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TEACHER EFFECTIVENESS: DOES IT INFLUENCE EFFECTIVENESS AND
STUDENT ACHIEVEMENT IN THE CLASSROOM?

by
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A Thesis

Submitted in partial fulfillment of the requirements of the
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Advisor

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ABSTRACT

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TEACHER PERSONALITY: DOES IT INFLUENCE EFFECTIVENESS AND STUDENT ACHIEVEMENT IN THE CLASSROOM?

2008/09

Dr. Roberta Dihoff

Master of Arts in School Psychology

The purpose of this research was to learn more about how teacher personality affects teacher efficacy and student academic success in the elementary school setting. The researcher hypothesized that: a) students in classrooms with more extraverted teachers would have higher grades in reading and math than those students in classrooms with more introverted teachers and b) more extraverted teachers would score higher on a self-report inventory of teacher effectiveness than more introverted teachers. Participants' scores on the Extraversion Scale of Eysenck Personality Inventory (EPI) were correlated with composite scores of students' grades and answers on a self-evaluation of effectiveness. Pearson r correlations revealed no significant relationships between teacher extraversion and both student academic performance and teacher efficacy. However, further analysis of the sample revealed that 14 out of 26 participants (88%) answered questions on the EPI typical of the extraversion personality type. This finding supports previous personality research that elementary teachers are usually more extraverted. Implications, limitations, and suggestions for future research are discussed.

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CHAPTER 1

Need

Due to changes in legislation and recent school reforms, a lot of attention has been placed on teachers and their influences on students' academic success. For instance, as part of the Individuals with Disabilities Education Act (IDEA), No Child Left Behind states that every student should have a quality teacher who is licensed and effective. The act focuses on teachers' academic qualifications and licensure requirements as a measure of their effectiveness. However, as will be discussed later, there are many other teacher characteristics that are identified as being important to student's achievement in school. In addition, Sanders and Horn (1998) found that the single most important factor in student academic achievement is the classroom teacher. Therefore, it seems that identifying the characteristics that make teachers most effective should be a high priority for school administrators, legislators, teachers, and students alike.

There has been much research conducted about teacher effects such as age, experience level, college coursework, attitudes, and teaching styles on students' academic success and learning. For example, in a review of past literature, Wayne and Youngs found that teacher college ratings, licensure test scores, degrees, and certification status were positively correlated with student achievement gains. They concluded that students learn more from teachers with higher ratings in each of the stated characteristics (2003). In addition, a study of first-grade teachers found that those who conveyed more positive

attitudes and beliefs produced significantly higher achievement gains in their students (Cantrell, Stenner, & Katzenmeyer, 1977). These characteristics account for some of the teachers' influence on students' achievement, but other, less researched teacher qualities may be responsible for this influence as well.

Studies exploring teacher personality effects on student academic success have found that teachers with certain personality profiles may be more effective, depending upon their students' learning styles and the classroom environments (Fairhurst & Fairhurst, 1995). However, much of this research focuses on high school and college students' own evaluations of their teachers' classroom styles and perceived effectiveness (Radmacher & Martin, 2001; Erdle, Murray, & Rushton, 1985). In addition, these same studies tend to encompass several general personality traits, such as charisma, supportiveness, leadership, and orderliness, as opposed to focusing on one definite aspect of personality. It would be beneficial and informative to learn more about how specific teacher personality traits effect the academic achievement of students in the elementary or middle school grades.

This type of research is important for current and prospective teachers to know as they may be able to adapt themselves to become more effective in the classroom. Colleges may even be able to use data about personality traits and teacher success to help screen prospective teachers, and direct certain students toward the teaching profession. Administrators and teacher leaders may also be interested in using information from this research to construct workshops and professional development programs to improve teachers' efficacy. Knowing which personality traits compose the most effective teachers

can benefit students in schools all over the country, so this type of research should be considered very important and prolific for education.

Purpose

The purpose of this study was to learn more about how teacher personality affects teacher efficacy and student academic success in the elementary school setting. The researcher planned to contribute to the limited body of research on the influences of teacher personality, while conducting a more focused examination of a particular personality dimension. More specifically, the researcher wanted to explore how the levels of the extraversion/introversion personality dimension affect student achievement and teacher effectiveness.

Hypotheses

The researcher hypothesized that students in classrooms with more extraverted teachers would have higher academic grades in the subjects of reading and math, as reported by the teachers in a Mock Report Card. This was based on research that extraversion is a characteristic of more effective teachers (Rushton, Morgan, & Richard, 2007). The researcher also hypothesized that more extraverted teachers would score higher on a self-report survey of teacher effectiveness, in the subjects of reading and math. This hypothesis was based on the research of Koziol and Burns, where teachers' self-reports about the success of their teaching strategies were found to be more accurate when focused on certain academic subjects, rather than an overall view of teacher success (2001).

Operational Definitions

The main focus of this research was to look at the effects of teacher personality on teaching effectiveness and student achievement. Effective teachers are defined as those who are apt to pursue specified learning goals for their students. Teaching effectiveness assumes that teachers actively pursue goals related to their students' learning, they are intentionally and purposefully teaching, and they are able to adapt their knowledge and skills to deal with many different situations (Anderson, 2004). For purposes of this study, teaching effectiveness was defined through a self-report, researcher-created survey, called the Teacher Effectiveness Self-Evaluation, where teachers will be asked to rate their teaching strategy with Likert-style questions. This survey has been adapted from Section 1 of the IDEA-Student Reactions to Instruction and Courses, a popular teacher-evaluation tool used in college courses.

Extraverted individuals are defined as obtaining information and being energized through the external world of people, things, and events. They are active, good talkers, and friendly. They also enjoy meeting new people, thinking aloud, and knowing what is going on around them (Fairhurst & Fairhurst, 1995). Introverted individuals are more energized by the internal world of their ideas, thoughts, and concepts. They are good listeners, passionate, and generally more difficult to get to know. They enjoy deep conversations, have few close friends, and are more likely to know what is going on inside them rather than what is going on around them (Rushton, Morgan, & Richard, 2007). The level of extraversion and introversion of each teacher in this study was assessed through the Eysenck Personality Inventory (EPI) (Eysenck & Eysenck, 1968).

The EPI measures two independent dimensions of personality: extraversion/introversion and neuroticism/stability. For purposes of this study, the researcher only focused on the extraversion/introversion scores to obtain the level of this personality dimension in each participant.

Student achievement can be defined in many ways, such as academic gains or growth, social maturity, and adaptive behaviors (Rowan, Correnti, & Miller, 2002). However, in this study, level of student achievement was defined as students' academic performances in two subjects: reading and math during the current school year. These scores were determined through a Mock Report Card, adapted from a previously developed measure (Pierce, Hamm, & Vandell, 1999). Teachers reported about their students' grades in both reading and math to determine how well each teacher's students are performing in the classroom.

Limitations

As with most research projects, there were many limitations to the present study. First of all, data was collected from three suburban public schools in New Jersey. Urban and rural school districts and districts in other states or from different cultures may have contributed dissimilar results and increase the ability of these results to generalize to the public. However, they were not included in the present research due to time and access restraints. In addition, the study had a smaller sample size, which may not be representative of teachers in the rest of the country. Therefore, any conclusions found in this study may be limited to teachers and students in suburban school districts in the state of New Jersey.

Secondly, as the research suggests, there may be many factors that influence student grades, including student and teacher characteristics other than personality (Rowan, Correnti, & Miller, 2002). However, the researcher in this study only focused on the extraversion/introversion dimension of personality, and its effects on students' grades. All other factors that may have an influence were partially controlled by the random assignment of students and teachers to each classroom by the individual school districts. Therefore, any results found may not be due entirely to the independent variable of teacher personality.

Finally, as teachers completed the surveys, they may have succumbed to demand characteristics and answer the questions according to how they think the researcher wants them to respond. Their response patterns may indicate that they want to be seen as socially desirable or as "good teachers". In anticipation of this effect, the researcher had included a manipulation check at the end of the Teacher Effectiveness Self-Evaluation to determine if any participants have figured out the exact purpose of the research. Also, the EPI contains a Lie scale, in which the researcher could determine if there is any response distortion (Eysenck & Eysenck, 1968). In these ways, the present study accounted and tried to prevent demand characteristics and distorted data.

Summary

The researcher hopes to contribute to the ever-growing body of research about teacher personality characteristics and student achievement. Furthermore, this study aimed to find out more about the extraversion/introversion dimension of personality and how it influences the classroom environment through student academic success. The

ultimate goal of this study was to help teachers become more effective by identifying personality characteristics that may better their students' learning and achievement. In the next chapter, the researcher will discuss the research and knowledge that has affected the realization and creation of this study. In chapter three, the researcher will identify the sampling of participants, the steps completed in gathering data, and outline the method of research. Then, in chapter four, results will be presented as analyzed from the gathered data. And, finally, in chapter five, the researcher will discuss the results and explain the implications of what was found.

CHAPTER 2

Introduction

As discussed before, the *No Child Left Behind* act states that every student should have a “quality” teacher, as measured by their academic qualifications and licensure requirements. However, many researchers have found that there may be other variables that make a teacher effective in the classroom. Some studies even support that the NCLB’s assumptions about a quality teacher are wrong and have little evidence to support them as legislation. For instance, Palardy and Rumberger (2008), using the Early Childhood Longitudinal Study data, found that teacher aspects such as beliefs, attitudes, practices, and personality were most relevant to teacher effectiveness. They further concluded that the highly-qualified-teacher provision of NCLB was insufficient to ensure that each classroom is run by a successful teacher. Therefore, research suggests that the legislation which is designed to ensure a quality education for America’s students may be based on inaccurate assumptions about what makes a teacher effective in the classroom.

The teacher is a vital part of the classroom, and it is suggested that teachers are the most important factor influencing a student’s achievement (Sanders & Horn, 1998). Revisiting the Palardy and Rumberger (2008) study, the researchers found that the choice of classroom teacher has a greater effect on students’ reading and math score gains than the choice of which school the child attends. Choice of classroom teacher accounted for 21% variance in the study, while choice of school accounted for only 14% of the variance in the study. In a similar research project, it was discovered that, with regard to students’

academic achievement, to which teacher a student is assigned is more important than to which school the student happens to attend (Nye, Konstantopoulus, & Hedges, 2004). There were also substantial differences in the ability of teachers to produce achievement gains in their students. With the heavy influence teachers seem to have on student's academic success, research in this area of study is very important for America's school systems.

If the teacher is the most important factor in determining a student's achievement, as this pervious research suggests, then it is vitally important that research be focused on determining which characteristics make up the best teachers. An effective teacher can be described one who as has high expectations for all students, contributes to positive academic, attitudinal and social student outcomes, uses diverse resources to plan, monitor, and adjust learning opportunities, contributes to the development of civic-minded classrooms, and collaborates with administrators, parents, and other faculty members to continually improve their classroom practices (Goe, Bell, & Little, 2008). But, the question remains as to which personal characteristics embody teachers who exude these successful classroom behaviors.

Most research about teacher effectiveness and student achievement focuses on one or several of four types of relevant variables. These are product, process, presage, and context variables (Rowan, Correnti, & Miller, 2002). Product variables are the possible outcomes of teaching, such as student academic achievement and students' attitudes. Process (or instructional) variables are those that interfere during student-teacher interaction such as student behavior and teacher behavior. Presage variables are

characteristics of teachers that have operated prior to teaching, but also influence student-teacher interactions such as personality, background qualifications, and attitude. Finally, context variables are those that can directly influence instruction and process variables such as environment and curriculum (Rowan, Correnti, & Miller, 2002).

However, traditionally research on teacher effectiveness has focused on only three of these variables. Cantrell, Stenner, and Katzenmeyer (1977) posited that presage variables, process variables, and product variables were the three criteria for accurate determination of teacher effectiveness. Some studies even suggest a causal model in the classroom in which presage variables (teacher personal characteristics) influence process variables (teacher behaviors) which then determine product variables (student achievement) (Erdle, Murray, & Rushton, 1985). This presents a model in which the three variables are related to each other, rather than acting as separate entities in the classroom.

Furthermore, more recent research has separated the study of teacher presage variables into the overt (or more concrete) variables such as gender, education level, background qualifications, etc., and the covert (or more abstract) variables such as personality, motivation, attitude, knowledge, etc. (Zhang, 2007). For purposes of relevancy to the current study, the researcher will focus on prior studies more similar to these, which include the effects of presage variables on teacher effectiveness and student achievement.

Overt Presage Variables

Many studies have shown that more overt presage variables such as college ratings, licensure test scores, background qualifications, etc. influence teacher effectiveness and student achievement. For example, in a review of past research, Rowan, Correnti, and Miller (2002) found that a variety of overt teacher presage variables, if measured precisely, have a significant effect on elementary school students' reading and math scores. These results were very strong with effect sizes ranging from .72 to .85. They also found that these same variables can explain the differences in teachers' effectiveness and success in the classroom.

In another review of past studies, Wayne and Youngs (2003) examined the relationships between four different teacher characteristics and student achievement gains. The examined characteristics were: ratings of teachers' colleges, teachers' licensure test scores, teachers' degree and coursework, and teachers' certification status. College ratings and test scores were found to have significant positive effects on students' scores in reading and math, while certification status only influenced students' math scores. The researchers concluded that students may learn more from teachers who scored higher on their licensure exams and who attended highly ranked colleges/universities.

Although these studies support that overt presage variables account for the influence that teachers have on students' academic achievement, there is more research which shows that these variables may not be enough to explain the link. In a four-year study where teachers and student were randomly assigned to certain classrooms, results

showed that teachers had a significant effect on students' scores in reading and math (Nye, Konstantopoulos, & Hedges, 2004). However, the researchers also found that common covert presage variables, such as past teacher experience and teacher education, did not account for these results. They concluded that other, more covert presage variables, may be responsible for this relationship between teacher characteristics and student achievement and that more research would have to be completed to investigate the possibility.

Covert Presage Variables

In response to the studies showing a link between background qualifications and student achievement and the subsequent addition of the quality-teacher-provision to the NCLB act, many researchers started to look at the covert teacher presage variables and their effects on students' academic performance. In the Palardy and Rumberger (2008) study, teacher aspects such as beliefs, attitudes, practices, and personality were the most relevant variables to teacher effectiveness. Students with these more effective teachers could exceed an entire grade level higher than students with teachers who had lower ratings in each these categories (teachers who were considered ineffective). Therefore, the researchers supported that presage variables were the key to the relationship between teacher characteristics and student achievement.

Similarly, in a study of how teachers' behavioral knowledge and attitudes were related to student achievement, researchers found that teachers who were more knowledgeable and had more positive attitudes towards their students were more successful in the classroom (Cantrell, Stenner, & Katzenmeyer, 1977). Specifically,

these teachers were better able to foster achievement in students who were in the low and middle IQ ranges than teacher who were less knowledgeable and had more negative or neutral attitudes. This study is also important as it was one of the first studies to find such results with a covert presage variable like teacher attitude.

Another historical study looked at the relationship between teacher expectations and student academic performance. Students participating in the study performed better on a test of knowledge when their teachers had high expectations of them (67% answers correct) than students who had teachers with low expectations (55% answers correct). The researchers also found that academic performance was the only are where teacher expectations influenced the students. There was no effect on the students' attitudes about themselves, their teachers, or the lessons they were taught (Feldman & Theiss, 1982). Therefore, the idea that more covert teacher characteristics may have an effect student academic achievement has been studied for many years, and recently, there have been even more developments.

In a study exploring the transference of teachers' autonomous motivation for teaching to students' autonomous motivation for learning, data showed that teachers' who had higher levels of autonomous motivation (motivated independently or intrinsically) fostered more academic enthusiasm in their students, who were in turn more able to deeply process the material being taught (Roth, Assor, Kanat-Maymon, & Kaplan, 2007). A very similar study looked at the transference of teacher competency or self-efficacy to students' self-confidence about school. Teachers with a higher level of competency or professional capability fostered the same traits in their students, who subsequently

showed an increase in academic achievement (Goldman, Botkin, Tokunuga, & Kuklinski, 1997). It seems these more recent studies show that covert presage variables have academic effects on students that go beyond test scores or gains in grades.

There many other examples of studies that support teacher covert presage variables' influence on teacher effectiveness and student achievement. For instance, in a study about the effect of teachers' attitudes, beliefs, and priorities on students' performances in the classroom, researchers found that teachers with more positive attitudes and beliefs created more positive and rich classroom experiences (Rimm-Kaufman & Sawyer, 2004). This caused the students to do better academically than students in classrooms with teachers who had more negative attitudes and beliefs. Another study showed that students who felt that their teachers cared about them were better-behaved and did better academically than students who felt that their teachers were aloof or uncaring (Sutton & Wheatley, 2003). This study focused on the student academic effects of teacher emotions, and how students' cognitions and behaviors are influenced by teachers' either positive or negative emotional support.

The above discussion involves research that supports the effect of teachers' covert characteristics on student achievement and their success in the classroom. However, there is a very powerful covert presage variable at work in the classroom that has yet to be mentioned. Novojenova and Sawilowsky (1999) conducted research about the transmission of personality traits in the classroom from teachers to students. Before and after a lesson taught by a new teacher, students were given a checklist about their personality, attitudes, and beliefs. Data revealed that students' personalities were

significantly impacted and changed from before to after the lesson. This study demonstrates how strongly teachers' personalities can impact their students, as they were altered within one class period. Also, Dodge (1943) states that personality is a basic predictor of teacher success and that weakness in personality is a major cause of student failure. Since this effect seems to be very significant in the classroom, it is no wonder that research supports that teachers' personalities play a role in student achievement and teacher effectiveness.

Teacher Personality

Research on the effects of teacher personality has been conducted for a long time with many researchers concluding that teacher personality is the most important variable at work in the classroom (Getzels & Jackson, 1963). Much of the research focuses on the different strengths and weaknesses of the various personality types as teachers, communicators, and leaders in the school system. And, other articles attempt to determine which personality traits are the most desirable for teachers and educators (Dodge, 1943). Still, others posit theories on how and why teacher personality has effects on effectiveness and student achievement.

In a review of prior research, Polk (2006) found that personality is a basic predictor of teacher success. If causality could be inferred from the studies that the researcher analyzed, it would indicate that personality causes teaching effectiveness or ineffectiveness, depending on the personality trait being discussed. In a more empirical study, researchers sought to explore the causal model that teacher personality directs teacher instructional behaviors, which in turn causes student outcomes or achievement

(Phillips, Carlisle, Hautala, & Larson, 1985). After recording and analyzing data from a ten-lesson physical education program, researchers found support that teacher personality indirectly caused changes in student achievement.

Although these studies found support for a causal model, most research about teacher personality and student achievement seeks a correlational link between the two variables. For example, a study in China found a relationship between teacher personality and student achievement (Zhang, 2007). The relationship was so strong, that it surpassed other covert variables such as perceptions, beliefs, and expectations about the students. In another study, researchers found that teacher personality had effects on undergraduates' academics and behaviors in the classroom (Fisher & Kent, 1998). Teacher personality accounted for 10% of the variance, which was much stronger than any other covert presage variables studied, such as teacher perceptions, attitudes, and beliefs. Causation could not be determined from these studies, but they clearly show that there is a strong relationship between teacher personality and student academic performance.

Acknowledging the relationship between these two classroom aspects can be very important in order for teachers to create effective learning environments and meet more of their students' needs (Fairhurst & Fairhurst, 1995). However, knowing which personality traits are more successful and effective in the classroom is possibly even more valuable for teachers and educators. In a survey of undergraduates in teacher education programs, Grindler and Stratton (1990) found that most of them (17.31%) were extraverted, sensing, feeling, and judging (ESFJ), as described by the Myers-Briggs Personality Type Indicator (MBTI). The researchers expressed the value of realizing

teachers' personality types, so they might adapt and modify their teaching strategies to complement their personality style. But, the study did not determine if ESFJ teachers were the most effective in the classroom.

The Extraversion-Introversion Dimension

In determining which personality characteristics are most successful in the classroom, many researchers use the Myers-Briggs Type Indicator (MBTI) to categorize teachers into one of 16 possible personality types (Fairhurst & Fairhurst, 1995). There are four dimensions on which the MBTI judges a participant's preferences: Extraversion-Introversion, Sensing- Intuitive, Thinking-Feeling, and Perceiving-Judging. Once the preferences have been established, the participants are described as a type with four letters, each corresponding to a preference in that dimension (i.e. ENFJ, ISTP). For purposes of the current study, the EI dimension will be the focus of the discussion.

The EI dimension explains whether an individual is energized externally or internally. Extraverts are described as expansive, easy to get to know, friendly, confident, have many friends, figure things out while talking, do not mind interruptions, are good talkers, and know more about what is going on around them than what going on within themselves (Fairhurst & Fairhurst, 1995). They are also described as revealing their best to the world, or with the popular idiom, what you see is what you get (Lawrence, 1979). Introverts are basically the opposite of extraverts. They are passionate, difficult to get to know, reserved, prefer peace and quiet, are good listeners, and know more about themselves than what is going on around them (Fairhurst & Fairhurst, 1995). Within the EI dimension alone, there seem to be differences in teaching effectiveness and success.

Without accounting for teacher effectiveness and student achievement, more teachers prefer extraversion than introversion. Fairhurst and Fairhurst (1995) report that a little over half of all elementary school teachers prefer extraversion over introversion. In addition, researchers looking at undergraduate students in teacher education programs found that 61% of the population was more extraverted (Rojewski & Holder, 1990). Business teacher education undergraduates also showed a higher preference for extraversion (Vogt & Holder, 1988). Therefore, more teachers seem to be extraverted, but they also may be more effective due to this preference.

In a study of teachers deemed exceptional and effective by their acceptance into the Florida League of Teachers (FLoT), researchers found that these educators were significantly more extraverted when compared to a random sample of Florida teachers who took the MBTI as well (Rushton, Morgan, & Richard, 2007). Also, the ENFP personality type was overrepresented in the FLoT population with 32% of teachers showing a preference for this personality type. Similarly, in a study of Florida Teacher of the Year (ToY) recipients, higher percentages of extraversion were preferred when compared to the general teacher population of the state (Rushton & Juola-Rushton, 2006). These studies are only the first of many that support extraversion as a desirable personality trait for teachers.

In a study of consulting teachers, researchers determined that supervisors rated those consultants who were more extraverted as more effective and better teachers than those consultants who were more introverted (Savelsbergh & Staebler, 1995). In addition, physical education teachers who were more confident, self-assured,

independent, and assertive (all traits similar to extraversion), were more effective and fostered better student outcomes than those teachers with more introverted traits (Phillips, et al., 1985). Not only does extraversion seem to be more desirable for teachers, but it also seems to predict teachers' effectiveness in the classroom.

Much of the evidence supporting extraversion as a predictor of teacher effectiveness and student achievement comes from studies on college professors. Radmacher and Martin (2001) had undergraduates evaluate their college professors who took the MBTI. Those professors who were rated as more effective and helpful showed a preference for extraversion. The extraverted professors also had students with higher grades in their classes. With some more analysis, the researchers concluded that the higher grades were a reflection of the more effective teaching from the professors possessing more extraverted traits. Similarly, highly student-rated professors were found to possess more Charisma (related to extraversion), than lower rated professors (Erdle, Murray, & Rushton, 1985). Charisma accounted for over 50% of the variance in teacher effectiveness evaluations.

More examples of the relationship between extraversion and teacher effectiveness include Ghorpede, Lackitz, and Singh (2007), who found that professors who were more extraverted were less susceptible to teacher burn-out, which allowed them to be more effective than more introverted teachers over time. Also, students and professors rated better classroom cohesiveness and effectiveness in rooms with more extraverted teachers (Fisher & Kent, 1998). Although the quality of research linking teachers' preference towards extraversion and student achievement is important, much of the evidence focuses

on college-level participants. The current study will look at how this relationship plays out in an elementary setting.

Skepticism about Teacher Personality and Effectiveness

For as many studies there are to support the link between teacher personality and student achievement, there are almost just as many that challenge it. For example, in a study of college music teachers, the researcher found that more music teachers were social. However, there was no significant relationship between teacher personality and effectiveness, as measured through observation (Teachout, 2001). These results were replicated in an experiment with elementary and secondary education teachers. No significant relationship was found between personality and student achievement, and the EI dimension was especially immaterial in the results (Sears & Kennedy, 2001).

Rather than pinpoint certain personality traits that are more effective in the classroom, some researchers believe that matching teacher and student personalities is what matters. In a study with undergraduates, Pankratius (1997) grouped students by their MBTI personality types. At the end of the course, these students rated the class as more effective and beneficial than students who were grouped with differing MBTI types. The researcher concluded that people with similar personality traits teach and learn from each other more effectively. This finding would suggest that teachers are more effective when they prefer similar personality traits as their students.

Eysenck Personality Inventory (EPI)

Although many of the studies reviewed in this chapter have used the MBTI to determine participants' personality preferences, one of the purposes of this current

research is replicate these results using the Eysenck Personality Inventory (EPI). The EPI is a 57 yes or no question survey that focuses on two dimensions of personality: extraversion-introversion and neuroticism-stability (Eysenck & Eysenck, 1968). It also contains a Lie scale in order to detect response distortion and falsification. The researcher believed that this survey was more relevant to the current study as extraversion is a main focus of the test.

There is much evidence to support the validity and reliability of the EPI in its measurement of personality. In test-retest and split-half reliabilities, the EPI has been shown to be more than satisfactory, with scores ranging from .80 to .94 for test-retest reliability and .74 to .91 for split-half reliability (Eysenck & Eysenck, 1968). This suggests that participants who may take the survey several times will generally come out with the same scores every time. The EPI scores are consistent and dependable.

In terms of validity, scores on the extraversion-introversion EPI dimension were found to be significantly correlated with the scores of the EI dimension on the MBTI (Stoole & Kelly, 1976). The researchers concluded that the EPI and MBTI were very similar measures of extraversion and introversion. In addition, the construct and concurrent validity of the EPI was supported through comparison to other valid tests of personality such as the Minnesota Multiphasic Personality Inventory (MMPI) and the DOTS-R (Windle, 1989; Platt, Pomerane, & Eisenman, 1969). These results demonstrate the strength and legitimacy of the EPI as a measure of personality.

Summary

In this chapter, previous research about the effects of teacher characteristics on student academic success was reviewed. Studies support the link between overt and covert presage teacher variables and student achievement. More relevant to the current study, teacher personality and preference for extraversion have been shown to predict teacher effectiveness and student success in the classroom. Although there is some skepticism about this link, it seems that extraversion is a desirable characteristic for teachers.

In this thesis, the purpose was to replicate results of studies linking teacher personality to effectiveness and student achievement, in an elementary school setting. More specifically, the researcher wanted to explore how teacher preferences for extraversion and introversion affect student achievement and teacher personality, as measured by the Eysenck Personality Inventory (EPI). The hypotheses were that students in classrooms with more extraverted teachers would have higher academic grades in reading and math than students who have more introverted teachers. In addition, these same extraverted teachers would score higher on a self-report survey of teacher effectiveness than their introverted counterparts. Results and implications of the findings will be used to help teachers, parents, administrators and legislators gain more knowledge about what constitutes a quality teacher. It will also help teachers adapt their teaching styles and classroom behaviors to create more effective learning environments for our students.

CHAPTER 3

Sample

The participants in this study consisted of Kindergarten through Fourth grade regular and special education teachers from three school districts. All of the schools used in this study were located in Burlington County, southern New Jersey. Each class had a range of about 15 to 25 students. All Kindergarten to Fourth grade general and special education teachers from the schools mentioned above were invited to participate, but it was clearly stated that participation was completely voluntary. Each of the three school districts had given its consent for the research to be performed.

Although the researcher had handed out 68 questionnaires, only 18 teachers responded, giving this study a response rate of 0.26. All of the participants were female, ages ranging from 24 to 60 years with an average age of 45 years. Every teacher had graduated from a 4-year college or university with a degree in elementary education, and had at least 2 years of teaching experience. All but three teachers participating in this study were tenured at their respective school districts. Participants taught in similar classroom settings, either inclusion or regular education classrooms with a range of 15 to 21 students.

Measures

The measures used in this study were compiled into a research packet given to each participant. The packet consisted of: a demographics survey, a Mock Report Card, the Eysenck Personality Inventory (EPI) (Eysenck & Eysenck, 1968), the Teacher Effectiveness Self-Evaluation, and a manipulation check. The demographics survey asks each participant to report age, gender, college attended, teacher licensure test score, and number of students in the class. Information from this survey was used to control for any possible effects these extraneous variables had on the dependent variables.

The Mock Report Card asked teachers to report on their students' grades in math and reading. Each student was represented by a number on the chart, and teachers were instructed to record each student's grades in the current academic marking period next to the appropriate number. Scores were reported in a Likert scale, with 1 meaning "below" (child is performing below grade level) and 5 meaning "excellent" (child is performing beyond grade level). This measure was adapted from a similar Mock Report Card used in research about the effectiveness of after-school programs (Pierce, Hamm, & Vandell, 1999). See Appendix A for a sample of the Mock Report Card used in the current study.

The Eysenck Personality Inventory (EPI) was a 57-question survey that focuses on two dimensions of personality: extraversion/introversion and neuroticism/instability (Eysenck & Eysenck, 1968). Each question had a yes or no answer, and participants were instructed to answer each one honestly and quickly. The measure also contained a Lie scale in order to detect response distortion and falsification. The EPI was hand-scored by the researcher, counting the number of "yes" responses to questions designated into

three categories: Extraversion, Neuroticism, and Lie. In many studies, the reliability and validity of scores on this personality measure have been reported (Eysenck & Eysenck, 1968; Stoole & Kelly, 1976). This means that EPI has been shown to be a sound measure of participants' personalities in terms of extraversion and neuroticism.

In the researcher-created Teacher Effectiveness Self-Evaluation, participants were asked to rate the frequencies that they engage in certain teacher behaviors. These behaviors have been shown to be effective and desirable in the classroom in studies on teachers' and students' evaluations of teacher efficacy (Bray & Howard, 1980). The measure consisted of 20 Likert-style questions, with 1 representing "hardly ever" and 5 representing "almost always". Teachers were asked about their behaviors during reading and math periods only, based on research that teachers' self-reports about their success are more accurate when focused on certain academic subjects rather than an overall view (Koziol & Burns, 2001). Scores were compiled by the research with higher scores correlating to a high frequency of effective teacher behaviors and lower scores correlating to a low frequency of effective teacher behaviors. See Appendix B for an example of this survey.

At the end of the Teacher Effectiveness Self-Evaluation, were three open-ended questions about the participants' experience in this study. They asked how the participants felt about their participation, whether they would participate in similar research in the future, and what they thought the research was about. These questions were added as manipulation checks to control for demand characteristics and response distortion based on the participants' abilities to predict the purpose of the study. The

purposes of the research packet as a whole were to determine whether teacher personality characteristics affect students' grades and teacher effectiveness.

Procedure

Before data could be collected, the researcher sent official letters to the proper authorities at each school district in order to obtain permission for this study. Permission was granted by either the superintendent or the Board of Education at each district through official responses. Once the schools consented to have the research performed, research packets were distributed in manila envelopes to each teacher's mailbox in the faculty room. A cover letter stating the general purpose of the study, a statement of consent including the involuntary nature of participation, and the instructions on how to complete the packet was included to properly inform participants about the study. Upon completion of the research packets, participants were instructed to seal the manila envelopes and submit them to the main office of their school for the researcher to pick-up. Once data was collected, the measures were scored by the researcher.

Design

The design of the current research was correlational as the relationships between an independent variable and two dependent variables will be discussed. The independent variable consisted of the participants' personality characteristic of extraversion/introversion. This was measured by the EPI (Eysenck & Eysenck, 1968). The first dependent variable was student's current scores in reading and math. This was measured through the Mock Report Card filled out by the students' teachers. The second dependent variable was teacher effectiveness in the classroom which was measured

through the Teacher Effectiveness Self-Evaluation. No causation between these variables can be determined. Therefore, the researcher chose a correlational approach, seeking to find significant relationships between teachers' level of extraversion and student academic achievement and effectiveness of teaching strategies.

Hypotheses

It was hypothesized that students in classrooms with more extraverted teachers would have greater academic achievement than students in classrooms with more introverted teachers, in the subjects of reading. Achievement was characterized by scores reported by each student's current teacher. It was also hypothesized that more extraverted teachers would score higher than more introverted teachers on a self-report survey of teacher effectiveness, in the subjects of reading and math. Teacher effectiveness was characterized by the frequency each teacher participated in effective teaching strategies and behaviors.

Analysis

All data was analyzed after data collection and the scoring of survey and measure. For the first hypothesis, teachers' scores on the Extraversion dimension of the EPI were correlated with students' academic scores on the Mock Report Card. For the second hypothesis, teachers' scores on the Extraversion dimension of the EPI were correlated with teachers' scores on the Teacher Effectiveness Self-Evaluation. These correlations were completed for each participant's individual scores and overall across all participants' scores. This was done to determine if relationships exist across the entire population or just in certain classrooms. And finally, answers on the demographics

questionnaire were correlated with students' scores and teacher effectiveness to determine any compounding effects these characteristics may have had on the current findings.

Summary

In Chapter 3, the research design and procedure of the study was explained in detail. It included discussion of the sample of the participants, the measures used, and analysis design of the research. Responses, compiled from the measures used in this study, will either support or oppose the hypotheses stated previously. With the use of a standardized measure in combination with researcher-created measures, important information should be found for school personnel, parents, and students alike. Whether the hypotheses were supported or other interesting data trends discovered, the information provided in this research will be valuable to the educational community. The information in this chapter may also help other researchers to replicate the study, which will increase the knowledge and study of how teacher personality affects student achievement. In the following chapters, the data analysis and results of the study will be described. The research will also include a discussion about the implications of the results and improvements for future research.

CHAPTER 4

Introduction

The purpose of this study was to examine the possible relationships between teacher personality and student achievement and teacher effectiveness. The first hypothesis was stated that students in classrooms with more extraverted teachers would perform better on a Mock Report Card in the subjects of reading and math than students in classrooms with more introverted teachers. The second hypothesis was stated that more extraverted teachers would also score higher on a self-report measure of teacher effectiveness, in the subjects of reading and math.

After data was obtained from each measure, students' grades, as reported on the Mock Report Card, were averaged together by subject. This gave two class averages of academic achievement for each teacher, one for math and one for reading. Teachers' scores on the Survey of Teacher Effectiveness were added together by subject, giving two composite scores of efficacy for each teacher, one for math and one for reading. Using the Manual for the Eysenck Personality Inventory, all participants with scores of 12 or above on the Extraversion Scale were labeled as extraverts (Eysenck & Eysenck, 1968). Accordingly, those participants with scores of 11 on the Extraversion (E) Scale of the EPI were labeled as introverts. Of 16 viable participants, 14 were designated as extraverts and two were designated as introverts.

Results

Two Pearson Product Moment Correlations were conducted to test the first hypothesis that levels of teacher extraversion would predict students' academic achievement scores. For both math and reading, no significant relationships were found between teacher extraversion and students' grades on the Mock Report Card.

Similarly, two Pearson Product Moment Correlations were conducted to test the second hypothesis that levels of teacher extraversion would predict teachers' efficacy in the classroom. For both math and reading, no significant relationships were found between teacher extraversion and teachers' scores on a self-report scale of effectiveness.

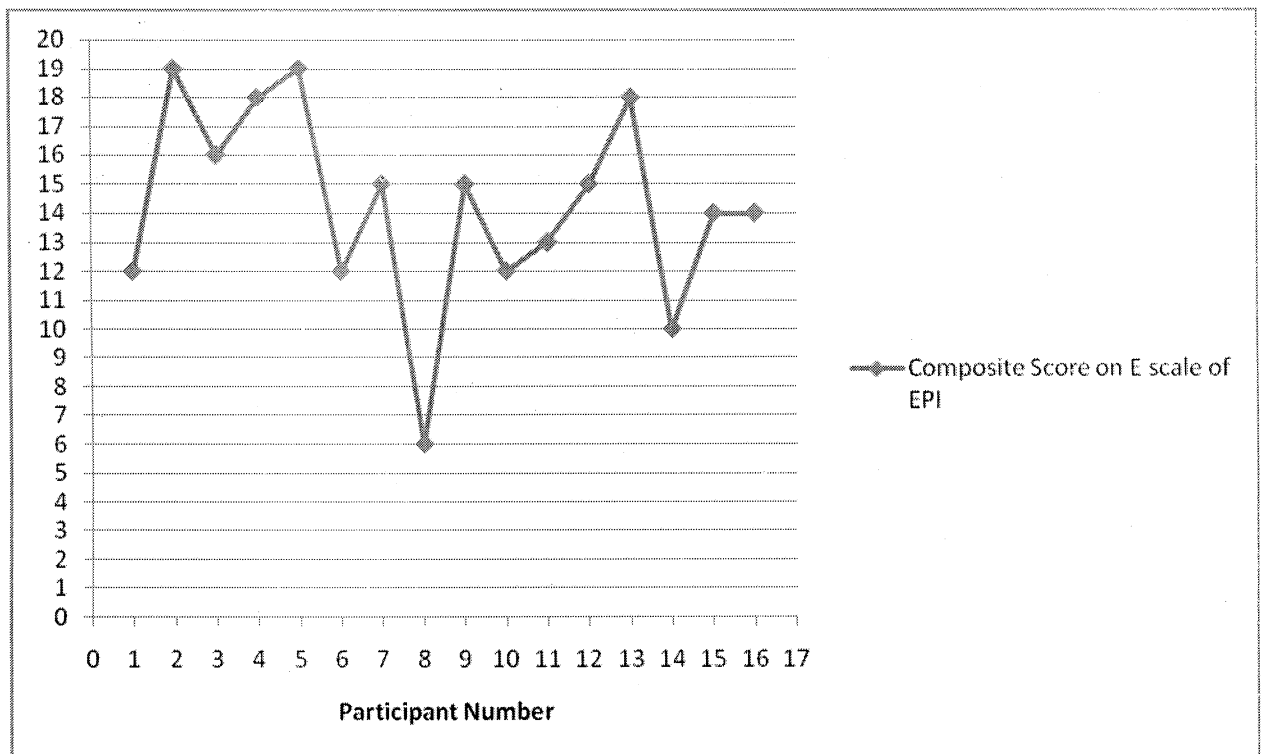
In order to control for influences of extraneous variables, students' average achievement scores in both math and reading were correlated using Pearson Product Moment Correlations with teachers' ages, years of experience, and number of years in the current school district. No significant relationships were found in these analyses. Teachers' ages, years of experience, and number of years in the current district were also correlated with teachers' scores of efficacy for both math and reading using Pearson Product Moment Correlations. No significant relationships were found in these analyses as well.

Further analysis of control questions revealed that all 16 participants enjoyed participating in the study, with most writing "happy to help" or "interested in the outcomes" in response to the question "How do you feel about participating in this study?". All 16 participants also responded "yes" when asked if they would participate in this type of research again. In order to account for demand characteristics, participants

were asked to write what they thought this study was about. Eight participants wrote that the study involved “teacher personalities” in some way, with no participants determining the exact hypotheses.

Although none of these hypotheses were found to be significant, participants’ scores on the Extraversion (E) Scale of the EPI revealed that significantly more teachers in this sample rated themselves as extraverts, see figure 4.1. Fourteen participants (88% of the sample) earned composite scores of 12 or higher on the Extraversion (E) Scale of the EPI, with the mean score for the entire sample being 14.29. This finding supports previous personality research which has indicated that more extraverted individuals may be drawn to careers in teaching. This will be discussed with more detail in Chapter 5.

Figure 1: Participants’ Composite Scores on the Extraversion Scale of the EPI



Summary

Correlations between teacher personality and student achievement and teacher effectiveness were not significant. However, the number of participants who reported themselves as extraverts in this study may support previous research that individuals in the teaching field are more likely to be extraverted. Because correlations of selected control variables with student achievement and teacher efficacy were not significant, it could be assumed that these extraneous variables had no effect on the current findings. In the subsequent chapter, results will be interpreted, and limitations and implications will be discussed.

CHAPTER 5

Introduction

In summation, the researcher outlined the need and purpose for the current study, which was an attempt to determine if teacher personality affects teacher effectiveness and student achievement. With new legislation about the qualifications of teachers, this study hoped to add to the literature about the various characteristics that may have an influence on student achievement. Two hypotheses were posed that teacher personality, specifically the level of introversion/extraversion, would impact the students' academic grades and the teacher's efficacy in both reading and math.

In the next chapter, a detailed description of past research about the effects of teacher characteristics on student academic success, including personality and other covert presage variables, aimed to explain the rationale behind the posed hypotheses. Studies that challenge the link between teacher personality and student achievement, as well as the aims of the present study to replicate past research results, were also discussed.

The third chapter included an explanation of the study's sample, design, and data analysis. The sample consisted of Kindergarten through Fourth grade teachers who were given several measures that they were asked to answer. The Mock Report Card, used to record students' performance in reading and math, the Eysenck Personality Inventory (EPI), used to determine the preference of extraversion/introversion, and the Teacher

Effectiveness Self-Evaluation, used to measure the efficacy of each participant in reading and math instruction, were important to the testing of the hypotheses. The analysis of each hypothesis involved calculating the strength of the relationship through Pearson Product Moment Correlations.

The results of the study were presented in the fourth chapter. Although there were no significant relationships between teacher personality and both teacher efficacy and student achievement, the sample did show that 88% of the teachers in the study exuded qualities linked to a more extraverted personality type. A graph was included to illustrate this finding which supports some previous personality research.

Finally, in the remainder of the fifth chapter, the researcher will discuss the conclusions, limitations, and implications of the current study. Explanations as to why the posed hypotheses were not supported and how the unexpected finding of more teacher extraversion affects the classroom environment will also be described. In addition, suggestions for future research will be made as to how to improve the knowledge and design of teacher personality research.

Discussion

With regard to the results of the present study, few conclusions could be made. First of all, the relationship between student academic achievement in both reading and math and teacher personality was not significant. This was in direct contrast to the results found in a study of undergraduate professors. Not only did students rate more extraverted teachers as highly effective, but the students in classes with extraverted teachers also had higher grades (Erdle, Murray, & Rushton, 1985). Although the purpose of the present

research was to replicate results such as these, the current findings did not support the link between teacher personality and student achievement.

Similarly, the relationship between teacher effectiveness in reading and math instruction and teacher personality was not significant. This finding was also in direct contrast to previous studies about the effects of personality in the classroom. For instance, in the Rushton, Morgan, and Richard study, members of the Florida League of Teachers (FLoT), admitted because of their exceptional teaching abilities, were found to be significantly more extraverted than a random sample of other Florida teachers (2007). However, this link between teacher efficacy and personality was not supported by the results of the present study.

Results such as those found in the current research have been reported in past studies. For instance, in a study of emergency certified teachers, researchers found that there was a limited relationship between teacher personality and efficacy (Henson & Chambers, 2003). Canonical correlation analyses between personality type and both teaching efficacy and classroom management ability were found to be not significant. One reason for these findings in both studies could be the use of teacher self-reports in the evaluation of classroom effectiveness, but this will be explored further in the limitations section.

The implications of these two conclusions are very important within the field of education. The lack of a relationship between a teacher's personality and a teacher's effectiveness in the classroom is important for administrators and interviewers to keep in mind when evaluating new and prospective teaching staff. In keeping with the current

findings, a teacher's effectiveness should not be evaluated or measured by the preference for introversion or extraversion. As Sears and Kennedy (2001) found, the extraversion/introversion personality dimension did not have an effect on student achievement; so it should not play a factor in the determination of a teacher's instruction ability.

The last conclusion that may be drawn from the current results was actually an unexpected finding. Analysis of the sample revealed that over half the sample of teachers scored a 12 or higher on the EPI, qualifying them as the extraversion personality type. Although this uneven distribution may have hindered the ability to find significance in the posed hypotheses, it also provided support for a body of research which identifies a high percentage of extraverts in the teaching profession. For example, 61% of undergraduate students in a teacher education program were found to show a tendency towards extraversion (Rojewski & Holder, 1990). Furthermore, Fairhurst and Fairhurst (1995) report that a little over half of all elementary school teachers are extraverted.

A possible explanation for the high percentage of teachers identified as extraverts is discussed in a study of 175 pre-service teachers (Thornton, Peltier, & Hill, 2005). Researchers found that 35% of the sample had ESTJ personality profiles, supporting the conclusion that college students who exhibit qualities of the extraversion personality type are more attracted to the teaching profession than those students who exhibit qualities of the introversion personality type. Therefore, it is possible that extraverts are drawn to teaching as a profession, making them become teachers more often than introverts.

This finding has many implications, especially for teacher education programs in colleges and universities. Results from personality profile tests can possibly be used to identify students who would enjoy the teaching profession and recruit them to become education majors. Conversely, the results could be used to suggest alternative career paths for those education majors who may not be happy about their choice and whose personality profiles do not demonstrate a preference for teaching. However, as Rojewski and Holder (1990) warn, results from a personality profile test should not be used to stereotype college students. Looking at personality type should be used to enhance college students' career choices, but should not be the only method used in determining a future career path.

Limitations

There are several limitations in this study that may have contributed to the lack of significant findings. First of all, there was a small sample size in this study ($n=16$). Therefore, these results may not be generalizable to the public as they represent only a small portion of the general population. Similarly, the sample may not have been very diverse since teachers were recruited from three suburban school districts in southern New Jersey. Urban and rural school districts in other states or from different countries may exhibit different results from the ones in the present study. However, they were not represented in the sample. These factors affected not only the generalizability and validity of the results, but they also made it difficult to obtain significant correlations.

In addition, the operational definitions and measurement of the variables may have limited the ability to accurately test how teacher personality affects the dependent

variables. As mentioned before, previous studies that used teacher self-report as a measurement of teacher effectiveness also had difficulty showing a significant relationship between teacher personality and efficacy (Henson & Chambers, 2003). Also, the operationalization of student achievement through grades may not be the best way to measure students' success. In a study about teacher grading techniques, researchers found that teacher-given grades do not always reflect student achievement, and that teacher grading techniques are insufficient (Rakoczy, Klieme, Burgermeister, & Harks, 2008). Therefore, the current study may have been hindered by the chosen methods of measurement.

Although analysis of control variables found that none of the other teacher characteristics gathered in this study were significantly related to teacher effectiveness and student achievement, it is possible that there are other variables which influence students' academic success. There are many overt and covert presage teacher variables other than personality that have been shown to influence how students perform in the classroom, such as teacher expectations, attitudes, praise, knowledge, etc. (Rowan, Correnti, & Miller, 2002; Cantrell, Stenner, & Katzenmeyer, 1977; Feldman & Theiss, 1982). Since the current study only focused on the influence of one dimension of personality, the results cannot account for other possible characteristics affecting student achievement.

Suggestions for Future Research

Keeping in mind these limitations, future research of this type should be conducted with a larger sample size, a much more diverse pool of participants, and

measures that involve direct observation rather than self-report questionnaires. There is a sizable body of research which suggests that the level of teacher extraversion does in fact influence the effectiveness of teachers in the classroom. Therefore, more research should be done looking into this hypothesis with varied measurement techniques and on a much larger scale than was used in the current study.

In addition, because the majority of the sample in the current study was extraverted, future research should further explore this finding in detail. As mentioned before, it may have important implications for teacher education programs at colleges and universities. So, it would be beneficial to gain more definite knowledge about why these individuals seem more attracted to teaching careers and how this trend will affect the educational system in the future. If the general population of teachers becomes more and more homogenous, there could be significant effects on teaching practices and curriculum. Subsequently, more research needs to be done in order to determine the possibilities of this trend.

In conclusion, any research that seeks to help teachers become more effective in the classroom is important. With legislation like No Child Left Behind stating that we need “high quality” teachers in every classroom in America, it becomes essential that researchers begin to determine what constitutes a quality, or effective, teacher. In the current study, no relationship was found between one aspect of teacher personality (extraversion) and student achievement. However, it was found that more teachers identified with the extraversion personality type, which could prove to be an influential finding as teacher personality research progresses.

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APPENDIX A

Mock Report Card

For this survey, please report on your current students' scores in reading and math. Using the response scale below, write the appropriate number which represents each student's grade. Each number on the chart corresponds to one student. (It does not matter if you have different students for reading and math. Just report the scores for the students that you have for each subject.)

Response Scale

- 1 = below (child is performing below grade level)**
- 2 = needs improvement (child needs to improve quality of work at this grade level)**
- 3 = satisfactory (child is performing at grade level)**
- 4 = very good (child is doing high-quality work at this grade level)**
- 5 = excellent (child is performing beyond grade level)**

Reading	Math
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.
11.	11.
12.	12.
13.	13.
14.	14.
15.	15.
16.	16.
17.	17.
18.	18.
19.	19.
20.	20.
21.	21.
22.	22.
23.	23.
24.	24.
25.	25.

APPENDIX B

Teacher Effectiveness Survey

Using the response scale below, please answer each question about the frequency of your teaching strategies in reading and math this school year as honestly as possible. Write all answers in the corresponding number grid on the right.

Response Scale

- 1 = hardly ever
- 2 = occasionally
- 3 = sometimes
- 4 = frequently
- 5 = almost always

1. I display a personal interest in my students and their learning.
2. I find ways to help students answer their own questions.
3. I schedule class work in ways which encourage students to stay up- to- date on their work.
4. I demonstrate the importance and significance of each subject matter.
5. I place the students in groups to facilitate learning.
6. I make it clear how each activity relates to the current topic or chapter.
7. I explain the criticisms of student academic performance.
8. I stimulate students to go beyond what is required by most teachers.
9. I encourage students to use multiple resources (e.g. the library, internet, parents, etc.) to improve understanding.
10. I explain all directions clearly and concisely.
11. I relate the subject matter to real-life situations.
12. I give tests, quizzes, projects, etc. that cover the most important points of the topic or chapter.
13. I introduce stimulating ideas about the current topic.
14. I involve students in “hands on” projects or activities relating to the subject matter.
15. I inspire students to set and achieve goals which really challenge them.
16. I ask students to share their ideas and answers with the rest of the class.
17. I provide timely and frequent feedback on tests, quizzes, projects, etc.
18. I ask students to help each other learn new concepts or ideas.
19. I give projects, tests, or assignments that require original or creative thinking.
20. I encourage student interaction outside the classroom (in hallways, at lunch, at recess, etc.)

Reading	Math
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.
11.	11.
12.	12.
13.	13.
14.	14.
15.	15.
16.	16.
17.	17.
18.	18.
19.	19.
20.	20.

Please answer the following questions on the lines provided.

How do you feel about participating in this study?

What do you think this study is about?

Would you participate in this type of research again?

Please, place the completed surveys in the manila envelope, seal it, and submit it to the main office of your school. Once again, thank you for participating in this research project! It is very much appreciated.