebra I} & + & \text{English II} & + & \text{Biology} & + & \text{FRC} & + & \text{ACT} & + & \text{ACT WorkKeys} & + & \text{Grade Rate} \\ \% \text{ Proficient} & & \% \text{ Proficient} & & \% \text{ Proficient} & & \% \text{ Math III} & & \% \text{ Met 17} & & \% \text{ Silver} & & \% \text{ 4yr} \end{array} \quad = \text{Points}$$

$$\begin{array}{ccccccc} & & & & \text{\# of Available} & & & & & & & & \\ & & & & \text{Indicators} & & & & & & & & \\ 85.7\% & + & 89.7\% & + & 82.8\% & + & 63.4\% & + & 69.1\% & + & 85.7\% & + & 98.8\% \\ (90/105) & & (78/87) & & (77/93) & & (52/82) & & (56/81) & & (42/49) & & (80/81) \end{array} \quad = 82.2$$

$$7$$

$$85.7 + 89.7 + 82.8 + 63.4 + 69.1 + 85.7 + 98.8 = 575.2 \text{ and } 575.2 \div 7 = 82.17 \approx 82.2$$



## High School: Grade Letter Determination

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**Achievement Score 80 or above AND “Met Growth”**

Achievement Score = School Performance Grade Points

82.2 = 82.2

**82.2pts=letter grade of “C”**

# APPENDIX F: 2015–16 SCHOOL PERFORMANCE GRADES (A–F) FOR NORTH CAROLINA PUBLIC SCHOOLS



## 2016 READY Accountability Background Brief

This briefing paper provides basic background information to help you understand the 2015-16 school accountability data, including how the test data are used.

The 2015-16 school year was the fourth year under the state's READY accountability model.

The READY initiative has three components:

- *A Standard Course of Study* focused on the most critical knowledge and skills that students need to be successful at the next grade level and after high school.
- End-of-grade and end-of-course assessments with rigorous open-ended questions and real-world applications that require students to express their ideas clearly with supporting facts.
- An accountability model that measures how well schools are doing to ensure that students are career and college ready upon high school graduation.

Data being released to State Board of Education members at their Sept. 1 meeting will provide insight into student academic progress and school performance in 2015-16. This includes student performance on end-of-grade and end-of-course assessments based on five achievement

levels, overall student proficiency on end-of-grade and end-of-course assessments, academic growth, School Performance Grades, and graduation rates.

With respect to School Performance Grades, schools will be graded using a 15-point grading scale, and grades will be based on the school's achievement score (80 percent) and students' academic growth (20 percent).

Information contained in this background brief will provide more details into the state's READY accountability model.

### Achievement Levels

To better report students' career and college readiness, the North Carolina Department of Public Instruction uses a five-level achievement scale:

**Achievement Level 1: Limited Command**

**Achievement Level 2: Partial Command**

**Achievement Level 3: Sufficient Command**  
(Grade-Level Proficiency)

**Achievement Level 4: Solid Command**  
(Career and College Readiness)

**Achievement Level 5: Superior Command**  
(Career and College Readiness)

Achievement Level 3 identifies students who have a sufficient command of grade-level knowledge and skills in the tested content areas (English language arts, math and science) to move on to the next grade but who may need additional support to be on track for career and college readiness. Achievement Levels 4 and 5 indicate students are on track to be career and college ready by the time they graduate from high school.

### TIMELINE

#### June 30, 2016

Local school systems submit accountability data to the NCDPI

#### July-August 2016

NCDPI engages in data checks for local districts

#### September 1, 2016

End-of-grade proficiency, end-of-course proficiency, high school indicators, academic growth, School Performance Grades, as well as graduation rate presented at State Board of Education meeting

#### Fall 2016

NC School Report Cards released



Here are the state assessments that students take:

GRADE	ENGLISH LANGUAGE ARTS (ELA)	MATHEMATICS	SCIENCE	OTHER
3	Beginning-of-Grade/End-of-Grade	End-of-Grade	–	–
4	End-of-Grade	End-of-Grade	–	–
5	End-of-Grade	End-of-Grade	End-of-Grade	–
6	End-of-Grade	End-of-Grade	–	–
7	End-of-Grade	End-of-Grade	–	–
8	End-of-Grade	End-of-Grade	End-of-Grade	–
9	–	Math I	–	–
10	English II	–	Biology	ACT Plan
11	–	–	–	ACT
12	–	–	–	ACT WorkKeys

Here are the measures that are included in North Carolina's reports:

ELEMENTARY/MIDDLE SCHOOL INDICATORS			HIGH SCHOOL INDICATORS	
3rd Grade ELA	3rd Grade Math	5th Grade Science	<b>ASSESSMENTS</b>	<b>OTHER MEASURES</b>
4th Grade ELA	4th Grade Math	8th Grade Science	Biology	4-year and 5-year Graduation Rates
5th Grade ELA	5th Grade Math	Math I	English II	Successful completion of high-level math courses
6th Grade ELA	6th Grade Math	Biology	Math I	
7th Grade ELA	7th Grade Math		ACT	
8th Grade ELA	8th Grade Math		ACT WorkKeys	

### Annual Measurable Objectives

States are not required to report Annual Measures of Objectives during the transition from *No Child Left Behind* to *Every Student Succeeds Act* (ESSA) (2014-15 – 2016-17); however, beginning in 2017-18, North Carolina's ESSA plan will include long-term goals for closing achievement gaps and interim targets for achieving these goals.

### Read to Achieve

The goal of the state's Read to Achieve program is to ensure that every third grader is reading at or above grade level. Students who are not reading at grade level by the end of third grade receive extra support, including reading camps, multiple opportunities to show proficiency, guaranteed uninterrupted blocks of reading time, and intensive reading interventions so that they will be more prepared to do fourth-grade work.

At their October meeting, State Board of Education members will receive a report on the success of the program's third year that will include:

- the number and percentage of students demonstrating and not demonstrating proficiency on end-of-grade;
- the number and percentage of students who take and pass an alternative assessment;
- the number and percentage of students retained (this would include students who are retained in third grade and students placed in fourth grade with a retained reading label); and
- the number and percentage of students with a Good Cause Exemption (this would include portfolio, limited English proficient, exceptional children and multiple retentions).

### School Performance Grades

The 2015-16 school year is the third year for which public schools and charter schools will receive a letter grade under the General Assembly's A-F School Performance Grades. The grades will be based on the school's achievement score and on students' academic growth. The final grade will continue to be based on a 15-point scale.

Schools also have the opportunity to earn an A<sup>+NG</sup> for their School Performance Grade. Schools receiving this grade earned an A and did not have a significant achievement gap that was larger than the largest state average achievement gap. This additional designation was added in 2014-15 to address federal requirements that the highest designation not be awarded to schools with significant achievement gaps.

### K-8 READY Accountability Model Components

- Statewide accountability testing is done in grades 3-8 only. For students in grades K-2, special age-appropriate assessments are used to chart students' academic progress and are not included in the READY accountability model.
- End-of-grade assessments in reading and mathematics in grades 3-8 and science assessments in grades 5 and 8 are counted for academic growth and performance. NCEXTEND1 is an alternate assessment for certain students with disabilities and is included in performance only, not in growth.



## High School READY Accountability Model Components

- **End-of-Course Tests** – Student performance on three end-of-course assessments: English II, Biology and Math I is counted for growth and performance. NCEXTEND1 is an alternate assessment for certain students with disabilities and is included in performance only, not in growth.
- **ACT** – The percentage of students meeting the UNC system admissions minimum requirement of a composite score of 17.
- **Graduation Rates** – The percentage of students who graduate in four years or less and five years or less.
- **Math Course Rigor** – The percentage of graduates taking and passing high-level math courses such as Math III.
- **ACT WorkKeys** – For Career and Technical Education concentrators (students who have earned four CTE credits in a career cluster), the percentage of concentrator graduates who were awarded at least a Silver Level Career Readiness Certificate based on ACT WorkKeys assessments.
- **Graduation Project** – The accountability report will note whether a school requires students to complete a graduation project.

## Understanding the Two Accountability Measures

- **Performance** – The percentage of students in the school who score at Achievement Levels 1-5. Achievement Level 3 is considered grade-level proficiency and Achievement Levels 4 and 5 are considered on track to be college and career ready.
- **Growth** – An indication of the rate at which students in the school learned over the past year. The standard is roughly equivalent to a year's worth of growth for a year of instruction. Growth is reported for each school as Exceeded Growth Expectations, Met Growth Expectations, or Did Not Meet Growth Expectations.

## How Test Data are Used

The North Carolina Department of Public Instruction and local school districts use end-of-grade (EOG) and end-of-course (EOC) test data in a number of ways.

- **Meeting Federal Reporting Requirements** – At the state level, student performance on EOG/EOC assessments must be reported to the US Department of Education as required under the *Every Student Succeeds Act* (ESSA) (formerly known as *No Child Left Behind* (NCLB)). As the state develops North Carolina's ESSA plan, consideration will be given regarding reporting of reading, mathematics and science proficiency rates.

States are not required to report Annual Measures of Objectives during the transition from NCLB to ESSA (2014-15 – 2016-17); however, beginning in 2017-18, North Carolina's ESSA plan will include long-term goals

for closing achievement gaps and interim targets for achieving these goals.

- **Providing READY Accountability Reporting** – The State Board of Education's READY Accountability Model requires that student performance on EOG/EOC assessments be reported by school, district and state. The information also is reported by assessment, grade and student group.
- **Assigning School Performance Grades** – Since 2013-14, student performance data have been used to assign letter grades to North Carolina public schools as required by the NC General Assembly. The grades are based on each school's achievement score (80 percent) and each school's students' academic growth (20 percent).

The total school performance score is converted to a 100-point scale and then used to determine a school performance grade of A, B, C, D or F. The final grade is based on a 15-point scale:

- A: 85-100
- B: 70-84
- C: 55-69
- D: 40-54
- F: Less than 40

Schools also may earn an A<sup>NE</sup> if the school did not have an achievement gap larger than the largest state average achievement gap. This additional designation was added in 2014-15 to address federal requirements that excludes schools with significant achievement gaps from earning a state's highest achievement designation.

In addition to the overall performance score and grade, a separate score and grade for reading and mathematics is reported for schools containing K-8 grade levels. Schools with no data available to calculate at least a School Achievement Score will not receive a School Performance Grade (e.g. K-2 schools and alternative schools).

- **Identifying Low-Performing Schools and Districts** – NCDPI staff use the data to identify low-performing schools and districts, which, under state law, are based on the School Performance Grade and Education Value-Added Assessment System (EVAAS) growth calculations.

Low-performing schools are those that receive a school performance grade of D or F and a school growth score of "met expected growth" or "not met expected growth" as defined by General Statute 115C-105.37. To avoid a low-performing designation, schools must earn a school performance grade of C or better.

Schools identified as low performing must develop a plan for improvement that specifically addresses the strategies the school will implement to improve both its School Performance Grade and School Growth designation (G.S. 115C-105.37(a1)). Schools also must notify parents of the school's low-performing status and actions it is taking to improve student performance.

Low-performing districts are those in which the majority of schools that receive a school performance grade and school growth score are identified as low performing as defined by General Statute 115C-105.39A. Districts identified as low performing must develop a district plan for improving both the school performance grade and school growth score of each low-performing school in the district (G.S. 115C-105.39A(b2)).

School and district improvement plans are to be shared with the public, including parents, guardians, and staff and made available through the districts' website and the North Carolina Department of Public Instruction's website.

Additional strategies for reform, changes to personnel, supports and interventions may apply to schools and districts that are continually low performing.

- **Identifying Third Graders for Support Under Read to Achieve** – EOG assessment data are used to identify third grade students who need additional support to achieve reading proficiency. The goal of the state's Read to Achieve program is to ensure that every third grade student is reading at or above grade level by the end of the school year.

Students who are not reading at grade level will have multiple opportunities to show proficiency. In addition, students may receive support through one or more of the following options:

- guaranteed uninterrupted blocks of reading time and other intensive reading interventions;
- reading camps;

- teachers selected based on demonstrated student outcomes in reading proficiency;
- placement in a transition class or a 4th grade accelerated class for the entire 4th grade year;
- promoted to fourth grade with a Good Cause Exemption but continue to receive instructional supports and services and reading interventions; or
- retention in the third grade.

- **Evaluating North Carolina Educators** – North Carolina educators participate in an annual evaluation process to assess their performance relative to the North Carolina Professional Standards and to design an annual plan for professional growth.

Student academic growth data are one indicator included in annual professional development plans of teachers and principals. Educators who are responsible for evaluating teachers, assistant principals and principals are encouraged to use academic growth data when they are evaluating the performance of teachers, assistant principals and principals.

- **Assessing District Initiatives to Improve Student Proficiency** – Districts use student performance data to assess the success of initiatives they have implemented to increase student reading and mathematics proficiency, close academic achievement gaps between groups of students and gauge the effectiveness of professional development.

## RESOURCES

**READY INITIATIVE** – <http://www.ncpublicschools.org/ready/>

**READY ANIMATION** – The animated READY logo tells the story of why North Carolina has raised standards and made other key changes in public schools in a 2.5 minute video clip. [http://www.youtube.com/watch?v=HCNYt5\\_K6CU](http://www.youtube.com/watch?v=HCNYt5_K6CU)

**NORTH CAROLINA STANDARD COURSE OF STUDY** – <http://www.ncpublicschools.org/curriculum/>

**TESTING PROGRAM GENERAL INFORMATION AND POLICIES** – <http://www.ncpublicschools.org/accountability/policies/geninfopoliciesindex>

**RELEASED TEST FORMS AND ANSWER KEYS FOR END-OF-GRADE AND END-OF-COURSE TESTS** – Parents and educators can see firsthand the rigor of questions on the assessments. <http://www.ncpublicschools.org/accountability/testing/releasedforms>

**READ TO ACHIEVE** – <http://www.ncpublicschools.org/k-3literacy/achieve/>

## 2016 READY INFORMATION CONTACTS

**READY ACCOUNTABILITY/BASIS FOR STATUS** – Accountability Services Division, Tammy Howard, Director, 919.807.3787

**COMMUNICATIONS AND GENERAL INFORMATION** – Communication and Information Services, Vanessa Jeter, Director, 919.807.3450

**READY DATA BY SCHOOL/DISTRICT/STATE AND PRESS RELEASE** – <http://www.ncpublicschools.org/accountability/reporting>  
**DEPARTMENT OF PUBLIC INSTRUCTION** – <http://www.ncpublicschools.org>

**APPENDIX G: NORTH CAROLINA END-OF-GRADE TESTS OF  
MATHEMATICS GRADES 3-8 ACHIEVEMENT LEVEL DESCRIPTORS AND SCALE  
SCORE CUT OFFS**

<p><b>North Carolina End-of-Grade Tests of Mathematics Grades 3-8</b></p>
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In October 2013, the State Board of Education (SBE) adopted college-and-career readiness Academic Achievement Standards and Academic Achievement Descriptors for the End-of-Grade (EOG) and End-of-Course (EOC) tests and their alternate assessments. After considering much input on the importance of having more definitive discrimination for student achievement reporting, the SBE adopted at its March 2014 meeting a methodology to add a new achievement level. The addition of the new Achievement Level 3 will identify students who are prepared for the next grade, but do not meet the college-and-career readiness standard. An additional level will also enable more accurate identification of students who need additional instruction and assistance. Effective with the 2013-14 school year, the State will report five levels as follows:

<b>Achievement Level*</b>	<b>Meets On-Grade-Level Proficiency Standard</b>	<b>Meets College-and- Career Readiness Standard</b>
Level 5 denotes Superior Command of knowledge and skills	Yes	Yes
Level 4 denotes Solid Command of knowledge and skills	Yes	Yes
Level 3 denotes Sufficient Command of knowledge and skills	Yes	No
Level 2 denotes Partial Command of knowledge and skills	No	No
Level 1 denotes Limited Command of knowledge and skills	No	No

\*Detailed achievement level descriptors are available on the following pages.

### Math Grades 3-8 Achievement Level Ranges (Cut Scores)

Subject	Grade	Level 1	Level 2	Level 3	Level 4	Level 5
Mathematics (Starting with 2013-14 school year)	3	≤ 439	440-447	448-450	451-459	≥ 460
	4	≤ 440	441-448	449-450	451-459	≥ 460
	5	≤ 440	441-448	449-450	451-459	≥ 460
	6	≤ 443	444-450	451-452	453-460	≥ 461
	7	≤ 443	444-450	451-452	453-460	≥ 461
	8	≤ 443	444-451	452-453	454-462	≥ 463

### Mathematics Achievement Level Descriptors—Grade 3

#### Achievement Level 1:

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 3 and are likely to need intensive academic support to engage successfully in further studies in this content area.

Level 1 students rarely represent and solve problems involving multiplication and division. They usually do not show evidence that they understand properties of multiplication and the relationship between multiplication and division. They are rarely able to multiply and divide within 100, solve problems involving the four operations, or identify and explain patterns in arithmetic. They are not usually able to use place value understanding and properties of operations to perform multi-digit arithmetic. They are usually unable to recognize and generate equivalent fractions. Level 1 students are rarely successful in solving problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; representing data; understanding concepts of area; and relating area to multiplication and to addition. They rarely recognize perimeter as an attribute of plane figures or distinguish between linear and area measures. They do not demonstrate reasoning about shapes and their attributes.

#### Achievement Level 2:

Students performing at this level have partial command of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 3 and are likely to need additional academic support to engage successfully in further studies in this content area.

Level 2 students sometimes represent and solve problems involving multiplication and division. They do show some evidence that they understand properties of multiplication and the relationship between multiplication and division. They are inconsistent when multiplying and

dividing within 100, solving problems involving the four operations, and identifying and explaining patterns in arithmetic. They are sometimes able to use place value understanding and properties of operations to perform multi-digit arithmetic. They are seldom able to recognize and generate equivalent fractions. Level 2 students are inconsistent in solving problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; representing data; understanding concepts of area; and relating area to multiplication and to addition. They sometimes recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. They show some evidence of reasoning about shapes and their attributes.

**Achievement Level 3:**

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 3, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college- and-career readiness without additional academic support.

**Achievement Level 4:**

Students performing at this level have solid command of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 3 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students typically understand how to represent and solve problems involving multiplication and division. They demonstrate a strong understanding of properties of multiplication and the relationship between multiplication and division. They are usually able to multiply and divide within 100, solve problems involving the four operations, and identify and explain patterns in arithmetic. They are typically able to use place value understanding and properties of operations to perform multi-digit arithmetic. They are also typically able to recognize and generate equivalent fractions. Level 4 students generally solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; represent data; understand concepts of area; and relate area to multiplication and to addition. They usually recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. They demonstrate sound reasoning about shapes and their attributes.

**Achievement Level 5:**

Students performing at this level have superior command of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 3 and are academically well prepared to engage successfully in further studies in this content area.

Level 5 students consistently understand how to represent and solve problems involving multiplication and division. They demonstrate an excellent understanding of properties of multiplication and the relationship between multiplication and division. They are able to multiply and divide within 100, solve problems involving the four operations, and identify and explain patterns in arithmetic. They can consistently use place value understanding and properties of operations to perform multi-digit arithmetic. They are able to recognize and generate equivalent

fractions. Level 5 students can solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; represent data; understand concepts of area; and relate area to multiplication and to addition. They recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. They demonstrate strong reasoning about shapes and their attributes.

## Mathematics Achievement Level Descriptors—Grade 4

### **Achievement Level 1:**

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 4 and are likely to need intensive academic support to engage successfully in further studies in this content area.

Level 1 students rarely use the four operations with whole numbers to solve problems, show familiarity with factors and multiples, or generate and analyze patterns. They seldom generalize place value understanding for multi-digit whole numbers, or use place value understanding and properties of operations to perform multi-digit arithmetic. They are usually unable to extend understanding of fraction equivalence and ordering. They have difficulty with building fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. They rarely understand decimal notation for fractions, and compare decimal fractions. Level 1 students seldom solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. They have difficulty in representing and interpreting data. They lack understanding of the concepts of angle and measuring angles. They are rarely able to draw and identify lines and angles and to classify shapes by properties of their lines and angles.

### **Achievement Level 2:**

Students performing at this level have **partial command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 4 and are likely to need additional academic support to engage successfully in further studies in this content area.

Level 2 students show some evidence of using the four operations with whole numbers to solve problems, show familiarity with factors and multiples, or generate and analyze patterns. They sometimes generalize place value understanding for multi-digit whole numbers or use place value understanding and properties of operations to perform multi-digit arithmetic. They seldom extend understanding of fraction equivalence and ordering. They inconsistently build fractions from unit fractions by applying and extending their previous understandings of operations on whole numbers. They sometimes understand decimal notation for fractions and compare decimal fractions. Level 2 students sporadically solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. They inconsistently represent and interpret data. They demonstrate an emerging understanding of the concepts of angles and measuring angles. They are sometimes able to draw and identify lines and angles and to classify shapes by properties of their lines and angles.

### **Achievement Level 3:**

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 4, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.

**Achievement Level 4:**

Students performing at this level have **solid command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 4 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students typically show strong evidence of using the four operations with whole numbers to solve problems, show familiarity with factors and multiples, and generate and analyze patterns. They usually generalize place value understanding for multi-digit whole numbers or use place value understanding and properties of operations to perform multi-digit arithmetic. They frequently extend understanding of fraction equivalence and ordering. They are usually able to build fractions from unit fractions by applying and extending their previous understanding of operations on whole numbers. They can usually understand decimal notation for fractions and compare decimal fractions. Level 4 students typically solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. They are mostly able to represent and interpret data. They demonstrate a sound understanding of the concepts of angles and measuring angles. They are usually able to draw and identify lines and angles and to classify shapes by properties of their lines and angles.

**Achievement Level 5:**

Students performing at this level have **superior command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 4 and are academically well-prepared to engage successfully in further studies in this content area.

Level 5 students have a high level of success in using the four operations with whole numbers to solve problems; show familiarity with factors and multiples; and generate and analyze patterns. They can consistently generalize place value understanding for multi-digit whole numbers and use place value understanding and properties of operations to perform multi-digit arithmetic. Students at level 5 are able to extend understanding of fraction equivalence and ordering. They can build fractions from unit fractions by applying and extending their previous understandings of operations on whole numbers. They can understand decimal notation for fractions and compare decimal fractions. Level 5 students regularly solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. They are able to represent and interpret data. They demonstrate a strong understanding of the concepts of angles and measuring angles. They consistently draw and identify lines and angles and classify shapes by properties of their lines and angles.



## Mathematics Achievement Level Descriptors—Grade 5

### **Achievement Level 1:**

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 5 and are likely to need intensive academic support to engage successfully in further studies in this content area.

Level 1 students can rarely write and interpret numerical expressions or analyze patterns and relationships. They are usually not able to understand the place value system or perform operations with multi-digit whole numbers and decimals to hundredths. Students at level 1 rarely use equivalent fractions as a strategy to add and subtract fractions. They usually do not apply and extend their previous understanding of multiplication and division to multiply and divide fractions. They can rarely convert like measurement units within a given measurement system or correctly represent and interpret data. Level 1 students can rarely graph points on the coordinate plane to solve real-world and mathematical problems. They demonstrate little understanding of the concepts of volume or relating volume to multiplication and addition.

### **Achievement Level 2:**

Students performing at this level have **partial command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 5 and are likely to need additional academic support to engage successfully in further studies in this content area.

Level 2 students inconsistently write and interpret numerical expressions or analyze patterns and relationships. They sometimes understand the place value system or perform operations with multi-digit whole numbers and decimals to hundredths. Students at level 2 seldom use equivalent fractions as a strategy to add and subtract fractions. They show some evidence that they apply and extend their previous understanding of multiplication and division to multiply and divide fractions. They can sometimes convert like measurement units within a given measurement system as well as correctly represent and interpret data. Level 2 students can sometimes graph points on the coordinate plane to solve real-world and mathematical problems. They demonstrate emerging understanding of the concepts of volume and relating volume to multiplication and addition.

### **Achievement Level 3:**

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 5, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.

### **Achievement Level 4:**

Students performing at this level have **solid command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 5 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students can typically write and interpret numerical expressions or analyze patterns and relationships. They usually understand the place value system and perform operations with multi-digit whole numbers and decimals to hundredths. Students at level 4 often use equivalent fractions as a strategy to add and subtract fractions. They show evidence that they can apply and extend their previous understanding of multiplication and division to multiply and divide fractions. They can typically convert like measurement units within a given measurement system as well as correctly represent and interpret data. Level 4 students can usually graph points on the coordinate plane to solve real-world and mathematical problems. They demonstrate a sound understanding of the concepts of volume and relating volume to multiplication and addition.

**Achievement Level 5:**

Students performing at this level have **superior command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 5 and are academically well-prepared to engage successfully in further studies in this content area.

Level 5 students can consistently write and interpret numerical expressions or analyze patterns and relationships. They understand the place value system and perform operations with multidigit whole numbers and decimals to hundredths. Students at level 5 consistently use equivalent fractions as a strategy to add and subtract fractions. They show strong evidence that they can apply and extend their previous understanding of multiplication and division to multiply and divide fractions. They are able to convert like measurement units within a given measurement system as well as correctly represent and interpret data. Level 5 students can consistently graph points on the coordinate plane to solve real-world and mathematical problems. They demonstrate a strong understanding of the concepts of volume and relating volume to multiplication and addition.

## Mathematics Achievement Level Descriptors—Grade 6

### Achievement Level 1:

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 6 and will need academic support to engage successfully in further studies in this content area.

Level 1 students rarely show understanding and application of the skills needed to divide fractions or to find common multiples and the greatest common factor (GCF). In geometry, they are usually unable to understand and solve real-world and mathematical problems involving surface area and volume. These students usually do not show evidence that they can evaluate numerical or algebraic expressions, solve equations or inequalities, or interpret the relationship between dependent and independent variables. Level 1 students rarely show understanding and ability to apply ratios and unit rates. They are usually unable to solve problems involving percents. Students seldom show understanding of statistical variability related to the center, spread, and shape of a distribution of data.

### Achievement Level 2:

Students performing at this level have **partial command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 6 and are likely to need academic support to engage successfully in further studies in this content area.

Level 2 students show limited understanding and application of the skills needed to divide fractions or to find common multiples and the greatest common factor (GCF). In geometry, they sometimes understand and solve real-world and mathematical problems involving surface area and volume. These students show some evidence that they can evaluate numerical or algebraic expressions, solve equations or inequalities, or interpret the relationship between dependent and independent variables. Level 2 students sometimes show understanding and ability to apply ratios and unit rates. They can sometimes solve problems involving percents. Students have limited understanding of statistical variability related to the center, spread, and shape of a distribution of data.

### Achievement Level 3:

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 6, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.

### Achievement Level 4:

Students performing at this level have **solid command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 6 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students typically understand and apply the skills needed to divide fractions and to find common multiples and the greatest common factor (GCF). In geometry, they usually understand and solve real-world and mathematical problems involving surface area and volume. These students are usually able to evaluate numerical or algebraic expressions, solve equations or inequalities, and interpret the relationship between dependent and independent variables. Level 4 students typically understand and can apply ratios and unit rates. They can solve problems involving percents. Students typically understand statistical variability related to the center, spread, and shape of a distribution of data.

**Achievement Level 5:**

Students performing at this level have **superior command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 6 and are academically well-prepared to engage successfully in further studies in this content area.

Level 5 students have a high level of success with understanding and applying the skills needed to divide fractions and to find common multiples and the greatest common factor (GCF). In geometry, they consistently understand and solve real-world and mathematical problems involving surface area and volume. These students are able to evaluate numerical or algebraic expressions, solve equations or inequalities, and interpret the relationship between dependent and independent variables. Level 5 students consistently understand and can apply ratios and unit rates. They can solve problems involving percents. Students show strong understanding of statistical variability related to the center, spread, and shape of a distribution of data.

## Mathematics Achievement Level Descriptors—Grade 7

### **Achievement Level 1:**

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 7 and will need academic support to engage successfully in further studies in this content area.

Level 1 students rarely show understanding and application of the skills needed to use proportional relationships in mathematical problems. They have difficulty computing operations with fractions to add, subtract, multiply, and divide all types of rational numbers. Students at Level 1 are rarely able to solve mathematical problems with expressions and equations. In geometry, they are usually unable to effectively solve real-world and mathematical problems involving angle measure, area, surface area, and volume. Level 1 students rarely show understanding and ability to draw inferences about a population using random sampling. Students seldom show understanding of chance processes including the development and use of probability models.

### **Achievement Level 2:**

Students performing at this level have **partial command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 7 and are likely to need academic support to engage successfully in further studies in this content area.

Level 2 students show limited understanding and application of the skills needed to use proportional relationships in mathematical problems. They have some difficulty computing operations with fractions to add, subtract, multiply, and divide all types of rational numbers. Students at Level 2 are sometimes able to solve real-world and mathematical problems with expressions and equations. In geometry, they sometimes understand and solve mathematical problems involving angle measure, area, surface area, and volume. Level 2 students sometimes show understanding and ability to draw inferences about a population using random sampling. Students have limited understanding of chance processes including the development and use of probability models.

### **Achievement Level 3:**

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 7, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.

### **Achievement Level 4:**

Students performing at this level have **solid command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 7 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students typically understand and apply the skills needed to analyze proportional relationships in real-world and mathematical problems. They have little difficulty computing operations with fractions to add, subtract, multiply, and divide all types of rational numbers. Students at Level 4 can often solve real-world and mathematical problems with expressions and equations. In geometry, they usually understand and solve real-world problems involving angle measure, area, surface area, and volume. Level 4 students typically understand and draw inferences about a population using random sampling. Students typically understand chance processes including the development, use, and evaluation of probability models.

**Achievement Level 5:**

Students performing at this level have **superior command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 7 and are academically well-prepared to engage successfully in further studies in this content area.

Level 5 students have a high level of success with understanding and application of the skills needed to analyze proportional relationships in real-world and mathematical problems. They have no difficulty computing operations with fractions to add, subtract, multiply, and divide all types of rational numbers. Students at Level 5 are able to solve real-world and mathematical problems with expressions and equations. In geometry, they consistently understand and solve real-world and mathematical problems involving angle measure, area, surface area, and volume. Level 5 students consistently understand and draw inferences about a population using random sampling. Students show strong understanding of chance processes including the development, use, and evaluation of probability models.

## Mathematics Achievement Level Descriptors—Grade 8

### Achievement Level 1:

Students performing at this level have **limited command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 8 and will need academic support to engage successfully in further studies in this content area.

Level 1 students can seldom identify numbers as being rational or irrational. In geometry, they are usually unable to understand and solve real-world and mathematical problems involving angles, similarity, congruence, and the Pythagorean Theorem. These students usually do not show evidence that they are able to perform and apply operations with radicals, integer exponents, and scientific notation; solve linear equations or pairs of simultaneous equations; or graph, compare, and interpret proportional relationships and linear equations. Level 1 students rarely show understanding and ability to describe, compare, evaluate, and analyze functions to model relationships between quantities. They are seldom able to compare and predict patterns of association in bivariate data.

### Achievement Level 2:

Students performing at this level have **partial command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 8 and are likely to need academic support to engage successfully in further studies in this content area.

Level 2 students can sometimes distinguish between rational and irrational numbers but struggle to evaluate irrational numbers using rational approximations. In geometry, they sometimes solve real-world and mathematical problems involving angles, similarity, congruence, and the Pythagorean Theorem. These students show some evidence that they are able to perform and apply operations with radicals, integer exponents, and scientific notation; solve linear equations or pairs of simultaneous equations; or graph, compare, and interpret proportional relationships and linear equations. Level 2 students can sometimes describe, compare, evaluate, and analyze functions to model relationships between quantities. They have limited ability to compare and predict patterns of association in bivariate data.

### Achievement Level 3:

Students performing at this level have a **sufficient command** of grade-level knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 8, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.

### Achievement Level 4:

Students performing at this level have **solid command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 8 and are academically prepared to engage successfully in further studies in this content area.

Level 4 students can identify numbers as being rational or irrational and consistently evaluate irrational numbers using rational approximations. In geometry, they understand and solve real-world and mathematical problems involving angles, similarity, congruence, and the Pythagorean Theorem. These students are usually able to perform and apply operations with radicals, integer exponents, and scientific notation; solve linear equations or pairs of simultaneous equations; and graph, compare, and interpret proportional relationships and linear equations. Level 4 students typically can describe, compare, evaluate, and analyze functions to model relationships between quantities. They are usually able to compare and predict patterns of association in bivariate data.

**Achievement Level 5:**

Students performing at this level have **superior command** of the knowledge and skills contained in the *Common Core State Standards (CCSS)* for Mathematics assessed at grade 8 and are academically well-prepared to engage successfully in further studies in this content area.

Level 5 students can almost always identify numbers as being rational or irrational and can use rational approximations to compare and order irrational numbers. In geometry, they show strong understanding and solve real-world and mathematical problems involving angles, similarity, congruence, and the Pythagorean Theorem. These students are able to perform and apply operations with radicals, integer exponents, and scientific notation; solve linear equations or pairs of simultaneous equations; and graph, compare, and interpret proportional relationships and linear equations. Level 5 students consistently can describe, compare, evaluate, and analyze functions to model relationships between quantities. They are consistently correct when comparing and predicting patterns of association in bivariate data.

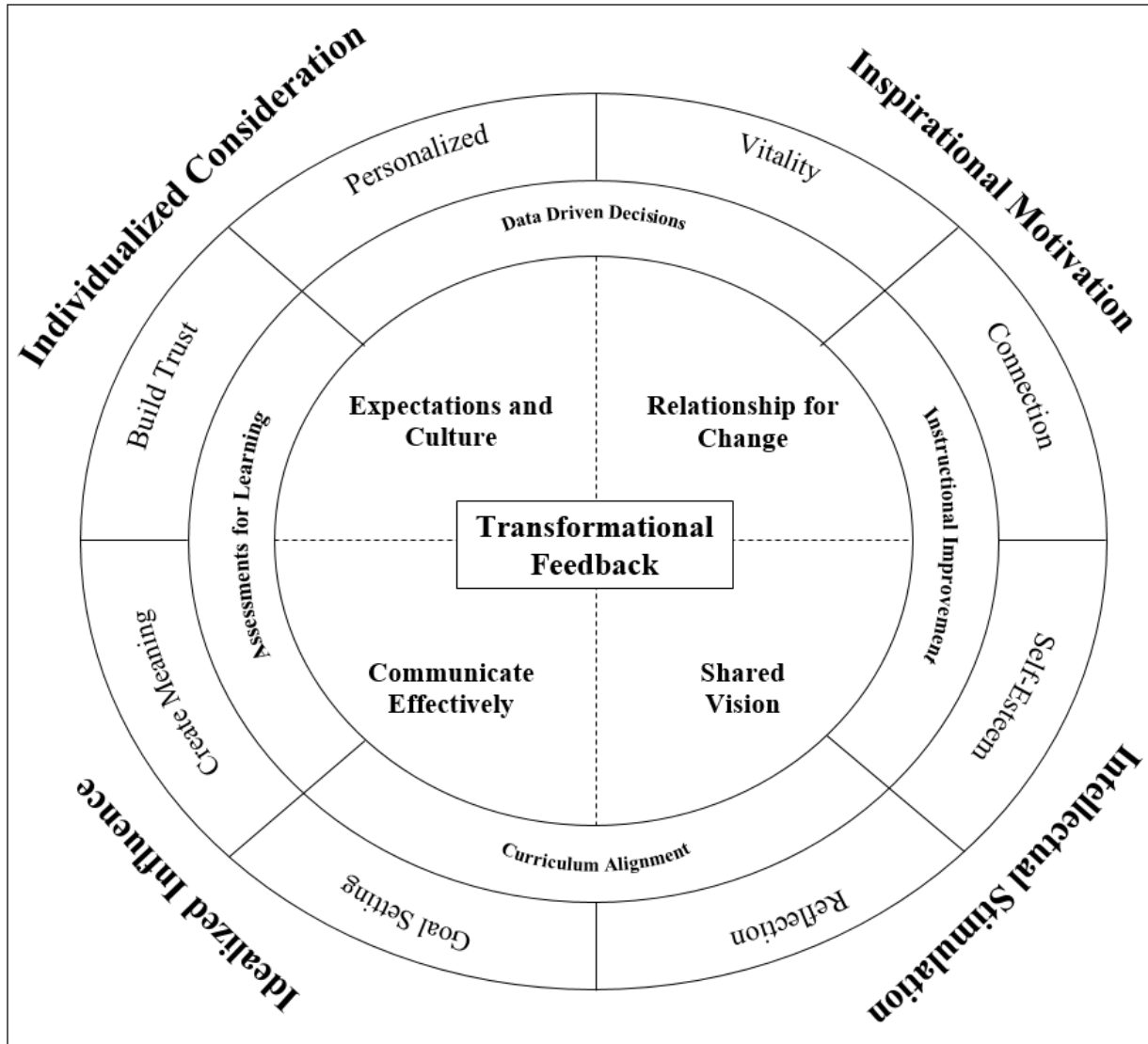


**APPENDIX H: COPY OF ESTIMATED BENCHMARK BUDGET FOR 2016-17 SCHOOL YEAR**

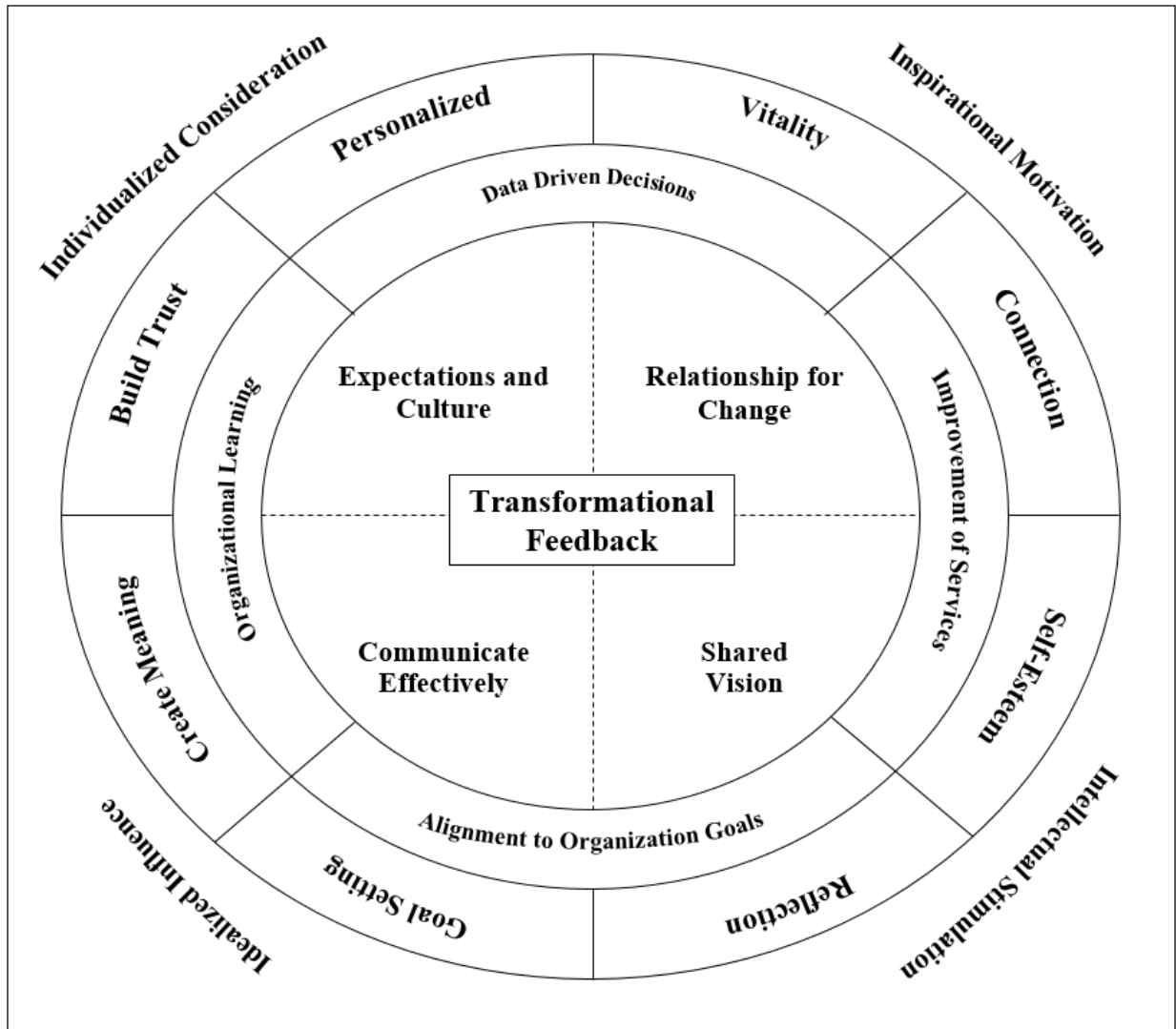
**Student Benchmark Pricing 2016-17**

Description	Subjects	Number of Benchmarks	Number of Students	Case 21		Cost per Student	Total	Printing			
				Cost per Student	Total			Total Benchmark 1	Total Benchmark 2	Total Benchmark 3	Total
Grade 2 Elementary Benchmark	Reading Math	2	636	\$8.00	\$5,088.00	\$0.76		\$960.49	\$960.49	\$1,920.97	
<b>Grade 2 Subtotal</b>					<b>\$5,088.00</b>					<b>\$1,920.97</b>	
Grade 3 Elementary Benchmark	Reading Math	3	671	\$10.00	\$6,710.00	\$0.76	\$1,013.34	\$1,013.34	\$1,013.34	\$3,040.03	
Grade 4 Elementary Benchmark	Reading Math	3	676	\$10.00	\$6,760.00	\$0.76	\$1,020.90	\$1,020.90	\$1,020.90	\$3,062.69	
Grade 5 Elementary Benchmark	Reading Math Science	3	661	\$10.00	\$6,610.00	\$0.76	\$998.24	\$998.24	\$998.24	\$2,994.73	
<b>Elementary Subtotal</b>					<b>\$20,080.00</b>					<b>\$9,097.44</b>	
Grade 6 Elementary Benchmark	Reading Math	3	616	\$10.00	\$6,160.00	\$0.76	\$930.28	\$930.28	\$930.28	\$2,790.85	
Grade 7 Elementary Benchmark	Reading Math	3	586	\$10.00	\$5,860.00	\$0.76	\$884.98	\$884.98	\$884.98	\$2,654.93	
Grade 8 Elementary Benchmark	Reading Math Science	3	644	\$10.00	\$6,440.00	\$0.76	\$972.57	\$972.57	\$972.57	\$2,917.71	
<b>Middle Subtotal</b>					<b>\$18,460.00</b>					<b>\$8,363.49</b>	
<b>Elem/Middle School Sub Total</b>			<b>4490</b>	<b>\$10.00</b>	<b>\$43,628.00</b>					<b>Printing Total</b>	
High School Benchmark	Biology	2	359	\$10.00	\$3,590.00						
High School Benchmark	English II	2	474	\$10.00	\$4,740.00						
High School Benchmark	Math I Semester	2	130	\$10.00	\$1,300.00						
High School Benchmark	Math I Year Long	4	445	\$10.00	\$4,450.00						
<b>High School Sub Total</b>			<b>8405</b>	<b>\$10.00</b>	<b>\$14,080.00</b>						
Online Student Access	Science 5 Science 8 Biology English II Math I		2713	\$4.00	\$10,852.00						
<b>Online Fees Sub Total</b>					<b>\$10,852.00</b>						
<b>TE-21 Total</b>					<b>\$68,560.00</b>						
<b>Printing Total</b>					<b>\$19,381.91</b>						
<b>Overall Total</b>					<b>\$87,941.91</b>						

# APPENDIX I: TRANSFORMATIONAL FEEDBACK MODEL



**APPENDIX J: TRANSFORMATIONAL FEEDBACK MODEL FOR OTHER PROFESSIONS**



**APPENDIX K: PRINCIPAL AND TEACHER COMMUNICATION HANDOUT**

**Principal and Teacher Communication Handout**

<b>Teacher Name:</b>		<b>Benchmark: 1 2 3</b>	<b>Grade/Subject:</b>
<b>EOG</b>			
<b><i>Assessment for Learning</i></b>			
What did we learn from the assessment results? (provide 3-5 points)		What do we need to do moving forward to reach our goal(s)? (provide 3-5 commitments)	
What is our goal for the next benchmark? (provide 1-2 goals)		What were/are factors effecting instruction in your classroom?	
<b><i>Data Results</i></b>			
<b>Highlights</b>		<b>Trends</b>	
Comments:		Positive:	Missed Opportunities:
<b><i>Instruction</i></b>			
<b>Practices:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target			
Comments:			
<b>Improvement:</b> <input type="checkbox"/> No Adjustment Needed <input type="checkbox"/> Minor Adjustment Needed <input type="checkbox"/> Major Adjustment Needed			
Comments:			
<b><i>Curriculum</i></b>			
<b>Alignment:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target			
Comments:			
<b>Improvement:</b> <input type="checkbox"/> Pacing on Target <input type="checkbox"/> Increase Pacing <input type="checkbox"/> Major Pacing Adjustments			
Comments:			

## APPENDIX L: PRINCIPAL TRAINING MATERIALS

# Principals using the Transformational Feedback Model (TFM) to Support Student Performance

Principal Training Session

October, 2016

## Outline of Training

### A. Motivation

- Problem of Practice
- Need
- Purpose

### B. Background

- The Principalship and Supervision
- Principal as a Change Agent
- Feedback
- Transformational Leadership
- Transformative Feedback Model

### C. Providing Feedback

- Benchmark Data
- PATCH
- Feedback Conference

# Motivation

*Leadership Context and Purpose of Action to Support Student Performance*



## Support Problem

*Schools have failed to connect assessments to school improvement and school leaders do not know how to address the problem*

*-Stiggins, 2002*

**Principals NEED to communicate to their teachers the purpose of student benchmark assessments and how to use the benchmark data to improve instructional improvement.**

*The principal plays a critical role in the quality of a school's academic program*

*-Byrk et al., 1998*

## Need for Support

Student Benchmark Assessment data MUST be used to facilitate the diagnoses of gaps in student learning so teachers can make instructional improvement

**Principals NEED to support teachers in managing multiple points of data through feedback to improve instruction and address learning gaps**

In order to use effective assessment data, the feedback process must provide guidance on how to improve instruction

-Black & William, 2010; Blanc et al., 2010

## Purpose for Support

Build upon the tremendous growth in student performance the district experienced after the 2015-2016 school year.

**Principals NEED to develop the skill of providing direct feedback to teachers to continue the improvement to surpass the North Carolina state average**

Superintendent's goal for 2016-2017: All schools achieve a school composite of 60 or higher.

# Background

*The Principalship to Support Student Performance*



## The Principalship and Supervision

**“It is the business of the principal to secure the best possible educational results and to do this with the utmost efficiency”**

-St. Louis Superintendent 1930 (Pierce, p. 56)

**Supervision by the principal at its core is working with teachers on specific ways to improve instruction and student performance which has been defined as “supervision of instruction”**

-Glanz & Behar-Horenstein, 2000



# Principal as a Change Agent

## Relationships

Understand the difficulty  
Builds the foundation  
Facilitator and supporter

## Shared Vision

Understood, effective, and accepted  
Gives direction

## Establishing Change

## Communication

Foundation for Success  
Desired actions occur  
Ongoing, dialogue, credible

## Expectations & Culture

Obligation of followers  
Align goals  
Challenge old and create new Norms

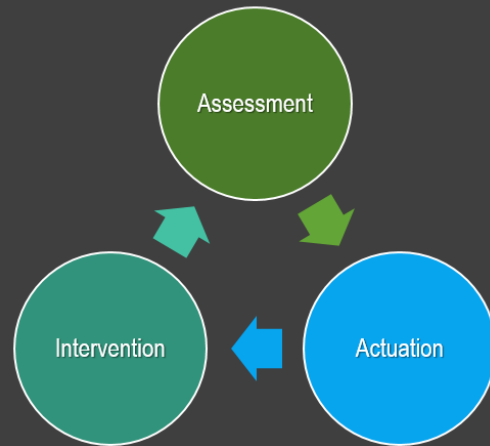
# Formative Feedback

- Developed by Halverson, Prichett, & Watson, 2007
- Links the efforts of the teacher to the expectations in the classroom
- Gives the teacher “accurate, incremental, and actionable measures of student learning and behavior directly linked to the units of practice most meaningful to classroom teaching and learning” (Halverson, Prichett, & Watson, p. 131)

# Formative Feedback

**Facilitates by providing information about teaching and learning with three distinct functions;**

- (a) information signals that measure student performance in terms of an intervention
- (b) develops sensor and processing functions to assess information signals
- (c) identify controllers that could actuate the new information in order to adjust the instruction



-Halverson, 2010

# Transformational Feedback

- First developed by Burns, 1978
- Bass (1985) determined the four categories that make up Transformational Leadership
  - Bass along with [Avolio](#) developed the initial research around the four categories
- Lead by the research of [Leithwood](#), Transformational Leadership has been a well researched framework focused on leadership

# Characteristics of Transformational Feedback

## Idealized Influence

Influence followers to transcend self-interest  
 Influence on an emotional level  
 Servant Leaders

## Intellectual Stimulation

Activities stimulate professional development  
 Question old assumptions  
 Look critical at self to motivate

Transformational Leadership Characteristics

## Inspirational Motivation

Inspire to empower followers  
 Allow people to grow and realize their potential  
 Increase commitment to the vision and mission

## Individualized Consideration

Impact through individualized efforts  
 Motivating the importance of learner control  
 Individualizing efforts to improve instruction

# Behaviors of Transformational Feedback

## Idealized Influence

Goal Setting

Create Meaning

## Inspirational Motivation

Vitality

Energizing Connections

## Intellectual Stimulation

Reflection

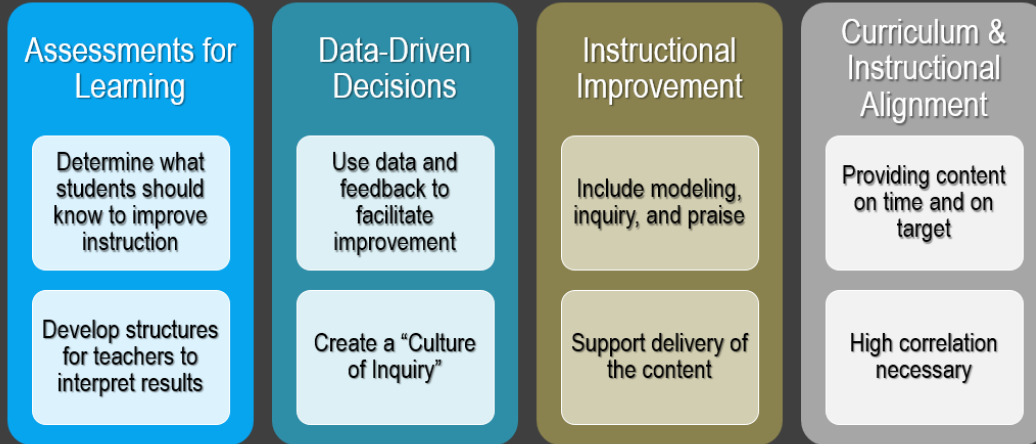
Self-Esteem

## Individualized Consideration

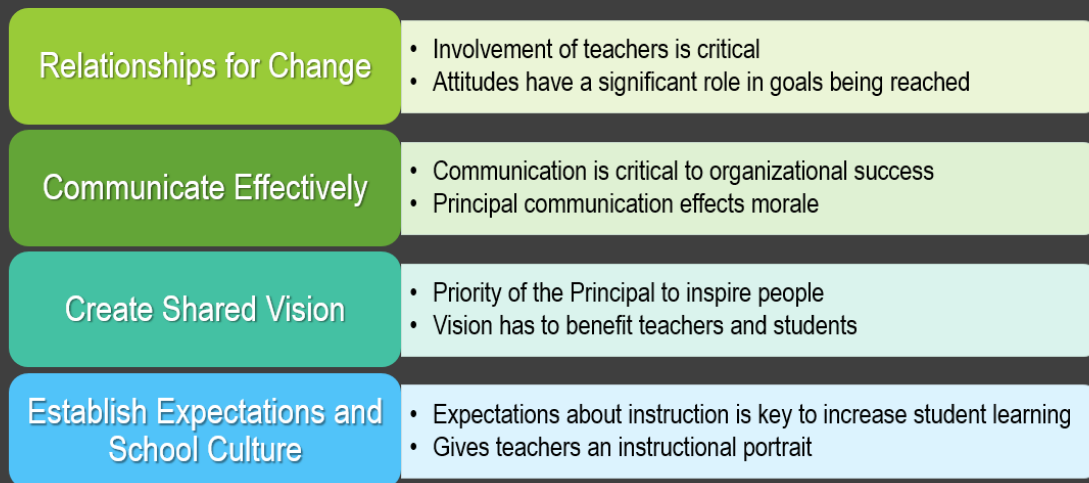
Build Trust

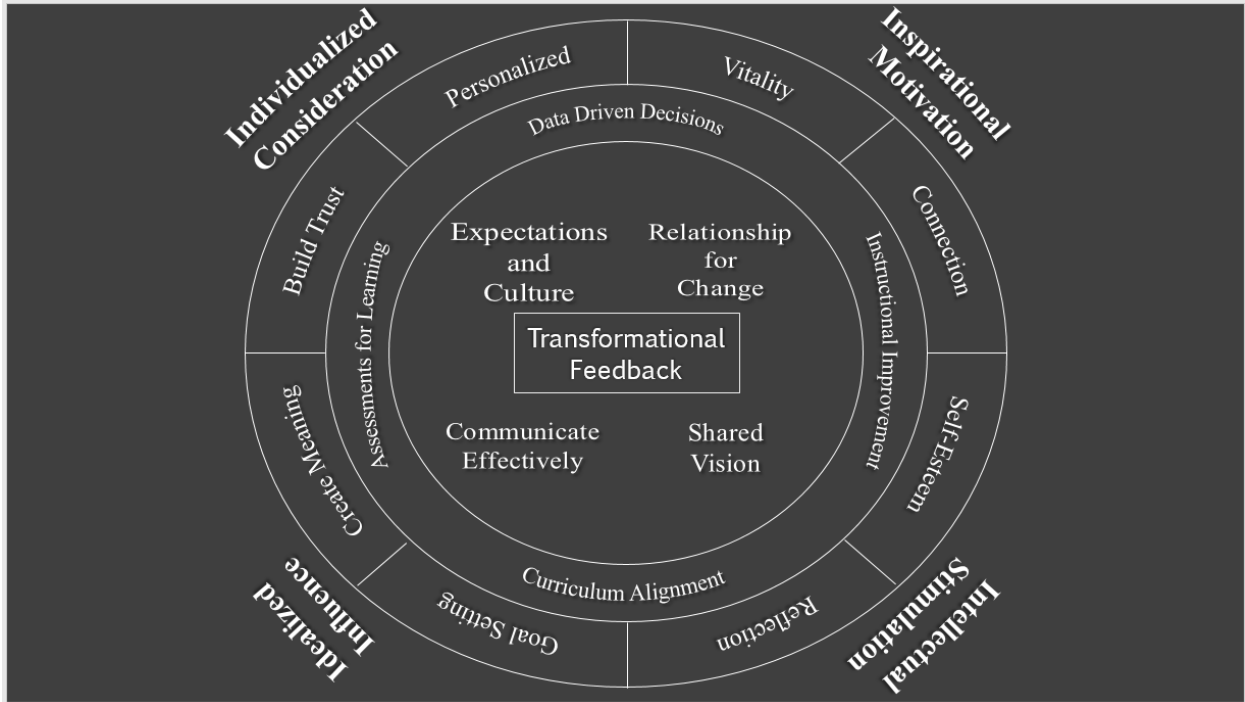
Personalization

# Practices of Feedback



# Actions of Feedback





# Providing Feedback

*Principals giving Specific Feedback to Teachers*



# Benchmark Data

- Benchmark data will be provided through the following reports:
  - Case 21 Reports
    - Class Report
    - Item Analysis Report by class
  - District Reports
    - Class Dashboard
    - Item Analysis Report for Grade Level

## Principal and Teacher Communication Handout

1. Complete the PATCH on each teacher as you review the data from the benchmark assessment prior to meeting with the teacher.
  1. Complete Data Results, Instruction, and Curriculum sections
2. You can use prior knowledge and observations (formal and informal) to help provide feedback.
3. Feedback needs to be specific using the benchmark data.
4. Complete the Assessment for Learning section with the teacher during the conference.

Principal and Teacher Communication Handout		
Teacher Name:	Benchmark: 1 2 3	Grade/Subject:
<b>Assessment for Learning</b>		
What did we learn from the assessment results? (provide 1-2 points)	What do we need to do moving forward to reach our goal(s)? (provide 1-2 commitments)	
What is our goal for the next benchmark? (provide 1-2 goals)	What were are factors effecting instruction in your classroom?	
<b>Data Results</b>		
Comments:	Highlights	Trends
	Positive:	Missed Opportunities:
<b>Instruction</b>		
Practices:	<input type="checkbox"/> Above Target	<input type="checkbox"/> On Target <input type="checkbox"/> Below Target
Comments:		
<b>Improvement:</b> <input type="checkbox"/> No Adjustment Needed <input type="checkbox"/> Minor Adjustment Needed <input type="checkbox"/> Major Adjustment Needed		
Comments:		
<b>Curriculum</b>		
Alignment:	<input type="checkbox"/> Above Target	<input type="checkbox"/> On Target <input type="checkbox"/> Below Target
Comments:		
<b>Improvement:</b> <input type="checkbox"/> Pacing on Target <input type="checkbox"/> Increase Pacing <input type="checkbox"/> Major Pacing Adjustments		
Comments:		

# Feedback Conferences

- Conferences should last between 20-30 minutes at the most within one week of receiving the data
- Use the PATCH as the structure of the conference.
- Provide teachers a copy at the end of the conference of the PATCH
- Feedback is not to be all positive (rah,rah) or all negative (reprimand)
- Feedback should mirror the areas of a change agent (Actions of Feedback) reflective of your leadership
- Your comments and behavior in the feedback conference should convey the behaviors of Transformational Feedback

## Questions/Clarification

## APPENDIX M: UNDERSTANDING AND USING STUDENT BENCHMARK REPORTS

# Understanding and Using Benchmark Reports in PLCs

This handout is to help teachers understand the Case 21 Benchmark Reports and how to use them within grade level PLCs to improve student achievement.

### Case 21 Reports

Each teacher receives three reports from the benchmark assessment. These three reports are:

1. Item Analysis
2. Class Report-pdf
3. Class Report-excel spreadsheet

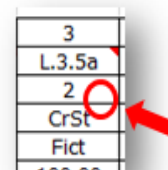
Each report can be very powerful as you discuss student achievement within your PLC. Let's now breakdown further each report and how they can help your PLC meetings.

### Item Analysis

The item analysis report provides each teacher a roster of their students and what answer choice they made for each question. Teachers can also see which standard, Depth of Knowledge (DoK) each item contained. Also included in the report is the class and school percentage correct for each question.

This report can be used in a PLC meeting to determine which questions an entire class had difficulty in answering or if the question was difficult for the entire grade level.

**NOTE:** If you are viewing the item analysis spreadsheet on your computer and want to know what the description of the standard, all you have to do is place the curser over the red triangle in the top right corner of the standard and the description will appear.



3
L.3.5a
2
CrSt
Fict
...



## Class Report

The other two reports each teacher receives is a class report. One is a pdf and the other is in an Excel spreadsheet. This handout will focus on the pdf. A teacher can use the Excel spreadsheet version to manipulate the data to group particular data together.

The pdf version of the Class Report includes data on each student along with a class, school, and district summary. Within the report a student receives data on their total assessment, on each DoK, and on each standard assessed. Below goes more in depth about each section of the report.

The **Assessment Results** box has three data points for each student.

1. **Perc Corr** gives you the percentage of the questions a student correctly answered.
2. **Proj Ach Lev** is a prediction of what achievement level Case 21 thinks a student will receive on the state assessment. The +/- found next to the achievement level indicates if it is at the top or bottom end of the achievement level.

Assessment Results		
Perc Corr	Proj Ach Lev	Sugg Marks

In a PLC meeting, teachers can use this data to determine which students need additional support in order to reach proficiency on the state assessment.

3. **Sugg Marks** is a suggested letter grade the student could be given if the benchmark is graded. This is a school decision to use this benchmark as a graded assignment. Please discuss this with your principal.

Depth of Knowledge		
DoK 1 n=12	DoK 2 n=14	DoK 3 n=4

The DoK Results box provides each student an achievement level for all questions that fell into one of the three type of DoK questions. You will also see in the heading row an "n=" this is letting you know how many questions on the assessment were that DoK level.

Just like the results for the DoK, each standard assessed on the benchmark has an achievement level for the student along with how many questions were asked. In addition to the standards, the ELA class report also includes the Genres.

Strand Results			Genre Results					
Read Lit n=11	Read Info n=13	Lang n=6	Fiction n=14	Nonf/ Inform n=	Poetry n=	Science n=6	Soc St n=5	Tech n=5

As a PLC when you are reviewing your data look for patterns in students with similar projected achievement levels and achievement levels on a particular DoK or standard.

**APPENDIX N: UNDERSTANDING CLASS AND CONSOLIDATED ITEM ANALYSIS REPORTS**

**UNDERSTANDING THE CLASS AND CONSOLIDATED ITEM ANALYSIS REPORTS**

**USING THE CASE 21 CLASS ITEM ANALYSIS REPORT**

The class and consolidated item analysis report provides the principal and teacher with data related to each question on the student benchmark report. These reports allow for the examination of the individual items and student responses at the class and school levels.

**CLASS ITEM ANALYSIS REPORT**

The curriculum standard, depth of knowledge, the percentage correct of the class and school, and the correct answer for each question is provided in the class item analysis report. This information is valuable as you work through instructional changes and working with students' one-on-one and in small groups to improve performance.

**ITEM INFORMATION**

When reviewing your item analysis, you first need to determine the curriculum standard, the depth of knowledge, category, and genre of the question. The last two, category and genre only pertain to the reading benchmark item analysis reports. When reviewing this information, it may be helpful to highlight standards that are the same or similar. You may want to do the same for the depth of knowledge.

Item Numbers	1	2	3	4	5
CC Standard	RL2.2	RL2.4	RI2.2	RI2.7	L2.3
Depth of Knowledge	1	2	1	3	2

Class Percent Correct	0.90	0.85	0.35	0.70	0.75
School Percent Correct	0.92	0.87	0.46	0.65	0.89
Correct Answer	D	A	C	D	B

**ITEM PERFORMANCE**

Underneath the item information will be the performance of the class and school for each item. Below that is the correct answer. The value in knowing how the class did as it relates to the school is important so you know if the

question was difficult for only the students in the class or across the entire school. If the item was difficult for your class, but the rest of the students in the school performed better this is good information to know so you can seek support from a fellow teacher who may have taught the concept differently that you could use in your classroom. If the class and school performance on the item was low then it would be good for the grade level to sit down, reflect, and ask the questions: What about the question made it difficult for the students? and is there anything different we could do in our instruction?

## STUDENT RESPONSES

At the bottom of the report is a list of the students in the class and the answer each student gave for each item. If a question is highlighted in green, then the student got the correct answer. If the answer is red, the student got the item wrong. This gives you a quick visual reference if many students in the class got an item correct or incorrect. You are also able to determine if many of the students who got an item incorrect chose the same or different response. If incorrect responses are the same then this provides insight into what many students in the class were thinking as they answered the item.

## CONSOLIDATED ITEM ANALYSIS REPORT

The consolidated item analysis report is going to combine the multiple item analysis reports for a teacher or grade level into one report. This reports allows the principal and teacher to see the entire picture of the student performance on each item within a particular standard.

Each benchmark item is categorized by the standard it assessed. Some standards have multiple items while other standards may only have one question. The consolidated item analysis comes in two different ways: (1) comparing each section taught by the teacher and (2) combined results for the teacher.

The value of these two reports is in using the test specifications for the End-of-Grade or End-of-Course assessments for the particular subject and grade level related to the percentage of questions to understand the impact of the item analysis results.

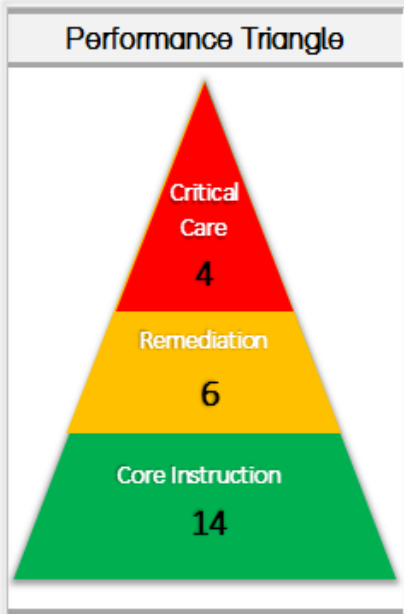
Average Percent Correct	Teacher A				
Row Labels		Section 1	Section 2	Section 3	Section 4
⊖ EE.A.1		4.8	11.8	17.0	5.7
gr_item3		4.8	11.8	17.0	5.7
⊖ EE.A.3		20.3	28.9	21.4	21.0
mc_item7		20.3	28.9	21.4	21.0
⊖ EE.A.4		7.5	12.8	13.4	1.9
gr_item4		7.5	12.8	13.4	1.9
⊖ EE.B.5		56.2	61.9	61.9	56.7
mc_item25		39.6	42.8	50.9	37.6
mc_item6		79.3	80.2	80.4	83.4
mc_item9		49.8	62.6	54.5	49.0
⊖ EE.B.6		29.4	37.1	32.1	29.7
mc_item16		21.1	35.3	35.7	24.2
mc_item26		33.9	38.0	34.8	36.9
mc_item4		33.0	38.0	25.9	28.0
⊖ EE.C.7a		27.3	27.8	30.4	39.5
mc_item13		27.3	27.8	30.4	39.5
⊖ EE.C.7b		44.9	50.8	54.5	56.7
mc_item5		44.9	50.8	54.5	56.7

# APPENDIX O: CLASS PERFORMANCE DASHBOARD

## Class Performance Dashboard

BENCHMARK 1

<b>Teacher:</b>	Smith	<b>Section:</b>	1
<b>Subject:</b>	Reading	<b>Grade:</b>	Fourth



**Goals and Performance**

<b>Class Goal</b>	65%
<b>Class Benchmark Performance</b>	58%
<b>Grade Level Goal</b>	52%
<b>Grade Level Benchmark Performance</b>	52%

**Previous Class Benchmark Performance**

Benchmark 1
Benchmark 2

**Class Roster**

Student Names	Critical Care	Remediation	Core Instruction
Student Name 1		✓	✓
Student Name 2		✓	✓
Student Name 3			✓
Student Name 4			✓
Student Name 5			✓
Student Name 6			✓
Student Name 7	✓		✓
Student Name 8			✓
Student Name 9		✓	
Student Name 10	✓		✓
Student Name 11			✓
Student Name 12		✓	
Student Name 13	✓		✓
Student Name 14			✓
Student Name 15			✓
Student Name 16		✓	✓
Student Name 17			✓
Student Name 18	✓		✓
Student Name 19			✓
Student Name 20			✓
Student Name 21		✓	
Student Name 22			✓
Student Name 23			
Student Name 24			

## APPENDIX P: UNDERSTANDING THE CLASS PERFORMANCE DASHBOARD

### Understanding the Class Performance Dashboard

The Class Performance Dashboard provides the teacher a roster of students in their class who are expected to be proficient at the end of the school year as determined by the principal and teacher using performance data from the prior school year. Students not expected to be proficient are not reported on the dashboard unless they are projected on the current student benchmark to achieve a level 2+ or higher. Below is an explanation of the parts of the dashboard and how to use the information to support instructional improvement and improved student performance.

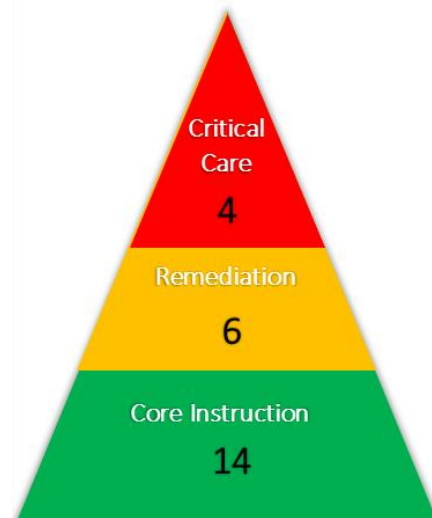
#### Performance Triangle

The Performance Triangle is made up of three areas: Core Instruction, Remediation, and Critical Care. Below is a definition of each area.

**Core Instruction:** Students who are expected to be proficient at the end of the school year and are projected to be proficient (Level 3 to 5+) based on the current student benchmark assessment.

**Remediation:** Students who are expected to be proficient at the end of the school year and are projected to be proficient (Level 3-) or not proficient (Level 2+) based on the current student benchmark assessment.

**Critical Care:** Students who are expected to be proficient at the end of the school year and are projected not to be proficient (Level 2 or lower) based on the current student benchmark assessment.



Inside the Performance Triangle is the number of students in the class who fall into one of the three areas.

#### Class Roster

The Class Roster lists all the students in the class projected to be proficient based on the previous student data results and conversations between the principal and teacher. Next to each student is a check mark in one of the three performance areas a student could fall into based on their performance on the current student benchmark. The total number of check marks in each column represents the number found in the area of the Performance Triangle to the left of the roster.

#### Goals and Performance

Provides the Class and Grade Level Goals established at the beginning of the school year along with the performance of the class and grade level on the current benchmark. In addition, the previous class benchmark performances are provided.

## APPENDIX Q: CONSOLIDATED ITEM ANALYSIS REPORT

### Consolidated Item Analysis Report

Grade \_\_\_\_\_  
 School \_\_\_\_\_

Average of School Percent Correct Row Labels	Column Labels	
	Teacher 1	Teacher 2
NS.A.1	34.3	34.3
gr_item1	27.4	27.4
gr_item6	3.5	3.5
mc_item1	60.2	60.2
mc_item4	46.3	46.3
NS.B.2	43.5	43.5
gr_item3	48.3	48.3
mc_item16	43.3	43.3
mc_item3	65.2	65.2
mc_item5	17.4	17.4
NS.B.3	63.6	63.6
gr_item4	56.2	56.2
mc_item12	65.2	65.2
mc_item7	60.2	60.2
mc_item8	72.6	72.6
NS.B.4	36.6	36.6
gr_item5	25.4	25.4
mc_item10	55.7	55.7
mc_item11	25.4	25.4
mc_item6	39.8	39.8
NS.C.5	35.0	35.0
mc_item15	16.9	16.9
mc_item18	32.8	32.8
mc_item2	55.2	55.2
NS.C.6a	37.8	37.8
mc_item9	37.8	37.8
NS.C.6b	21.4	21.4
mc_item19	21.4	21.4
NS.C.6c	38.8	38.8
gr_item2	15.4	15.4
mc_item22	62.2	62.2
NS.C.7a	56.2	56.2
mc_item13	56.2	56.2
NS.C.7b	73.1	73.1
mc_item20	73.1	73.1
NS.C.7c	11.9	11.9
mc_item17	11.9	11.9
NS.C.7d	15.9	15.9
mc_item23	15.9	15.9
NS.C.8	23.5	23.5
mc_item14	11.4	11.4
mc_item21	31.3	31.3
mc_item24	27.9	27.9

## APPENDIX R: CLASS ROSTER ANALYSIS REPORT

Teacher:  
Subject:  
Grade:

School:  
Period:

Benchmark Comparison	
Benchmark 1	58.3%
Benchmark 2	30.4%
Benchmark 3	43.5%

Trending	
Upward (▲)	7
Flat (▶)	13
Downward (▼)	3

Achievement Level Breakdown						
Level	Benchmark 1		Benchmark 2		Benchmark 3	
	# of Students	% of Students	# of Students	% of Students	# of Students	% of Students
Level 1	3	12.5%	8	34.8%	6	26.1%
Level 2	7	29.2%	8	34.8%	7	30.4%
Level 3	7	29.2%	2	8.7%	5	21.7%
Level 4	6	25.0%	3	13.0%	3	13.0%
Level 5	1	4.2%	2	8.7%	2	8.7%

Student Names	Benchmark 1	Benchmark 2	Benchmark 3	Trending
	3			
	3	1	2	▲
	5	5	5	▶
	2	2	4	▲
	4	4	3	▼
	3	1	2	▲
	1	1	1	▶
	2	1	1	▶
	4	3	3	▶
	4	3	3	▶
	4	4	4	▶
	3	4	2	▼
	4	5	5	▶
	2	1	2	▲
	1	1	1	▶
	3	2	2	▶
	4	2	4	▲
	2	2	2	▶
	1	1	1	▶
	2	1	1	▶
	3	2	3	▲
	2	2	2	▶
	2	2	3	▲
	3	2	1	▼

## APPENDIX S: UNDERSTANDING THE CLASS ROSTER ANALYSIS

# USING the CLASS ROSTER ANALYSIS

### Introduction

The Class Roster Analysis is broken down into four sections. There is the Benchmark Comparison section, the Class Trending section, the Achievement Level Breakdown section, and the class roster section. Below is a description of each section and how you can use it to help with your own data analysis and when you meet with your teachers about their results.

To get a complete picture of what is going on with the data for the class, you need to use all four sections in conjunction. Using only one or two sections worth of data will not give you a complete picture of what is going on with student achievement.

### Benchmark Comparison

The benchmark comparison gives you the overall percentage of students in the class who obtained a projected level 3- or higher on the benchmark.

This section will tell you if the percentage of students projected to pass the state assessment increased or decreased.

Benchmark Comparison	
Benchmark 1	80.0%
Benchmark 2	84.2%
Benchmark 3	

### Class Trending

The class trending section is broken down into three areas; upward, flat, and downward. Beside each area is a number. This represents the number of students in the class whose projected achievement level either increased, stayed the same, or decreased.

#### Upward

If the class had a majority of students in the upward area the teacher is moving the students in their class.

#### Flat

If the majority of the students are in the flat area means the students are staying steady and not losing any ground.

#### Downward

If the majority of the students are in the downward area this means the majority of the students are falling behind in their understanding of the curriculum. This would be a major concern moving forward since students are trending down at this time.

Trending	
Upward (▲)	4
Flat (▶)	10
Downward (▼)	5

### Achievement Level Breakdown

The achievement level breakdown compares the number and percentage of students who were projected to reach each achievement level in the class.

You can use this section to see what level of student the teacher's instruction is focusing on.

Look at this chart in two sections; proficient and not proficient. Ideally, you would like to see the number of level 1 and 2 students decreasing from the previous benchmark and the number of students projected to be level 3, 4 and 5 increase.

If a teacher has increased the number of students at level 1 or 2 this is a concern because these students are not progressing as they should and there may be some instructional concerns that may need to be addressed.

In some cases you may see a higher number of students at one particular achievement level. In this case this may indicate the teacher's instruction could be focused at one level and not differentiated to meet the needs of all the students in the class.

Level	Achievement Level Breakdown			
	Benchmark 1		Benchmark 2	
	# of Students	% of Students	# of Students	% of Students
Level 1	3	13.0%	2	8.7%
Level 2	7	30.4%	8	34.8%
Level 3	4	17.4%	5	21.7%
Level 4	9	33.1%	7	30.4%
Level 5	0	0.0%	1	4.3%

### Class Roster

The class roster lists all the students in the class and their projected achievement after each benchmark. Beside the achievement levels is a column named "trending". Each student has a symbol showing that they are trending upward (▲), flat (▶), or downward (▼). This trend is only looking at the previous two benchmarks for each student. If the student did not take either of the two benchmarks they will have a blank in the column.

When you are reviewing the roster look for students who made gains or dropped between the two benchmarks. Is there a pattern with similar students?



APPENDIX T: INTERPRETIVE GUIDE TO WINSCAN

# Interpretive Guide to the WinScan Score Reports for the North Carolina End of Grade Assessments

2014-15

North Carolina Department of Public Instruction



Public Schools of North Carolina  
State Board of Education | Department of Public Instruction

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## List of Figures in Guide

Figure 1. Sample Individual Student Report for EOG ELA/Reading and Mathematics Assessments. ....	6
Figure 2. Sample Individual Student Report for EOG Science Assessments.....	7
Figure 3. Sample Class Roster Report.....	8
Figure 4. Sample Score Frequency Report for EOG Assessments. ....	10
Figure 5. Sample Achievement Level Frequency Report for EOG ELA/Reading and Mathematics Assessments .....	13
Figure 6. Sample EOG Goal Summary Report.....	15

## **Introduction**

WinScan is a software application provided by the North Carolina Department of Public Instruction (NCDPI). This software permits administrators at the district level to produce a variety of score reports on demand, including Individual Student Reports (ISRs), Achievement Level Frequency Reports, Class Roster Reports, Score Frequency Reports, and Goal Summary Reports. *The Interpretive Guide to the WinScan Score Reports for NC End-of-Grade Assessments* is intended to help educators understand these reports and to inform decision making at the student, classroom, school, and district levels. This guide will also help administrators and educators explain test results to parents and the general public.

The NCDPI also produces an interpretive guide entitled *Understanding the Individual Student Report* (UISR). The UISRs are available online for the English Language Arts (ELA)/Reading, Mathematics, and Science End-of-Grade (EOG) general and alternate assessments (see <http://www.ncpublicschools.org/accountability/policies/uirs>). The UISRs are designed for parents and teachers; whereas, the *Interpretive Guide to WinScan Score Reports for the North Carolina End-of-Grade Assessments* is designed for teachers and administrators at the school, district, and state levels. Together, these documents provide guidance in interpreting the many reports that are generated by the WinScan software application.

## **How to Use This Guide**

This guide provides users with sample WinScan reports and the information needed to interpret a specific WinScan report. Users can learn about all of the key features of the sample reports by matching label numbers in the sample reports to the label numbers in the *Index of Terms by Label Number*.

## **The WinScan Reports**

Each WinScan report has a standard template. Except for the ISRs, the standard templates can be modified through user-defined options. When the standard report templates are combined with different options, assessments, and data filters, over three hundred (300) unique reports can be produced. This guide focuses on the most commonly used reports for EOG assessments. Table 1 shows a list of the reports described in subsequent pages and the audiences for which these reports are intended. The ISRs are designed for students, teachers, students' parents, and school administrators. Class Rosters are designed for teachers and school administrators. Score Frequency Reports, Achievement Level Frequency Reports, and Goal Summary Reports are designed for teachers, school administrators, district administrators, and state administrators.

Table 1. *WinScan Reports and Intended Audience*

Report	Audience Administrators				
	Parent	Teacher	School	District	State
Individual Student Report	✓	✓	✓		
Class Roster Reports		✓	✓		
Score and Achievement Level Frequency		✓	✓	✓	✓
Goal Summary Reports		✓	✓	✓	✓

The WinScan reporting system can aggregate data at various levels, including class, school, district, and state levels. Table 2 presents the reporting levels of each group-level WinScan report.

Table 2. *Reporting Levels for Group-Level WinScan Reports*

Report	Reporting Level			
	Class	School	District	State
Class Roster Reports	✓	✓		
Score and Achievement Level Frequency	✓	✓	✓	✓
Goal Summary Reports	✓	✓	✓	✓

The WinScan reporting system can also summarize scores across various subgroups including gender (male and female) and ethnicity (American Indian, Asian, Black, Hispanic, Two or More Races, and White). Table 3 presents the standard reporting groups available for each group-level WinScan report. When multiple subgroups are selected, reports are produced for every combination of the chosen subgroups.

Table 3. *Standard Reporting Groups for Group-Level WinScan Reports*

Report	Groups			
	All	Gender	Ethnicity	Gender &
Class Roster Reports	✓	✓	✓	✓
Score and Achievement Level Frequency	✓	✓	✓	✓
Goal Summary Reports	✓	✓	✓	✓

*Note: Ethnicity includes the following subgroups: American Indian, Asian, Black, Hispanic, Two or More Races, and White*

As can be seen from Tables 2 and 3, users have many options when producing WinScan reports, including many subject areas, four possible reporting levels, and four grouping variables to choose from, resulting in over 300 unique reports.

## **NC End-of-Grade Assessments**

During the final ten (10) days of the school year, students take the state-required NC EOG assessments of ELA/reading, mathematics, and science. The ELA/reading and mathematics assessments are administered to students at grades 3–8 as part of the statewide assessment program. Science is administered to students at grades 5 and 8. These curriculum-based achievement assessments are specifically aligned to the North Carolina *Standard Course of Study* and include a variety of strategies to measure the achievement of North Carolina students. Student scores in ELA/reading, mathematics, and science from the EOG assessments are used for computing school and teacher growth as well as performance composites, as required by the state-mandated READY Accountability Program. They are also used in determining Annual Measurable Objectives (AMOs) intended to improve educational outcomes for all students and close achievement gaps. AMO reporting is required under the Elementary and Secondary Education Act (ESEA) waiver obtained by North Carolina in May 2012 and the renewal granted through the 2014–15 school year. This waiver granted North Carolina flexibility regarding specific requirements of the *No Child Left Behind Act* of 2001 (NCLB).

## **Key Features of the EOG ELA/Reading Assessments**

- Reading and knowledge of vocabulary are assessed by having students read selections and answer questions related to the selections.
- The ELA/reading assessments at grades 3–5 consist of 52 items. The ELA/reading assessments at grades 6–8 consist of 56 items. A small portion of the items are field test items. These items do not count toward or against the student’s score.
- The selections on the assessment are chosen to reflect the variety of actual reading done by students in and out of the classroom.
- Students read literary selections (i.e., fiction, nonfiction, and poetry) and informational selections (i.e., content and consumer).
- The variety of selections allows for the assessment of reading for various purposes: to acquire literary experience, to gain information, and to perform a task.
- The estimated time for students at grades 3–8 to complete the ELA/reading assessment is 180 minutes. Students who are not finished at the end of the estimated time may be given additional time. However, no administration of the ELA/reading assessment at
- grades 3–8 may exceed 240 minutes.

### **Key Features of the EOG Mathematics Assessments at Grades 3–5**

- The mathematics assessments at grades 3–5 assess student achievement in the five strands of the mathematics curriculum: (1) Operations and Algebraic Thinking, (2) Number and Operations in Base Ten, (3) Number and Operations—Fractions, (4) Measurement and Data, and (5) Geometry.
- The mathematics assessments at grades 3–5 consist of two sections, calculator inactive and calculator active. The minimum (“at least”) calculator requirement for grades 3–5 is a four-function calculator with memory key.
- The mathematics assessments at grades 3 and 4 consist of 54 multiple-choice items.
- The mathematics assessment at grade 5 consists of 46 multiple-choice items and 8 gridded response items.
- Some of the mathematics items at grades 3–5 are experimental (field test) items. These items do not count toward or against the student’s score.
- The estimated time for students at grades 3–5 to complete the mathematics assessments is 180 minutes. Students who are not finished at the end of the estimated time may be given additional time. However, no administration of a mathematics assessment at grades 3–5 may exceed four hours (240 minutes).

### **Key Features of the EOG Mathematics Assessments for Grades 6–8**

- The mathematics assessments at grades 6–8 assess student achievement in the five strands of the mathematics curriculum: (1) Ratios and Proportional Relationships, (2) the Number System, (3) Expressions and Equations, (4) Geometry, and (5) Statistics and Probability.
- The mathematics assessments at grades 6–8 consist of two sections, calculator inactive and calculator active.
- The minimum (“at least”) calculator requirement for grades 6–8 is any four-function calculator with a square root function,  $y^x$ ,  $\pi(pi)$ , and algebraic logic.
- At grades 6–8, the 60-item assessment has 49 multiple-choice items and 11 gridded response items. Some of the mathematics items at grades 6–8 are experimental (field test) items. These items do not count toward or against the student’s score
- The estimated time for students at grades 6–8 to complete the mathematics assessments is 180 minutes. Students who are not finished at the end of the estimated time may be given additional time. However, no administration of a mathematics assessment at grades 6–8 may exceed four hours (240 minutes).

## **Key Features of the EOG Science Assessments at Grades 5 and 8**

- The EOG science assessments require students to demonstrate knowledge of important principles and concepts, understand and interpret laboratory activities, and relate scientific information to everyday situations.
- The science assessments have a substantial focus on processing information and higher-order thinking.
- The science assessments contain 75 multiple-choice items.
- Some of the science items are experimental (field test) items. These items do not count toward or against a student's score.
- The estimated time for students to complete the science assessments is 180 minutes. Students who are not finished at the end of the estimated time may be given additional time. However, no administration of a science assessment at grades 5 and 8 may exceed four hours (240 minutes).

## **Individual Student Reports**

For students at grades 3–8, the ISR for the EOG provides information concerning performance on the EOG for ELA/reading and mathematics. For students at grades 5 and 8, ISRs are also produced for the EOG science assessments. Sample ISR reports are provided in Figures 1 and 2. Key features are labeled and explained in the *Index of Terms by Label Number*.



**End-of-Grade  
NC READY Student Report 2014–15**



Student:  
Teacher:

Grade: 5  
School:

This report provides information about your student's score on these End-of-Grade tests given in 2015. The scores on these tests are only one of the many indicators of how well your student is achieving. Test scores should always be considered along with all other available information provided about your student. See the reverse side of this report for an explanation of information provided on this report.

1 - Student's Achievement Level Descriptor	2 - Student's Scores	3 - Scale Score Comparisons
<p><b>1</b> Students performing at this level have a <b>sufficient command</b> of grade-level knowledge and skills contained in the <i>Common Core State Standards (CCSS)</i> Reading Standards for Literature assessed at grade 5, but they may need academic support to engage successfully in this content area in the next grade level. They are prepared for the next grade level but are not yet on track for college-and-career readiness without additional academic support.</p>	<p><b>End-of-Grade ELA/Reading</b></p> <p><b>2</b> Scale Score <b>452</b></p> <p><b>3</b> Percentile (2013 Norming Year) <b>56</b></p> <p><b>4</b> Achievement Level <b>3</b></p> <p><b>5</b> Proficient <b>Yes</b></p> <p><b>6</b> Lexile Framework® for Reading <b>1030L</b></p>	<p><b>7</b> Levels * 1 2 3 4 5</p> <p><b>8</b> Student</p> <p><b>9</b> School</p> <p><b>10</b> District</p> <p><b>11</b> State 2013</p>
<p><b>1</b> Students performing at this level have <b>solid command</b> of the knowledge and skills contained in the <i>Common Core State Standards (CCSS)</i> for Mathematics assessed at grade 5 and are academically prepared to engage successfully in further studies in this content area.</p> <p>Level 4 students can typically write and interpret numerical expressions or analyze patterns and relationships. They usually understand the place value system and perform operations with multi-digit whole numbers and decimals to hundredths. Students at level 4 often use equivalent fractions as a strategy to add and subtract fractions. They show evidence that they can apply and extend their previous understanding of multiplication and division to multiply and divide fractions. They can typically convert like measurement units within a given measurement system as well as correctly represent and interpret data. Level 4 students can usually graph points on the coordinate plane to solve real-world and mathematical problems. They demonstrate a sound understanding of the concepts of volume and relating volume to multiplication and addition.</p>	<p><b>End-of-Grade Mathematics</b></p> <p><b>2</b> Scale Score <b>456</b></p> <p><b>3</b> Percentile (2013 Norming Year) <b>73</b></p> <p><b>4</b> Achievement Level <b>4</b></p> <p><b>5</b> Proficient <b>Yes</b></p> <p><b>6</b> Quantile Framework® for Mathematics <b>925Q</b></p>	<p><b>7</b> Levels * 1 2 3 4 5</p> <p><b>8</b> Student</p> <p><b>9</b> School</p> <p><b>10</b> District</p> <p><b>11</b> State 2013</p>

\* An achievement level of 3 indicates the student is proficient in the grade-level knowledge and skills assessed by the test. An achievement level of 4 or 5 indicates the student is proficient and has met the college-and-career readiness standard which is a part of federal reporting.

Figure 1. Sample Individual Student Report for EOG ELA/Reading and Mathematics Assessments

**End-of-Grade Science  
NC READY Student Report 2014-15**

Student: **FIRSTNAME LASTNAME**  
Teacher: **LASTNAME**

Grade: **8**  
School: **TEST MIDDLE**



This report provides information about your student's score on this End-of-Grade Science test given in 2015. The score on this test is only one of the many indicators of how well your student is achieving. Test scores should always be considered along with all other available information provided about your student. See the reverse side of this report for an explanation of information provided on this report.

**1 - Student's Achievement Level Descriptor**

**1** Students performing at this level have **solid command** of the knowledge and skills contained in the North Carolina *Essential Standards (ES)* for Science assessed at their grade level and are academically prepared to engage successfully in this content area.

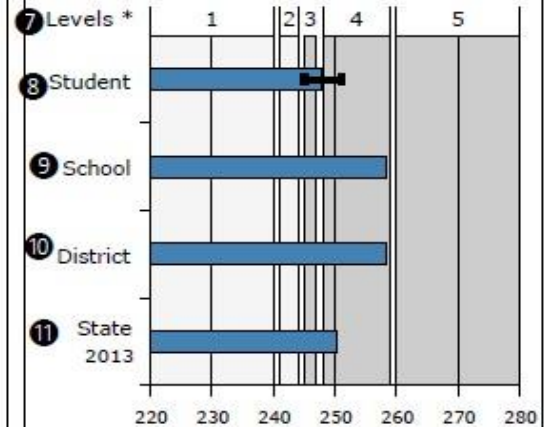
Students understand the properties of matter and the changes that occur when matter interacts in an open and closed container. They explain the environmental implications associated with the various methods of obtaining, managing, and using energy resources. Students understand the hydrosphere, human impact on local water systems, and the effects of the hydrosphere on humans. They understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms. Students understand the hazards caused by agents of diseases that affect living organisms. They understand how biotechnology is used to affect living organisms. Students understand how organisms interact with and respond to the biotic and abiotic components of their environment. They understand the evolution of organisms and landforms based on evidence, theories, and processes that affect Earth over time. Students understand how food provides energy and molecules required for survival, growth, and repair of organisms (including plants). They can explain the relationship between respiration and digestion as it pertains to the health of the body.

**2 - Student's Scores**

**End-of-Grade Science**

- 2** Scale Score **248**
- 3** Percentile (2013 Norming Year) **41**
- 4** Achievement Level **4**
- 5** Proficient **Yes**

**3 - Scale Score Comparisons**



\* An achievement level of 3 indicates the student is proficient in the grade-level knowledge and skills assessed by the test. An achievement level of 4 or 5 indicates the student is proficient and has met the college-and-career readiness standard which is a part of federal reporting.

Figure 2. Sample Individual Student Report for EOG Science Assessments

## Class Roster Reports

The Class Roster Reports take on many different combinations. A Class Roster Report can contain grade-specific student scores for each content area independently or contain grade-specific student scores for combinations of content areas. The most typical combination for the EOG is a Class Roster Report that displays reading and mathematics scores together on one report for a specific grade. Figure 3 displays a sample EOG Class Roster Report. This report is often produced at the class level and the school level. The report's features and layout do not differ across levels. The *Index of Terms by Label Number* can be used to learn more about each labeled feature of this report.

PUBLIC SCHOOLS OF NORTH CAROLINA END-OF-GRADE TESTS 2014-2015 Grade 5 Reading and Mathematics Class Roster								
12 ASchCode =				15 MrSchoolName =				
13 InstrName =				16 ClassPeriod =				
14 TestDates = Regular End-of-Year Testing				May/June 2015				
Student Name	Reading Scores <sup>1</sup>				Mathematics Scores <sup>2</sup>			
	2 Develop Scale	6 Reported State Lexile <sup>Y</sup>	17 2013 State Pctl' <sup>3</sup>	4 Ach. Level	2 Develop Scale	6 Reported State Quantile <sup>Y</sup>	17 2013 State Pctl' <sup>3</sup>	4 Ach. Level
1	448	935L	40	2	448	755Q	42	2
2	445	865L	29	2	442	630Q	22	2
3	452	1030L	56	3	452	840Q	57	4
4	456	1125L	72	4	456	925Q	73	4
5	454	1075L	66	4	447	735Q	38	2
6	437	675L	10	1	438	545Q	11	1
7	453	1055L	61	4	447	735Q	38	2
8	443	820L	24	2	444	670Q	28	2
9	451	1005L	52	3	447	735Q	38	2
10	447	910L	36	2	440	585Q	16	1
11	448	935L	40	2	449	775Q	46	3
12	445	865L	29	2	448	755Q	42	2
13	438	700L	12	1	434	460Q	4	1
14	452	1030L	56	3	448	755Q	42	2
15	452	1030L	56	3	449	775Q	46	3
16	446	890L	32	2	442	630Q	22	2
17	440	750L	16	1	440	585Q	16	1
18	453	1055L	61	4	437	525Q	10	1
19	445	865L	29	2	436	500Q	8	1
<div style="display: flex; justify-content: space-between;"> <span>18 Class Mean</span> <span>447.6</span> <span>444.4</span> </div>								

<sup>1</sup> There are 52 items on the reading test.  
<sup>2</sup> There are 54 items on the mathematics test. Eight of the 54 items are gridded response items.  
<sup>3</sup> The NC State reading and mathematics percentiles were established from 2013 statewide test data.  
 Y For more information on the Lexile Measure, visit [www.Lexile.com](http://www.Lexile.com).  
 For more information on the Quantile Measure, visit [www.Quantiles.com](http://www.Quantiles.com)

Figure 3. Sample Class Roster Report.

## Scale Score Frequency Reports

Frequency tables are used to summarize large quantities of scores. The Scale Score Frequency Reports available in WinScan are used to summarize scale score information at the class, school, district, and state levels. The WinScan Scale Score Frequency Report presents the frequency, percent, cumulative frequency, and cumulative percent of each scale score at a specific grade.

These reports can be created for each EOG assessment. Figure 4 presents a sample Score Frequency Report for an EOG mathematics assessment. The *Index of Terms by Label Number* can be used to learn more about each labeled feature of this report.

The Score Frequency Report consists of three sections: the header (section label F1), a summary table of statistics (section label F2), and a score frequency table (section label F3). The first line of the sample Score Frequency Report header describes the type of assessment (EOG) and the school year (2014-15). The second line of the header displays the specific grade, the subject area, and the type of report.

The top row of the summary table (section label F2) indicates that 44 students in this report had valid scores. The highest score was 467 and the lowest score was 439.

PUBLIC SCHOOLS OF NORTH CAROLINA END-OF-GRADE TESTS 2014-2015 Grade 7 Mathematics Developmental Scale Score Frequency Report							
<input type="checkbox"/> LEASchCode = <span style="float: right;">15 HdrSchoolName =</span> <span style="float: right;">13 InstrName =</span> <span style="float: right;">16 ClassPeriod =</span> 14 TestDates = Regular End-of-Year Testing May/June 2015							
Summary Statistics on Scale Score							
Number of Students with Valid Scores 44				High Score 467			
19 Developmental Scale Score Mean 454.52				22 Local Percentiles			
20 Standard Deviation 6.68				Developmental Scale Scores 19			
21 Mode 454				90 463.0 75 459.5 50 (Median) 455.0 25 452.0 10 444.0			
Frequency Distribution							
2 Dev Scale Score	23 Frequency	24 Cumulative Frequency	25 Cumulative Percent	26 Cumulative Percentile	4 Achievement Level	17 2013 State Percentile	6 Reported Quantile
467	1	44	2.27	100.00	5	97	1290Q
465	1	43	2.27	97.73	5	94	1250Q
464	1	42	2.27	95.45	5	92	1230Q
463	2	41	4.55	93.18	5	90	1210Q
462	2	39	4.55	88.64	5	89	1185Q
461	1	37	2.27	84.09	5	86	1165Q
460	3	36	6.82	81.82	4	84	1145Q
459	1	33	2.27	75.00	4	81	1125Q
458	1	32	2.27	72.73	4	78	1105Q
457	2	31	4.55	70.45	4	75	1085Q
456	6	29	13.64	65.91	4	72	1060Q
455	2	23	4.55	52.27	4	68	1040Q
454	7	21	15.91	47.73	4	65	1020Q
453	2	14	4.55	31.82	4	61	1000Q
452	2	12	4.55	27.27	3	58	980Q
451	1	10	2.27	22.73	3	54	960Q
449	1	9	2.27	20.45	2	47	915Q
448	1	8	2.27	18.18	2	43	895Q
446	1	7	2.27	15.91	2	36	855Q
445	1	6	2.27	13.64	2	33	835Q
444	1	5	2.27	11.36	2	29	810Q
443	1	4	2.27	9.09	1	26	790Q
442	1	3	2.27	6.82	1	23	770Q
440	1	2	2.27	4.55	1	18	730Q
439	1	1	2.27	2.27	1	15	710Q

Figure 4. Sample Score Frequency Report for EOG Assessments. The LEASchCode (Label 12) indicates the Local Educational Agency school code, the InstrName (Label 13) indicates the instructor's name, TestDates (Label 14) indicates the time of year in which the exam was administered, the HdrSchoolName (Label 15) indicates the school name, and the ClassPeriod (Label 16) indicates the class period.

The arithmetic mean of the developmental scale score was 454.52 (Label 19), the standard deviation was 6.68 (Label 20), and the mode was 454 (Label 21). The percentile scores are listed at the far right of the table (label 19). The scale scores are listed for the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles (label 22). In this sample, a scale score of 459.5 corresponds to a percentile of 75. This means that 75 percent of the 44 students earned a score of 459.5 or less.

In the score frequency table (section label F3) the Dev Scale Score column (Label 2) presents every score earned by the 44 students. The Frequency column (Label 23) on the report presents the number of students that earned each scale score. For example, 6 students earned a scale score of 456. A “Missing” label would indicate that one student did not receive a score.

The Cumulative Frequency column (Label 24) presents the total number of students that earned up to and including a given scale score. This column shows 29 students earned up to and including a scale score of 456.

The Percent column (Label 25) presents the percent of students that earned a given scale score (number of students that earned the score divided by total number of observations). This column shows that 13.64 percent of the students earned a score of 456.

The Cumulative Percent column (Label 26) displays the percent of students that earned up to and including a given scale score. This column shows 65.91 percent of the students earned up to and including a scale score of 456.

The Achievement Level column (Label 4) displays the achievement level associated with each scale score. In this example, a scale score of 456 corresponds to an achievement level of 4. The 2013 State Percentile column (Label 17) displays to the ELA/reading and mathematics percentiles that were established from 2013 statewide assessment data. This column shows that a scale score of 456 was in the 72<sup>nd</sup> percentile in 2013.

The Reported Quantile column (Label 6) displays the Quantile Score. This example shows that a scale score of 456 is linked to a Quantile of 1060Q. For the EOG ELA/reading assessment the column displays the Reported Lexile.

### **Achievement Level Frequency Reports**

Figure 5 displays a sample Achievement Level Frequency Report for an EOG ELA/Reading and Mathematics assessment. The first line of the header indicates the report is for the 2014-15 school year. The second line indicates the grade level and report type.

LEASchCode (Label 12) indicates the Local Educational Agency school code, the InstrName (Label 13) indicates the instructor’s name, TestDates (Label 14) indicates the type of administration and the time of year that the exam was administered (Regular End-of-Year Testing May/June 2015), the HdrSchoolName (Label 15) indicates the school name, and the ClassPeriod (Label 16) indicates the class period.

The Reading and Mathematics Achievement Levels column (Label 4) presents every achievement level earned by the students. Students who do not have an achievement level are classified as “blank.” The Frequency column (Label 23) presents the number of students that earned each achievement level. The total count of students excludes blank scores. The sample shows 13 students earned an achievement level of 4 in reading and 9 in mathematics.

The Percent column (Label 25) presents the percent of students that earned a given achievement level (number of students that earned the achievement level divided by total number of observations). This column shows that 40.63 percent of the students earned an achievement level of 4 in reading and 28.13 percent in Mathematics.

The Cumulative Frequency column (Label 24) presents the total number of students that earned up to and including an achievement level in a given row. This column shows 22 students earned up to and including an achievement level of 4 in reading and 14 students in mathematics earned up to and including an achievement level of 4.

The Cumulative Percent column (Label 26) displays the percent of students that earned up to and including an achievement level in a given row. In the sample shown, 68.75 percent of the students earned up to and including an achievement level of 4 in reading and 43.75 percent in mathematics.

The summary statistics just below the frequency table show 23 of 32 students were classified as level 4 or 5 and 25 of the 32 were classified as level 3, 4, or 5 in reading. This corresponds to 78.13 percent of the students at grade-level proficient (levels 3 and above) and 71.88 percent at college and career ready (levels 4 and above) in reading. In math, 27 of 32 students were classified as level 4 or 5 and 29 of the 32 were classified as level 3, 4, or 5. This indicates that in math 90.63 percent of the students were grade-level proficient (levels 3 and above) and 84.38 percent were college and career ready (levels 4 and above).





Key features are labeled and explained in the *Index of Terms by Label Number*. The standard protocol for reporting subscale scores requires that any goal with fewer than five (5) items does not produce a level of reliability sufficient for score reporting. The Goal Summary Report provides valid data about curriculum implementation only when 1) all forms are administered within the same classroom, school, or LEA; 2) there are at least five (5) students per form; and 3) approximately equal numbers of students have taken each form. It is best to compare a group's weighted mean percent correct with the state weighted mean to determine how far above or below the state weighted mean the group has performed.

PUBLIC SCHOOLS OF NORTH CAROLINA END-OF-GRADE TESTS 2013-2014						
Grade 8 Goal Summary Report						
Regular test administration						
<b>33</b> SystemCode =	<b>19</b> Developmental Scale Score Mean	<b>35</b> Number of Valid Scores	<b>34</b> SystemName =	<b>28</b> Pct of Read Items per Form <sup>1</sup>	<b>29</b> Weighted Mean Pct Correct	<b>30</b> Diff from 2013 State Mean Pct Correct <sup>2</sup>
Reading State 2013 <sup>3</sup>	455.6 458.7	1840 108923		100.0		
Common Core English Language Arts Concepts						
Language				20.3	64.5	-5.1
Reading: Literature				33.6	61.3	-3.1
Reading: Informational Text				46.2	56.1	-6.5
	<b>19</b> Developmental Scale Score Mean	<b>35</b> Number of Valid Scores		<b>28</b> Pct of Math Items per Form <sup>1</sup>	<b>29</b> Weighted Mean Pct Correct	<b>30</b> Diff from 2013 State Mean Pct Correct <sup>2</sup>
Mathematics State 2013 <sup>3</sup>	447.6 450.0	1843 109580		100.0		
Calculator Inactive Gridded Response Items				30.0 18.0	35.0 22.5	-5.1 -5.2
Calculator Active				70.0	48.7	-4.6
Common Core Mathematics Domains						
Functions				24.0	44.8	-5.4
The Number System				6.0	17.8	-4.8
Expressions and Equations				32.0	42.5	-5.8
Geometry				22.0	54.3	-2.2
Statistics and Probability				16.0	45.2	-5.2

<sup>1</sup> Domains may not sum to 100 due to rounding.

<sup>2</sup> The test forms used year to year may be different. Tests are equivalent at the total score level, not at the goal or objective level. Thus, forms from year to year may have more or less difficult items on a particular goal or objective.

<sup>3</sup> The goal summary report provides valid data about curriculum implementation when all forms are administered within the same classroom/school/LEA, there are at least five students per form, and approximately equal numbers of students have taken each form. It is best to compare a group's weighted mean percent correct with the state weighted mean to determine how far above or below the state weighted mean the group has performed.

The Common Core English Language Arts Standard can be found at <http://www.corestandards.org/ELA-Literacy>

The Grade 8 Common Core Mathematics Overview can be found at <http://www.corestandards.org/Math/Content/8/introduction>

Figure 6. Sample EOG Goal Summary Report

### Index of Terms by Label Number

① **Student’s Achievement Level Descriptor**—The student level descriptor describes the level of achievement that the student is expected to have mastered given his or her assessment score. The achievement level descriptors can be viewed at

<http://www.ncpublicschools.org/accountability/testing/shared/achievelevel/>.

② **Scale Score**—The number of assessment questions the student answers correctly is called a raw score. The raw score is converted to a developmental scale score.

③ **Percentile**—The percentile rank compares a student’s performance on the assessment this year to that of all North Carolina students who took the assessment in the norming year. The norming year for an assessment is generally the first year the assessment was administered. The percentile shows a student performed at a level equal to or better than the stated percentage of students who took the assessment during the norming year. For example, if a student scores as well as or better than 87percent of the students who took the assessment in the norming year, the student is at the 87<sup>th</sup> percentile.

④ **Achievement Levels / Levels / Ach. Level**—The achievement level shows the level at which a student performed on the assessment. Achievement levels are predetermined performance standards that allow a student’s performance to be compared to grade-level expectations. Five achievement levels (i.e., Levels 1, 2, 3, 4, and 5) are reported.

Achievement

levels of 3, 4, and 5 indicate grade-level proficiency. Achievement levels of 4 and 5 indicate college and career readiness. The achievement level descriptors can be viewed at

<http://www.ncpublicschools.org/accountability/testing/shared/achievelevel/>.

⑤ **Proficient**—Proficient indicates whether the student has met (Yes) or not met (No) the grade-level proficiency standards.

⑥ **Quantile or Lexile Score**—The EOG mathematics tests are linked to the Quantile Framework<sup>®</sup> for Mathematics. The EOG ELA/reading test are linked to the Lexile Framework<sup>®</sup> for Reading. Definitions of Lexiles and Quantiles follow.

### **Lexile Score**

The Lexile Framework<sup>®</sup> measures both reader ability and text difficulty on the same scale, the Lexile scale. Lexile scores are reported from a low of BR (Beginning Reader) to a high of 2000L. Lexile scores do not translate specifically to grade levels. Using a student’s Lexile score a student can be matched to books or other reading material that are similar to his or her reading ability. The lower a book’s Lexile measure, the easier it will be to comprehend. For example, a text with a Lexile measure of 850L will most likely be easier for a reader to comprehend than a

text at 950L. The Lexile score also allows one to track a student’s progress over time. Additional information on Lexiles can be found at <http://www.lexile.com>.

## Quantile Score

To interpret what a **Quantile® score** means for a student, two pieces of information are needed: the Quantile score and the grade level during which a student received the Quantile score.

Typically, a higher Quantile measure within a specific grade range indicates that a student probably has very few problems with grade-level material in school. A lower Quantile measure indicates that a student most likely struggles to understand and succeed with grade-level material. Once a student’s Quantile measure and grade are known, mathematical concepts, topics, materials, and resources can be identified within that same Quantile range. A student can be matched with resources and engaged in instruction to focus remediation and move forward with more demanding concepts and skills. Additional information on Quantile measures can be found at <http://www.Quantiles.com>.

⑦ **Levels**—The 5 achievement levels (described under Label 4) are listed across the top of the graph.

⑧ **Student**—This blue bar represents the student’s scale score on the particular assessment. Surrounding the student’s scale score is a confidence interval, indicated by a black line. The confidence interval indicates the range of scores that would likely result if the same student completed similar tests many times.

⑨ **School**—The average school score is represented by this blue bar. The average scale score for the school is based on fall and/or spring test administration data for the given school year.

⑩ **District**—The average district score is represented by this blue line. The average scale score for the district is based on fall and/or spring test administration data for the given school year.

⑪ **State**—The average state score for 2013 is represented by this blue bar. The state average is based on the scores of all North Carolina students who took the test in the norming year (2013).

⑫ **LEASchCode** refers to the Local Education Agency (LEA) school code.

⑬ **InstrName** refers to the instructor’s name.

⑭ **TestDates** describes the time of year in which the exam was administered.

⑮ **HdrSchoolName** refers to the school name.

⑯ **ClassPeriod** refers to the class period.

⑰ **2013 State Pctl (Percentile)** refers to the ELA/reading and mathematics percentiles

that were established from 2013 statewide assessment data (also see Label 3 above).

**18 Class Mean**—The class mean is the average of the class scores. The mean is the sum of all scores in the roster divided by the number of scores in the roster.

**19 Developmental Scale Score Mean**—The group mean is the average of a group of scores. The mean is the sum of all scores in the report divided by the number of scores in the report.

**20 Standard Deviation**—The standard deviation indicates the degree of variation of scores among a group of students. The larger the standard deviation, the greater the variation there is in scores.

**21 Mode**—The group mode is the most common score or scores of the group.

**22 Percentile**—The percentile describes the percent of all values of the scale score in the report that are equal to or less than the scale score presented in the next column. The median is the midpoint of the scale score distribution and corresponds to the 50<sup>th</sup> percentile.

**23 Frequency**—The Frequency column presents the number of students that earned each score.

**24 Cumulative Frequency**—The value in the cumulative frequency column in a frequency table is the total number of students that earned all scores up to and including the score in the same row.

**25 Percent (Percent of Total)**—The percent of total column presents students that earned each score (number of students that earned the score divided by the total number of observations).

**26 Cumulative Percentile (Cumulative Percent)**—The value in the cumulative percent column is the percent students that earned all scores/achievement level up to and including the score/achievement level in the same row.

**27 Number of Observations** – The number of observations is the number of students who earned valid scores included in this report.

**28 Percent of the Read/Math Items per Form**—The percent of the items per form is the percent of items that align with each content goal.

**29 Weighted Mean Percent Correct**—A weighted mean is used to calculate the mean scores from different forms. If the count of students differs across forms, a weighted mean adjusts for the different counts. For instance, if twice as many students took one form as compared to another, this form would receive twice the weight in calculating the mean. Usually about the same numbers of students take each form, so in practice, the weighted mean is very similar to an unweighted mean.

**30** **Difference from 2013 State Mean Percent Correct**—This difference displays performance relative to the 2013 state mean percent correct. Negative values indicate a score performance below the state mean percent correct, while positive values indicate performance above the state mean.

**31** **Met College and Career Readiness Standards**—The number and percent of students in the report who have met the College and Career Readiness Standards (Levels 4 and 5).

**32** **Met On-Grade-Level Standards**—The number and percent of students in the report who have met On-Grade-Level Standards (levels 3, 4 and 5).

**33** **SystemCode** refers to the LEA school code.

**34** **SystemName** refers to the LEA or District Name.

**35** **Number of Valid Scores** refers to the number of valid scores, used as the denominator in calculating the mean.

## APPENDIX U: TEACHER FEEDBACK CONFERENCE SURVEY FOR TEACHERS

1. Please enter your unique identification number for the study \_\_\_\_\_
2. What was the date of the feedback conference between you and the principal?

### **Individualized**

#### *Build Trust*

3. How do you rate the level of trust you have between yourself and the principal?

- Very trustworthy
- Somewhat trustworthy
- Neither trustworthy nor No trust
- Somewhat trustworthy
- No trust

#### *Personalized*

4. How would you rate the personalization of the feedback on the student benchmark results you received from the principal?

- Very personal
- Personal
- Neither personal nor impersonal
- Somewhat personal
- Impersonal

### **Motivate**

#### *Connections*

5. Rate your overall relationship between you and the principal.

- Very good
- Good
- Fair
- Poor
- Very poor

*Vitality*

6. How would you describe the relationship between you and the principal as it relates to the feedback you have received on the student benchmark results?

- Very positive
- Somewhat positive
- Neither positive nor negative
- Somewhat negative
- Very negative

**Stimulate**

*Self-Esteem*

7. Rate your feelings about your student's performance prior to the conference.

- Very good
- Good
- Fair
- Poor
- Very poor

8. Rate your feelings about your student's performance after the conference.

- Very good
- Good
- Fair
- Poor
- Very poor

*Reflection*

9. Will you be able to make adjustments in your instruction as necessary based on the feedback?

- Yes
- No



## **Influence**

### *Goal Setting*

10. How confident are you that the feedback you received from the principal will support your goal(s) established for student benchmark performance?

- Very confident
- Somewhat confident
- Neither confident nor not confident
- Not confident

### *Create Meaning*

11. What did you learn about the data and your instructional practices from the feedback that you will continue using in the classroom or improve in your instruction?

### *Short Answer Response*

#### **Assessment for Learning**

12. Did the feedback from the principal connect the assessment data to how to improve student performance?

- Very connected
- Somewhat connected
- Not very connected
- Not at all connected

#### **Data Driven Decisions**

13. Rate the suggestions provided by the principal during the feedback conference as it relates the data from the student benchmark assessment results.

- Very good
- Good
- Fair
- Poor
- Very poor

#### **Instructional Improvement**

14. How confident are you that the feedback you received from the principal will support instructional improvement in your classroom?

- Very confident
- Somewhat confident
- Neither confident nor not confident
- Not confident

### **Curriculum Alignment**

15. How would you rate the feedback from the principal as it relates to supporting your instructional alignment to the curriculum?

- Very good
- Good
- Fair
- Poor
- Very poor

### **Miscellaneous Questions**

16. What part of the feedback was most helpful?

*Short Answer Response*

17. What part of the feedback was least helpful?

*Short Answer Response*

18. Did you have enough time to review the data prior to the conference?

- Yes
- No

19. How much time did you have to review the data prior to the meeting?

- Over 24 hours
- 12-24 hours
- 6-12 hours
- 0-6 hours
- Not given a chance to review the data

20. Is there anything you would like to add that was not asked in the survey as it relates to the feedback you received from your principal on your student's benchmark performance results?

*Short Answer Response*

## APPENDIX V: TEACHER FEEDBACK CONFERENCE SURVEY FOR PRINCIPALS

1. Please enter your unique identification number for the study \_\_\_\_\_
2. What was the date of the feedback conference between you and the teacher?

### **Individualize**

#### *Build Trust*

3. How do you rate the level of trust you have between yourself and the teacher?

- Very trustworthy
- Somewhat trustworthy
- Neither trustworthy nor No trust
- Somewhat trustworthy
- No trust

#### *Personalized*

4. How would you rate the personalization of the feedback you gave to the teacher on their student benchmark results?

- Very personal
- Personal
- Neither personal nor impersonal
- Somewhat personal
- Impersonal

### **Motivate**

#### *Connections*

5. Rate your overall relationship between you and the teacher.

- Very good
- Good
- Fair
- Poor
- Very poor

*Vitality*

6. How would you describe the relationship between you and the teacher as it relates to the feedback you have received on the student benchmark results?

- Very positive
- Somewhat positive
- Neither positive nor negative
- Somewhat negative
- Very negative

**Stimulate**

*Self-Esteem*

7. Rate your feelings about the teacher's performance prior to the conference?

- Very poor
- Poor
- Fair
- Good
- Very good

8. Rate your feelings about the teacher's performance after the conference?

- Very poor
- Poor
- Fair
- Good
- Very good

*Reflection*

9. Do you think the adjustments suggested in your feedback will improve instruction?

- Yes
- No

**Influence***Goal Setting*

10. How confident are you that the feedback will support the goal(s) established for student performance?

- Very confident
- Somewhat confident
- Neither confident nor not confident
- Not confident

*Create Meaning*

11. What did you learn about the data and the instructional practices of the teacher from the feedback that you provided during the conference?

*Short Answer Response***Assessment for Learning**

12. Did your feedback connect the assessment data to how to improve student performance?

- Very connected
- Somewhat connected
- Not very connected
- Not at all connected

**Data Driven Decisions**

13. Rate the suggestions you provided during the feedback conference to the teacher as it relates the data from the student benchmark assessment results.

- Very good
- Good
- Fair
- Poor
- Very poor

**Instructional Improvement**

14. How confident are you that the feedback you provided to the teacher will support instructional improvement in your classroom?

- Very confident
- Somewhat confident
- Neither confident nor not confident
- Not confident

**Curriculum Alignment**

15. How would you rate the feedback you provided as it relates to supporting the instructional alignment to the curriculum by the teacher?

- Very good
- Good
- Fair
- Poor
- Very poor

16. Is there anything you would like to add that was not asked in the survey as it relates to the feedback you received from your principal on your student's benchmark performance results?

*Short Answer Response*

## APPENDIX W: TEACHER INTERVIEW QUESTIONS

### **Introduction**

What is your Name (First and Last Name)?

Name of the teacher this teacher feedback conference survey is on:

What was the date of the feedback conference between you and the principal?

### **Individualized**

#### *Build Trust*

How did the level of trust change over the school year between you and the principal as the result of the feedback conferences?

#### *Personalized*

Did you think the feedback you received from the principal was personalized and how did the personalization of feedback from the principal support your instructional improvement?

### **Motivate**

#### *Connections*

How did the feedback conferences build a relationship with your principal?

#### *Vitality*

Describe how the relationship with your principal changed as related to the feedback conferences you had with them?

### **Stimulate**

#### *Self-Esteem*

Describe how your self-esteem change in how you felt about your instruction as a result of the feedback conferences?

#### *Reflection*

Describe how the feedback conferences allowed you to reflect on your instructional practices and make adjustments to support student performance?

### **Influence**

#### *Goal Setting*

How did setting goals in the feedback conferences for your students help you focus on your instruction?

#### *Create Meaning*

Describe how your understanding of using student data to help your instruction changed from the first benchmark to the end of the school year?

**Assessment for Learning**

How did your understanding of the purpose of benchmarks to improve student performance changed over the school year?

**Data Driven Decisions**

Describe how you used the data from the benchmarks to make instruction changes in your classroom?

**Instructional Improvement**

Describe how your instruction changed because of the feedback conferences?

**Curriculum Alignment**

Describe the role the feedback conference had on aligning your instruction to the curriculum which aligned to the benchmark assessment?

**Miscellaneous Questions**

What part of the feedback was most helpful?

What part of the feedback was least helpful?

Did having time prior to the feedback conference to review the benchmark results for your students help when you were receiving feedback from the principal?

Is there anything you would like to add that was not asked in the survey as it relates to the feedback you received from your principal on your student's benchmark performance results.



## APPENDIX X: PRINCIPAL INTERVIEW QUESTIONS

### **Introduction**

What is your Name (First and Last Name)?

Name of the teacher this teacher feedback conference survey is on:

What was the date of the feedback conference between you and the principal?

### **Individualized**

#### *Build Trust*

How did the level of trust change over the school year between you and the teachers as the result of the feedback conferences?

#### *Personalized*

What impact did the personalization of the feedback you gave to the teachers have on the acceptance of the feedback you gave them?

### **Motivate**

#### *Connections*

How did the feedback conferences build a relationship between you and the teachers?

#### *Vitality*

Describe how the relationship between you and the teachers change as related to the feedback conferences you had with them?

### **Stimulate**

#### *Self-Esteem*

Describe the change you observed in the teacher's self-esteem with regards to their instruction in the classroom?

#### *Reflection*

Describe how the feedback conferences facilitated reflection on your part and for the teachers?

### **Influence**

#### *Goal Setting*

How did establishing goals in the feedback conferences support the teachers understanding of expectations and focus on improving their instruction?

#### *Create Meaning*

Describe how your teachers understanding of how to use student data to improve instruction changed from the first benchmark to the end of the school year?

### **Assessment for Learning**

How did your understanding of the purpose of benchmarks to improve student performance changed over the school year?

**Data Driven Decisions**

Describe how you are using the data has changed this year to make data driven decisions for your school?

**Instructional Improvement**

Describe the changes you have observed in teacher instruction because of the feedback conferences?

**Curriculum Alignment**

Describe the role the feedback conference had on improving aligning your instruction to the curriculum which aligned to the benchmark assessment?

**Miscellaneous Questions**

What part of the feedback conference was most helpful for you as the principal?

What part of the feedback conference was least helpful for you as the principal?

Did providing time for the teachers prior to the feedback conference to review the benchmark results help them receive and accept the feedback from you?

Is there anything you would like to add that was not asked in the survey as it relates to the feedback conference?

## APPENDIX Y: SAS EVAAS POLICY BRIEF

# SAS® EVAAS®

POLICY BRIEF

## Key Research Findings

### Introduction

Over two decades ago, a team of statisticians and researchers at the University of Tennessee initiated a new way to view the effectiveness of educators. Rather than focusing on the *achievement level* of students as a measure of effectiveness, the future EVAAS team focused on the *progress* of students over time, following each individual student across subjects and grades. While the application to education represented a paradigm shift for educators and policymakers, the analyses themselves drew upon established statistical models, which overcame many significant challenges concerning the use of student testing data to assess educators' effectiveness.

Over the years, the EVAAS value-added approach—and the conclusions drawn from its research—have been reviewed, validated, and confirmed by a variety of public and private sector experts.<sup>1</sup> This document summarizes EVAAS' key findings regarding value-added modeling and teaching effectiveness.

### Key Research Findings from 1982 to 1999

Led by Dr. Bill Sanders at the University of Tennessee in Knoxville, the early work of the team focused on research that established many of today's basic understandings about teaching effectiveness. Key findings between 1982 and 1999 include:

- **Teaching matters.** The differences in teaching effectiveness have a highly significant effect on the rate of student academic progress.<sup>2</sup> These effects are greater in math than in reading comprehension.
- **Teaching matters a lot** because ineffective teaching cannot be compensated for in future years. Teacher effects were found to be cumulative and additive with very little evidence of compensatory effects.<sup>3</sup> In other words, if a student had two very ineffective teachers in a row for the same subject, then there is very little evidence that a subsequent teacher could make up that loss in progress. Furthermore, the sequence of teachers that a student has (and whether those teachers are effective or ineffective) greatly affects the possibility of that student passing a high-stakes test.<sup>4</sup>
- **Students' backgrounds do not matter in terms of their progress.** White and black students both make significant progress with teachers who have high value-added measures, and the ethnic composition of a school is a poor predictor of its effectiveness in terms of academic progress. In other words, students can make significant progress regardless of their race or ethnicity.

#### Milestones in EVAAS Development

- During the 1990s, EVAAS released district, school, and teacher value-added reports to all districts in Tennessee (1993, 1994, and 1996, respectively). These were the first releases of educational value-added reports in the nation. With these releases, it was possible to confirm that there is virtually *no* relationship between a student's background (demographics) and cumulative academic growth.
- In 1997, the statistical methodology underlying the multivariate, longitudinal methodology used in EVAAS was published in the open literature.<sup>1</sup>

## Key Research Findings from 2000 to Present

Through a variety of federal, state, and local initiatives, there has been an ever-growing awareness of and importance placed on identifying effective teaching. EVAAS' research on effective teaching has continued to break new ground. Key findings since 2000 include:

- Most of the differences in the rates of student progress can be attributed to classrooms within schools within districts (rather than districts or schools within districts). This reinforces the importance of teachers on their students' academic opportunities.
- Teaching effectiveness is related to years of service, with measurable improvement for up to 10 years. Teachers who leave after one or two years of experience are typically *less* effective than those who stay.
- When teachers change schools, the effectiveness of the teacher measured in the school *before* the move was found to be similar to the effectiveness of the teacher measured *after* the move.<sup>5</sup> This was true even when teachers moved to schools that were very different in socioeconomic status from their original school. This suggests that the teacher's effectiveness is primarily related to the teacher, rather than his or her schooling environment.
- A robust statistical approach using multiyear estimates yields highly reliable teacher value-added reporting. With the EVAAS methodology, the repeatability correlation is about 0.70–0.80 for three-year teacher value-added estimates.<sup>6</sup> This suggests that a teacher's estimate is primarily related to the teacher's effectiveness, rather than any year-to-year variation. Furthermore, value-added estimates for beginning teachers (again based on three years of data) indicate that highly *effective* teachers will remain effective three to five years later. About half of beginning *ineffective* teachers will improve to become average teachers in the future.

### Milestones in EVAAS Development

- In 2000, EVAAS moved from Knoxville to SAS in Cary, NC. Moving from a university to a software company enabled EVAAS to
  - ▶ expand its services beyond Tennessee
  - ▶ deliver reports in a secure hosted web application
  - ▶ provide new reports to support educators and policymakers
- After 2000, EVAAS began providing individual student projections to future tests. These projections, even when made three years into the future, are more reliable than looking at a student's most recent test score in the same subject. This information offers an opportunity to minimize inequities that often occur in student placement to more advanced courses and to improve differentiated instruction.
- EVAAS added an application to refine student-teacher linkages and enable teachers and administrators to verify rosters within the hosted web application. Using this application, educators can capture the correct percentages of instruction delivered by each teacher for each tested subject for each student. This flexibility helps to ensure that the verified rosters contain accurate information for generating teacher reports.

<sup>1</sup> See, for example: Lockwood J.R. and D.F. McCaffrey (2007). "Controlling for individual heterogeneity in longitudinal models, with applications to student achievement." *Electronic Journal of Statistics*, Vol. 1, p. 244. Also see: McCaffrey, D. F., Han, B. and Lockwood, J. R. (2008). "Value-Added Models: Analytic Issues." Prepared for the National Research Council and the National Academy of Education, Board on Testing and Accountability Workshop on Value-Added Modeling, Nov. 13-14, 2008, Washington D.C.

<sup>2</sup> Reference: McLean, R.A., & Sanders, W.L. (1984). *Objective component of teacher evaluation: A feasibility study*. Working Paper No. 199. Knoxville: University of Tennessee, College of Business Administration.

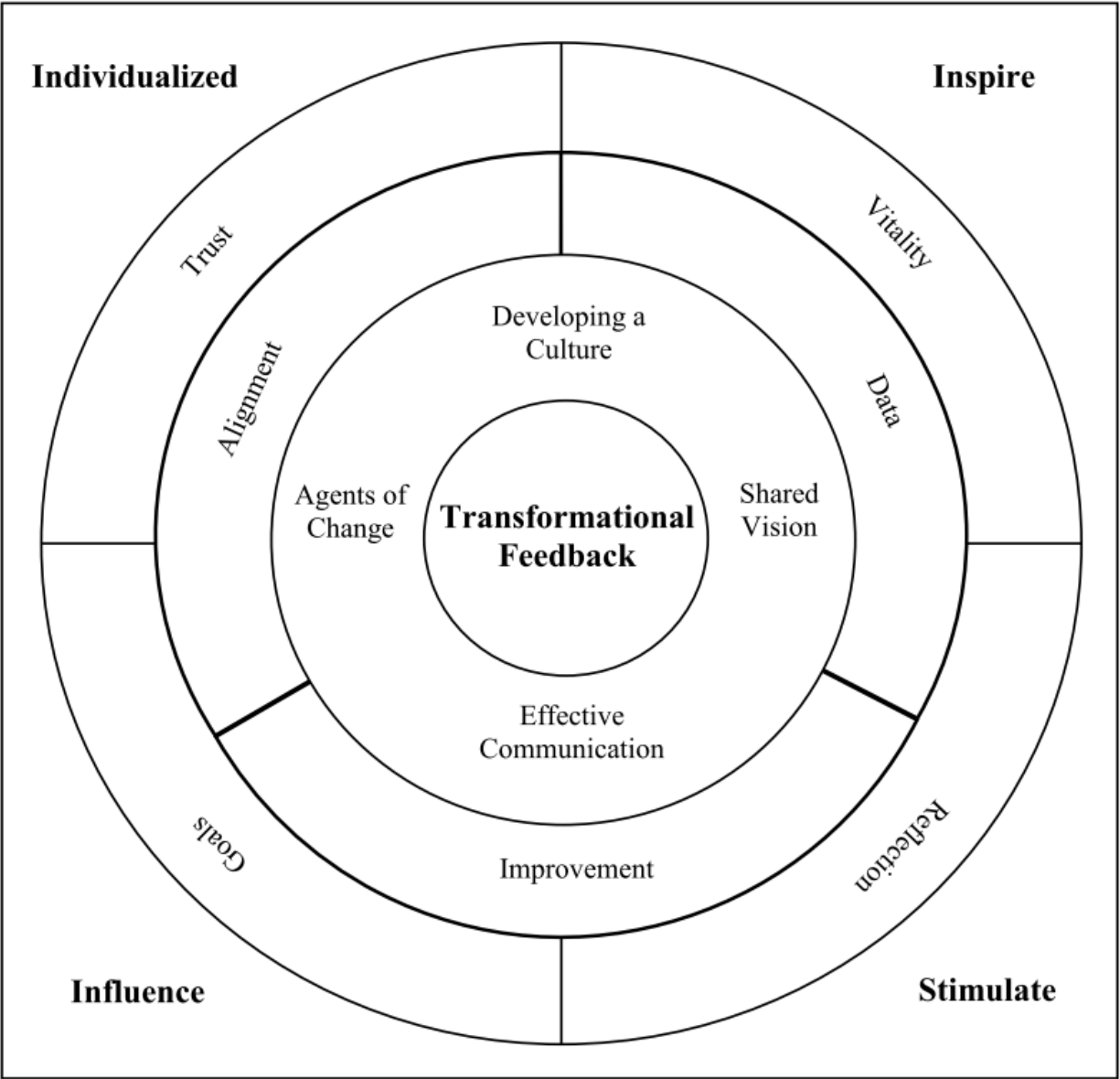
<sup>3</sup> Sanders, William L., and June C. Rivers (1996). *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*. Knoxville: University of Tennessee Value-Added Research and Assessment Center.

<sup>4</sup> Rivers, June C. (1999). *The Impact of Teacher Effect on Student Math Competency Achievement*. Unpublished doctoral dissertation, University of Tennessee Knoxville.

<sup>5</sup> Sanders, W. L., Wright, S. P., and Langevin, W. E. (2009). "The Performance of Highly Effective Teachers in Different School Environments." In Matthew G. Springer (ed.), *Performance Incentives: Their Growing Impact on American K-12 Education*. Washington, D.C.: Brookings Institution.

<sup>6</sup> White, J. T., Wright, S. P., and Sanders, W. L. (2011). Unpublished report.

**APPENDIX Z: UPDATED TRANSFORMATIONAL FEEDBACK MODEL**



**APPENDIX AA: UPDATED PRINCIPAL AND TEACHER COMMUNICATION**

**HANDOUT**

**Principal and Teacher Communication Handout**

<b>Teacher Name:</b>		<b>Benchmark:</b> 1 2 3	<b>Grade/Subject:</b>
<i>Reflection</i>			
What did we learn from the assessment results? (provide 3-5 points)		What were/are factors effecting instruction in your classroom?	
<i>Data Results</i>			
<b>Highlights</b>		<b>Trends</b>	
Comments:	Positive:	Missed Opportunities:	
<i>Alignment</i>			
<b>Curriculum and Assessment:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target			
Comments:			
<b>Adjustments:</b> <input type="checkbox"/> No Adjustment Needed <input type="checkbox"/> Minor Adjustment Needed <input type="checkbox"/> Major Adjustment Needed			
Comments:			
<i>Improvement</i>			
<b>Instructional Delivery:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target			
Comments:			
<b>Instructional Pacing:</b> <input type="checkbox"/> Pacing on Target <input type="checkbox"/> Increase Pacing <input type="checkbox"/> Major Pacing Adjustments			
Comments:			
<i>Goals</i>			
What is our goal for the next benchmark? (provide 1-2 goals)		What do we need to do moving forward to reach our goal(s)? (provide 3-5 commitments)	

## APPENDIX AB: FEEDBACK AND COMMUNICATION TRANSCRIPT

### Feedback and Communication Transcript

<b>Employee Name:</b>	<b>Quarter:</b>	<b>Grade/Subject:</b>
	1   2   3   4	
<i>Reflection</i>		
What did we learn from the project/last quarter results? (provide 3-5 points)	What were/are factors effecting the project/last quarter completion?	
<i>Data Results</i>		
<b>Highlights</b>	<b>Trends</b>	
Comments:	Positive:	Missed Opportunities:
<i>Alignment</i>		
<b>Organizational Goals:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target		
Comments:		
<b>Adjustments:</b> <input type="checkbox"/> No Adjustment Needed <input type="checkbox"/> Minor Adjustment Needed <input type="checkbox"/> Major Adjustment Needed		
Comments:		
<i>Improvement</i>		
<b>Service Delivery:</b> <input type="checkbox"/> Above Target <input type="checkbox"/> On Target <input type="checkbox"/> Below Target		
Comments:		
<b>Project/Quarter Timeline:</b> <input type="checkbox"/> On Target <input type="checkbox"/> Increase Pacing <input type="checkbox"/> Major Pacing Adjustments		
Comments:		
<i>Goals</i>		
What is our goal for the project/next quarter? (provide 1-2 goals)	What do we need to do moving forward to reach our goal(s) on the project/quarter? (provide 3-5 commitments)	

## APPENDIX AC: PRINCIPAL FEEDBACK POLICY BRIEF

# Principal Feedback to Teachers on Benchmark Performance

### RECOMMENDATION

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Principals will provide specific feedback to teachers on student performance data from student benchmark assessments through post conferences to discuss the strengths and weaknesses of their class benchmark performance.

### INTRODUCTION

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**Schools have failed to connect assessments to school improvement and school leaders do not know how to address the problem.** (Stiggins, 2002).

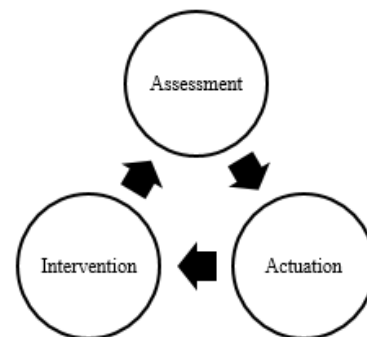
- principals play as critical in the quality of a school's academic program (Bryk et al., 1998).
- Leadership is critical in providing student success by establishing the expectations for data use with teachers to promote learning (Fullan, 2006; Leithwood et al., 2004; Levin & Datnow, 2012).

### CURRENT SITUATION

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**Teachers need feedback on the student benchmark results to help improve instructional practices to fill in the gaps between current student performance and the student performance necessary to demonstrate proficiency**

- **Principals have an important role in the era of accountability for achievement and growth of students** (Quin, Deris, Bischoff, and Johnson, 2015).
- **Instructional Supervision by the principal is working with teachers on specific ways to improve instruction and student performance** (Glanz & Behar-Horenstein, 2000).
- **Formative Feedback gives teachers “accurate, incremental, and actionable measures of student learning and behavior directly linked to the units of practice most meaningful to classroom teaching and learning”** (Halverson, 2010, p. 131).
- **Feedback to teachers supports the growth of effective educators** (Mielke & Frontier, 2012).



*Feedback Framework System. Adapted from Halverson (2010)*

The principal is “the prime factor in the success of an individual school” -CHICAGO AREA SUPERINTENDENT, 1884



## EVALUATION

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**Schools where Principals provided feedback increase results from the previous year's state End-of-Grade performance in Mathematics by 2.2 points This was an improvement of 8.3 points from the previous cohort performance**

	Grade Five	Grade Six	Difference
Cohort 1	49.9	40.8	-9.1
Cohort 2	49.1	43.0	-6.1
Cohort 3	54.9	57.1	2.2

## RECOMMENDATION

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The principal must provide feedback to teachers for student performance to improve. Since the late 1800's schools have been held accountable for student performance in some way, shape, or form.

Policy is already in place related to principal feedback on observations. adding required feedback on benchmark assessments will strengthen teacher instruction and student performance.

# APPENDIX AD: SUMMARY OF THE NORTH CAROLINA SUPERINTENDENT EVALUATION PROCESS

## Summary of North Carolina Superintendent Evaluation Process

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### **Standards on the North Carolina Rubric for Evaluating Superintendents:**

The North Carolina Standards for Superintendents reflect a 21<sup>st</sup> century vision of school leadership in which leaders shape school districts into nimble organizations that can change and meet goals quickly. Superintendents should unite all staff members behind a single vision centered on student achievement; this belief should drive all decisions made in district schools.

School board members score superintendents as not demonstrated, developing, proficient, accomplished, or distinguished on each of the elements within standards.

#### **1. Standard One: Strategic Leadership**

The superintendent pushes stakeholders to evaluate how the district's mission, goals, and vision will enable each student to graduate from high school prepared for employment or higher education, as well as for citizenship in the 21<sup>st</sup> century.

- a. **District Strategic Plan:** The superintendent uses multiple sources of data to create and implement a plan to meet the mission and goals of the district. The plan allows district officials to establish clear priorities for action.
- b. **Leading Change:** The superintendent challenges the status quo, and openly engages with stakeholders in discussions about areas for district improvement.
- c. **Distributive Leadership:** The superintendent prepares other district leaders to assume responsibility for district goals and take action in the schools.

#### **2. Standard Two: Instructional Leadership**

The superintendent sets high standards for teaching and learning by educators, as well as student achievement. The district leader establishes professional learning communities that develop stronger instructional skills and cause increased student achievement. The superintendent advocates for the use of research-based classroom strategies.

- a. **Focus on Teaching and Learning: Curriculum, Instruction, and Assessment:** The superintendent uses best practices to continually improve curriculum, teaching and assessment in the district's schools.

#### **3. Standard Three: Cultural Leadership**

The superintendent develops a supportive culture in which staff members and students can learn and grow as individuals. The district leader shows appreciation for the norms and traditions of the community, but will also work to shift that culture toward a focus on greater student achievement.

- a. **Focus on Collaborative Work Environment:** The superintendent builds relationships between staff members and the community so that they can reinforce each other's efforts to reach students.

- b. **Acknowledges Failures; Celebrates Accomplishments and Rewards:** The superintendent identifies areas for improvement and provides leadership on changing those areas. The district leader gives staff members credit for successes.
- c. **Efficacy and Empowerment:** The Superintendent creates an environment in which staff and community members feel welcome and empowered to play a role in achieving positive student outcomes.

#### **4. Standard Four: Human Resource Leadership**

The superintendent builds a district-wide professional learning community that provides for recruitment, induction, support, evaluation, development, and retention of a talented staff. The superintendent leads the drive to provide meaningful professional development for all staff members.

- a. **Professional Development/ Learning Communities:** The superintendent marshals appropriate resources to provide learning opportunities for staff members. Professional growth is ongoing as staff members collaborate in professional learning communities.
- b. **Recruiting, Hiring, and Mentoring Staff:** The superintendent leads the district in identifying high-quality applicants for positions, hiring those individuals, and developing them further through mentoring. The district leader provides the appropriate support to principals as they staff their individual schools.
- c. **Teacher and Staff Evaluation:** The superintendent ensures that all staff members have been trained on the appropriate evaluation instrument, and emphasizes the importance of meaningful and timely evaluations as a part of the professional growth process.

#### **5. Standard Five: Managerial Leadership**

The superintendent is responsible for management of resources, including the district budget and facilities. The district leader should create a communication protocol that increases efficiency and provides for the timely and smooth flow of information, especially as it relates to increasing student achievement.

- a. **School Resources and Budget:** The superintendent effectively manages the district's resources and meets budgeted priorities.
- b. **Conflict Management and Resolution:** The superintendent serves as a mediator to deescalate major conflicts and creates a culture in which disagreements between stakeholders are settled quickly and amicably.
- c. **Systemic Communication:** The superintendent establishes a communication system that disseminates important information to all stakeholders.

# APPENDIX AE: SUMMARY OF THE NORTH CAROLINA PRINCIPAL EVALUATION PROCESS

## Summary of North Carolina Principal Evaluation Process

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### Standards on the North Carolina Rubric for Evaluating Principals:

Superintendents score principals as not demonstrated, developing, proficient, accomplished, or distinguished on each of the elements within standards.

1. Standard One: Strategic Leadership. The principal leads the school staff in constant reflection on their vision, mission, and goals. The administrator guides the school through constant inquiry on how it prepares students for the future.
  - a. School Vision, Mission, and Strategic Goals: The school community has internalized the school's mission and vision, and aligns all decisions with these guiding principles.
  - b. Leading Change: The principal leads the way in the design of change that will result in improved student achievement.
  - c. School Improvement Plan: The school improvement plan creates a framework in which strategic planning and work toward goals results in improved student achievement.
  - d. Distributive Leadership: The principal encourages staff to take ownership of decisions and accept leadership responsibilities both within, and outside of, the school.
2. Standard Two: Instructional Leadership. The principal creates an environment in which the staff is accountable for the performance of their students. The administrator leads the staff in the use of the best instructional practices and spurs collaboration between teachers.
  - a. Focus on Learning and Teaching, Curriculum, Instruction, and Assessment: The principal engages teachers in discussions about curriculum and assessment, as well as best practices to ensure student success.
  - b. Focus on Instructional Time: The principal protects students' learning time and teachers' planning time.
3. Standard Three: Cultural Leadership. The principal fosters a positive school culture focused on student achievement. He or she understands school traditions and values and uses them to create a sense of pride. When necessary, the principal leads the school community to shape its culture into a more positive one.
  - a. Focus on Collaborative Work Environment: The principal focuses on the development of a spirit of collaboration between staff members.
  - b. School Culture and Identity: The principal uses the school's vision, mission, goals, and values to build a positive culture.

- c. **Acknowledges Failures; Celebrates Accomplishments and Rewards:** The principal acknowledges failures and uses them as opportunities for improvement. The administrator uses accomplishments to enhance a sense of pride in the school.
  - d. **Efficacy and Empowerment:** The principal builds a sense of well-being among students, staff, and students' families. The staff feels empowered to take action and create improvements.
4. **Standard Four: Human Resource Leadership.** The principal creates a professional learning community through recruitment, induction, support, evaluation, development, and retention of high-performing staff.
- a. **Professional Development/Learning Communities:** The principal individualizes professional development to meet school needs. He or she creates a professional learning community among the staff.
  - b. **Recruiting, Hiring, Placing, and Mentoring of Staff:** The principal creates processes and procedures to ensure a high-quality, high-performing staff.
  - c. **Teacher and Staff Evaluation:** The principal completes evaluations in a fair and consistent manner. The administrator uses the results of evaluations to improve performance and student achievement.
5. **Standard Five: Managerial Leadership.** The principal organizes the school and its systems in a manner that ensures efficiency and effectiveness in practices.
- a. **School Resources and Budget:** The principal uses the budget to maximize student achievement.
  - b. **Conflict Management and Resolution:** The principal creates processes and procedures to resolve problems and resume the focus on student achievement.
  - c. **Systematic Communication:** The principal uses various forms of communication to keep all stakeholders aware of school goals, activities, progress, and setbacks.
  - d. **School Expectations for Students and Staff:** The principal creates and enforces expectations, structures, rules, and procedures for students and staff.
6. **Standard Six: External Development Leadership.** The principal engages the community in the support and ownership of its schools.
- a. **Parent and Community Involvement and Outreach:** The administrator develops strong relationships with students' families and community members.
  - b. **Federal, State, and District Mandates:** The principal complies with all federal, state, and district laws and policies.
7. **Standard Seven: Micro-political Leadership.** The principal uses diversity and constructive differences between staff members to push the school toward its goals.

The administrator uses his or her awareness of staff needs, issues, and interests to build cohesion.

