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Exploring the Efficiency and Effectiveness of Teacher Selection Tools: The Effects on  
the Total Group with a Focus on the Gender Sub-Groups

by

Sharon Lynn Ellerbrook

December 2009

Dissertation submitted to the Education Faculty of Lindenwood University  
in partial fulfillment of the requirements for the degree of

Doctor of Education

School of Education

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This Dissertation has been approved as partial fulfillment of the requirements for the  
degree of  
Doctor of Education  
at Lindenwood University by the School of Education

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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May 14, 2009

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## Abstract

As schools struggle to meet federal testing requirements, the importance of having highly effective teachers in every classroom has never been greater, and, given the downward trend in the economy, there are more teaching applicants than ever. School districts would benefit from a streamlined process to interview and select only the most effective and highly-qualified teachers.

The researcher's purpose was to determine the efficiency and effectiveness of a unique and specific teacher selection process which included three Ventures for Excellence screening tools and one innovative instrument designed for this study, the performance rating scale. A collaborative correlational study involving three investigators was conducted to determine if there was an association between the three Ventures for Excellence tools (the written application questions, the StyleProfile online screening tool, and the 22-question screening interview tool) and the performance rating scale. A multiple linear regression study was conducted to determine the relationship between the predictive qualities of the selection tools and the actual teaching performance during the 2007-2008 school year.

The research question answered in the study was, "Are the teacher selection tools currently being utilized in the study district able to predict first year success?" The sub-question was, "Is there a difference in prediction related to gender, experience, or elementary and secondary levels?" This investigator focused on the gender issue.

In the literature review, the researchers examined (a) impact of quality teaching on student achievement, (b) characteristics of effective teachers, (c) teacher characteristics as related to gender, and (d) techniques and strategies that districts have

adopted to select these quality candidates. The common thread was that the teacher may be the most important factor affecting student achievement.

The most salient finding was that the 22-question interview was the most predictive of teacher success. The researchers also found, overall, that the StyleProfile rarely predicted teacher success. The written application was the stronger predictor for males, but there were no strong predictors for females. The recommendation to the study district was to use the StyleProfile tool cautiously with teacher candidates. A recommendation for future research is to replicate the study with larger subject groups.

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## Key to Abbreviations

AYP	Adequate Yearly Progress
DESE	Department of Elementary and Secondary Education
MAP	Missouri Assessment Program
NCLB	No Child Left Behind
PAR	Problem, Action, Result
STAR	Situation, Task, Action, Result

## Chapter One - Introduction

### *Background of the Study*

With school districts being held more accountable than ever before for student learning, the recruitment and selection of high quality teachers has never been more important. The No Child Left Behind Act (NCLB) includes federally mandated reforms that hold school districts accountable for every child's education.

Coble and Azordegan (2004) maintained that the NCLB Act "is the most significant federal education policy initiative in a generation" (p. 2). Jennings and Rentner (2006) stated that "test-driven accountability is now the norm in public schools, a result of the NCLB Act, which is the culmination of 15 years of standard-based reform" (p. 110). Since the inception of NCLB, more attention is being paid to public education. "NCLB is clearly having a major impact on American public education. There is more testing and more accountability. Greater attention is being paid to what is being taught and how it is being taught" (Jennings & Rentner, p. 113).

Many factors, including class size, curriculum, funding, and parental involvement, affect student learning. However, Stronge and Hindman (2003) suggested that the teacher is the most significant school-based factor affecting student achievement. Further, a student who had a high performing teacher for just one year, remained ahead of his or her peers over the next few school years (Stronge & Hindman, 2003). The opposite, however, was also true. Students with low performing teachers were negatively impacted for the next several years. Ferrandino (2002) found that "low performing students assigned to the least effective teachers did much worse on standardized tests than those assigned to the most effective teachers" (p. 80). Darling-Hammond and Youngs (2002) found that

student achievement gains are more related to a student's assigned teacher than to other factors such as the composition of the class or its size. Therefore, allocating the necessary time, money, and effort to select highly effective teachers seems to be a smart investment.

Quality teacher selection may be one of the most important factors facing education leaders today. In order to give every student a highly effective teacher, there must be a concerted effort to select the very best teachers. Selecting highly effective teachers should be a priority for every school district. In fact, Peal (2007) stated that without exception, the foremost of all decisions a principal must make involves the hiring of new classroom teachers, which is why an exemplary principal's epitaph should read "I hired well." Positive, well-thought-out hiring decisions can bear long-lasting, life-changing fruit. (p. 42)

Stronge and Hindman (2006) stated that "the goal for everyone involved in the hiring process should be placing a highly qualified and highly effective teacher in front of every student" (p. 3). It appears that having a successful selection process should be important for school districts. Reeves (2007) wrote that "putting the right people in positions of classroom leadership is an important first step in our efforts to improve student achievement" (p. 84).

Having an effective teacher selection process is also important considering recent career trends in the weakened economy. With these economic changes, teaching is a profession that is experiencing a glut of new teachers including first time graduates and professionals outside education who have been working in the private sector. Hare (2009)



found that with many people facing unemployment, there are more candidates pursuing teaching positions as an alternative career.

Given the large number of teaching candidates and the importance of selecting effective teachers, identifying the best candidates to interview seems to be essential. The interview process is labor intensive and expensive. Since resources are often limited, schools should be assured that their selection processes are efficient and effective. One research-based suite of teacher selection tools is the Ventures for Excellence program created by the Ventures for Excellence Corporation in Omaha, Nebraska. This nationally recognized program has useful tools for school districts interested in selecting the best candidates to interview. This is the program that is utilized by the study school district.

The purpose of this study was to determine the efficiency and effectiveness of a unique and specific teacher selection process, which included three Ventures for Excellence screening tools and one innovative instrument designed specifically for this study that will, from this point on, be known as the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. A correlational study was conducted to determine if there was an association between the three components of the Ventures for Excellence selection process (the written application questions, the StyleProfile online screening tool, and the 22-question screening interview tool) and the new innovative Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The three components of the selection process are products of the Ventures for Excellence Corporation. The Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District was a homegrown instrument created by the study school district to obtain administrator perspectives on the

performance of first year teachers in the study school district hired for the 2007-2008 school year. A multiple linear regression study was conducted to determine the relationship between the predictive qualities of the selection tools and the actual teaching performance. These data, along with research on the qualities and results of highly effective teachers and selection processes, were combined to create a report on the current teacher selection tools for the study school district, Fort Zumwalt.

Fort Zumwalt, a large suburban school district in the Midwest, was, at the time of this study, comprised of approximately 19,000 students educated at four comprehensive high schools, one alternative high school, four middle schools, and 15 elementary schools. The district employed a certified staff of over 1,200 teachers. Each year the district receives over 2,000 applications, interviews over 800 candidates, and hires approximately 100 teachers. (Fort Zumwalt, 2009).

Stronge and Hindman (2003) shared that many districts' selection processes include two major components. First, there is a job application, which includes documents related to teacher selection. Second, there is the actual candidate interview. The selection process in the Fort Zumwalt School District is a hybrid that includes three screening components created by the Ventures for Excellence Corporation and one that is district specific: the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The three Ventures for Excellence components are research-based and used by many school districts in the St. Louis metropolitan area; the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District is not.

The Fort Zumwalt School District's process to screen teaching applicants is as follows: Each applicant must answer seven written questions regarding teaching, learning, and philosophy, (the written application). The answers to the questions are reviewed by the Deputy Superintendent for Personnel, along with the applicant's college grade point average, student teaching grade, criminal background result, and the quality and presentation of the application. At this point, candidates who are selected to move forward through the screening process are asked to complete the StyleProfile online screening tool. Depending on the results of this screen, candidates may be scheduled for the face-to-face, 22-question screening interview. After the data from these three screening tools are evaluated, some candidates are then selected for a final school specific interview. These steps are illustrated using the algorithm in Figure 1.

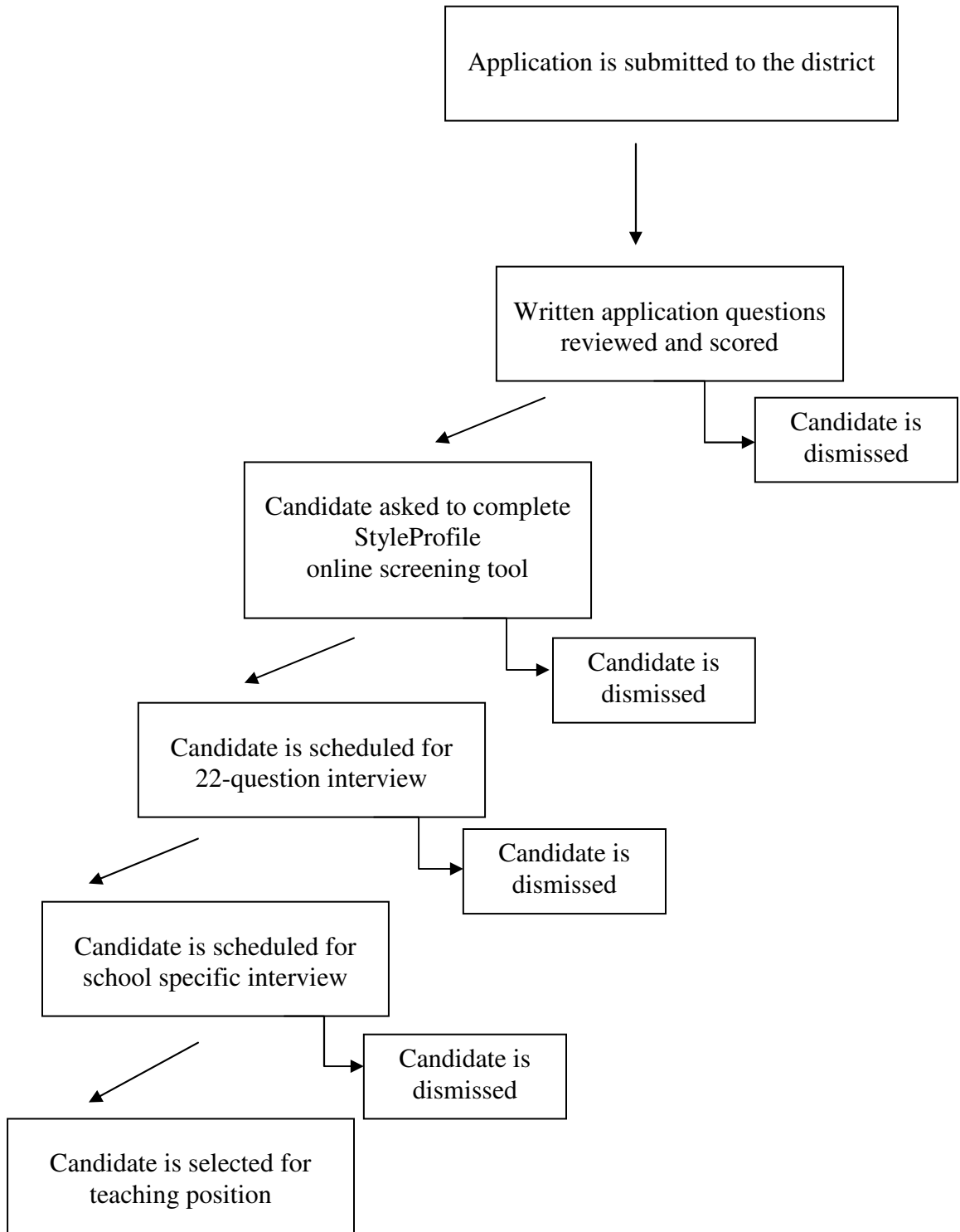


Figure 1. Algorithm Illustrating the Teacher Selection Process in the Fort Zumwalt School District

Questions on the application, StyleProfile, and the interview tool are based on certain themes, including (a) purpose, (b) human interactions skills, and (c) knowledge of teaching and learning. Through the use of these tools, the Fort Zumwalt School District strives to find candidates with the following qualities as identified by Ventures for Excellence: (a) demonstrates a clear sense of purpose by providing excellent learning and growth opportunities to all students, (b) is committed to the total development of students and devotes much time and energy toward this goal, (c) manifests excellent human relationship skills, (d) values interacting with people in a caring and supportive manner, (e) identifies with the feelings and thoughts of others in empathetic and helpful ways, (f) is insightful about what motivates others and perceptive about using approaches which will bring out the best in students, and (g) is versatile in utilizing high student involvement to ensure learning (Cottrell, 2004).

#### *Statement of the Problem*

The purpose of this study was to determine the efficiency and effectiveness of a unique and specific teacher selection process which included three Ventures for Excellence screening tools and the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. First, the researchers examined the screening instruments (written application questions, StyleProfile, or the 22-question interview) in an attempt to determine which was most predictive of successful teaching performance. Information was provided to the district to assist with narrowing down the number of candidates for the last step in the selection process, the school specific interview with the building principal, because this step takes the most time and resources. This was especially important considering the volume of teacher candidates available during the

hard economic times at the time of the study. Second, elementary and secondary school faculty struggle to meet the requirements for Adequate Yearly Progress (AYP) as determined by NCLB legislation. AYP is a goal set for students and student subgroups to meet that would eventually result in all students scoring at the proficient level by 2014 (Missouri Department of Elementary and Secondary Education [MO DESE], 2008a). The importance of having highly effective teachers in every classroom has never been greater. Therefore, if the selection tools currently being used result in high quality teacher performance in the classroom, it can be assumed that the Ventures for Excellence process assists in selecting high quality teachers. Third, the researchers examined which selection tools were more predictive of performance for female or male teachers, experienced or non-experienced teachers, and elementary or secondary teachers.

More specifically, the following research question and sub-question will be posed.

Research Question—Are the teacher selection tools currently being utilized in the Fort Zumwalt School District able to predict first year success?

Sub-question—Is there a difference in prediction related to gender, experience, and elementary and secondary levels?

Three researchers collaborated on this research study: Sharon Ellerbrook, Kim McKinley, and Greg Cicotte. All researchers contributed equally to answering the research question and the first hypothesis. However, Sharon Ellerbrook focused on the gender issue in the research sub-question and the related sub-hypothesis: Kim McKinley focused on the experience issue in the research sub-question and the related sub-hypothesis, and Greg Cicotte focused on the elementary and secondary level issue in the

research sub-question and the related sub-hypothesis. All researchers included all results and discussion in their analyses but with a greater focus on their specific areas.

*Rationale for Study*

With academic accountability at an all time high and teacher applicants also at an all time high, the importance of having an efficient method of hiring highly effective teachers has never been greater. Although the district was awarded “Distinction in Performance” by the Department of Elementary and Secondary Education (DESE) for the 2007-2008 school year, schools struggled with student achievement as measured by the Missouri Assessment Program (MAP). The MAP test assesses third through eighth grade students in the areas of communication arts and math. NCLB legislation mandates school districts make AYP as a total school population, as well as several subgroups within the population. These subgroups include Asian/Pacific Islander, Black, Hispanic, American Indian, White, Free and Reduced Lunch, Special Education, and Limited English Proficiency. Since 2005, the district has not met these requirements for all groups, as demonstrated in Tables 1 and 2. More detailed information is available in Appendix A.

Table 1

*Fort Zumwalt Adequate Yearly Progress Reports for Communication Arts*

Communication Arts MAP Scores				
	2005	2006	2007	2008
Total Groups	8	8	8	8
Groups Met	4	7	4	4

*Note:* From Missouri Department of Elementary and Secondary Education (2008b)

Table 2

*Fort Zumwalt Adequate Yearly Progress Reports for Math*

Math MAP Scores				
	2005	2006	2007	2008
Total Groups	8	8	8	8
Groups Met	6	7	4	4

*Note:* From Missouri Department of Elementary and Secondary Education (2008c)

Each year the Fort Zumwalt School District spends many dollars and man-hours in the selection process. The Deputy Superintendent for Personnel and the head building principals work together to complete this process. These administrators are thoroughly trained by the Ventures for Excellence Corporation in the scoring of each screening tool. Currently, administrators in the Fort Zumwalt School District interview approximately half of the roughly 2,000 candidates who apply each year. By knowing which screening tool is the most predictive, the district would be able to further streamline its selection process by interviewing fewer candidates. Furthermore, if the screening tools predict future performance, the district can be confident that it is selecting effective teachers.

*Independent Variables*

The data were examined in two analyses. The first analysis was a correlation study between the four variables including (a) written application score, (b) StyleProfile score, (c) 22-question interview score, and (d) Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score. The second analysis was a multiple linear regression. The independent variables in this analysis were the (a) score



on the written application questions, (b) score on the StyleProfile, and (c) score on the 22-question interview.

#### *Dependent Variable*

The dependent variable in the multiple linear regression analysis was the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score.

#### *Hypotheses*

The first hypothesis was there will be a significant correlation among all of the variables: (a) score on the written application, (b) score on the StyleProfile, (c) score on the 22-question interview, and (d) score on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. A related sub-hypothesis was that there will be a significant correlation among the variables by gender, experience, and elementary and secondary levels.

The second hypothesis was there will be a predictive relationship among the three independent variables: (a) score on the written application questions, (b) score on the StyleProfile, (c) score on the 22-question interview and the dependent variable: the score on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. A related sub-hypothesis was that there will be a predictive relationship between the independent variables and the dependent variables by gender, experience, and elementary and secondary levels.

#### *Limitations of the Study*

*Data collector characteristics threat.* The scorers conducting each interview were thoroughly trained by the Ventures for Excellence staff on how to use the 22-question

interview tool at the beginning of their administrative career. However, because every candidate is not screened by the same scorer, an instrumentation threat may occur.

*Location threat.* The StyleProfile and seven written questions on the application were completed off site. This could enable a candidate to receive assistance in answering the questions.

*Mortality threat.* Some first year teachers were not included in the study because they did not complete all of the components of the selection process.

#### *Delimitations of the Study*

The sample tested in this study was not random. It consisted of only those candidates who applied for and received a teaching job in the Fort Zumwalt School District for the 2007-2008 school year. Since those candidates were selected for school specific interviews, it is probable that their scores on the selection tools, especially the 22-question screening interview, may have been higher than the general population of applicants applying for teaching positions. The demographics of the district may further limit the study, in that Fort Zumwalt is largely a middle-income, suburban school district. Furthermore, since the researchers also only included those candidates who received teaching positions in the 2007-2008 school year, this limited the number of subjects tested. This sampling of subjects decreased the generalizability of the findings.

#### *Assumptions*

The Fort Zumwalt School District uses the Ventures for Excellence screening tools. There was an assumption that the Ventures for Excellence rating system results in the best candidates being hired. Thus, the focus was to compare the current screening tools that take only the best candidates forward to the school-specific interview.

### *Definitions*

*22-Question Interview.* The interview was developed by the Ventures for Excellence Organization. The Ventures for Excellence interview is a structured, 22-question interview format designed to elicit specific responses that, when scored by trained interviewers, claims to distinguish superior teacher candidates from less superior ones. The interview was designed to measure a candidate's potential based on certain themes, including purpose, relationships, and attitudes towards teaching and learning. The interview publisher suggested that the interview's power to distinguish among candidates is based upon a set of teaching work values and traits about which hiring decision information is elicited from candidates during the 22-question interview (Cottrell, 2004).

*Adequate Yearly Progress (AYP).* This indication demonstrates if the school received federal Title I funding, achieved AYP in the previous year, and has been identified as "in school improvement" or other special status. AYP is a measurement that allows the U. S. Department of Education to determine how each school district is performing (MO DESE, 2008d).

*Department of Elementary and Secondary Education (DESE).* The Department of Elementary and Secondary Education regulates and coordinates K-12 public school education in the state of Missouri. DESE is located in Jefferson City, Missouri.

*Distinction in Performance.* This award is given by DESE to school districts that meet certain criteria. To qualify for this award, districts must meet six of the seven of the Missouri School Improvement Program performance measures and all MAP and reading standards (MO DESE, 2008e).

*Missouri Assessment Program (MAP).* This series of tests measures student learning. It is required of all Missouri public school districts (MO DESE, 2008f).

*Missouri School Improvement Program.* The Missouri School Improvement Program has the responsibility of reviewing and accrediting school districts in Missouri (MO DESE, 2008g).

*No Child Left Behind Act (NCLB).* This federally mandated educational reform holds states and individual school districts accountable for every child's education. (Rebell & Hunter, 2004).

*School Improvement Plan.* This plan is a set of goals and an action plan written by committees within each school that focuses on student achievement and growth. A team develops this plan utilizing past achievement scores. This plan is reviewed annually and correlated with the most current testing results. The plan outlines professional development activities and actions taken by the staff to increase student achievement (National Staff Development Council, 2003).

*StyleProfile.* This tool utilizes online questions to help applicants develop a profile that reflects their teaching styles (Cottrell, 2004).

*Written Application Questions.* These seven professional questions are included in the application packet. These questions are based on the same themes as the Ventures interview instrument (Cottrell, 2004).

### *Summary*

In chapter one, the researchers outlined the background of the problem, described the statement of the problem, explained the rationale of the study, assessed limitations, and defined terms. The reason for examining the current selection processes in the Fort

Zumwalt School District was a need for efficiency and effectiveness. Federal and state accountability requirements placed upon school districts and the academic achievement expectations for students make the selection of highly effective teachers essential. Just as important, the researchers presented an argument for exploring which Ventures for Excellence screening tool is most predictive of teacher success.

Chapter two contains a review of the literature to examine the research on (a) the impact of quality teaching on student achievement, (b) the characteristics of effective teachers, (c) teacher characteristics as related to gender, and (d) the techniques and strategies that districts have adopted to select these quality candidates.

## Chapter Two - Review of Literature

This study examines relationships among the effects of quality teaching on student achievement, the characteristics of effective teachers, and the processes in place to select effective teachers. Review of literature showed a direct link between effective teaching and student achievement. Much of the research concluded that the teacher may be the most important factor affecting student achievement. The review also demonstrated a commonality between teacher characteristics and teacher effectiveness. A search of literature concerning selection processes also showed that procedures that are research-based add validity to the process, providing school districts a better chance of selecting effective teachers.

School districts are under more pressure than ever before to perform to certain standards. The reauthorization of the Elementary and Secondary Act, also known as NCLB, includes testing requirements that hold all schools accountable for student performance. The NCLB Act is based on the belief that setting high expectations and setting measurable goals can improve student outcomes. One premise of this law is that only highly qualified teachers will be permitted to instruct the nation's children. Porter-Magee (2004) affirms that teachers must have a college degree and state certification in the subject they are teaching.

NCLB defines highly qualified differently for new teachers and experienced teachers. A new elementary teacher must pass a rigorous state test of the elementary curriculum and teaching skills. A new middle or high school teacher must pass a rigorous state academic subject test or complete an academic major in each subject he or she will teach. Experienced teachers can be deemed highly

qualified based on either the same criteria as used for new teachers or on a high objective uniform state standard of evaluation. (Rebell and Hunter, 2004, p. 691)

Although there is much controversy over how these requirements are measured and if they actually determine if a teacher is highly qualified, Darling-Hammond and Berry (2006) stated that “the NCLB teacher-quality mandate has encouraged administrators to consider teacher assignments and the distribution of licensed teachers more seriously” (p. 16). There are substantial penalties for districts that do not meet certain criteria.

With high stakes testing, selecting quality teachers should be a critical goal for every school district. The following topics will be explored in the literature review: (a) the effects of quality teaching on student achievement, (b) the characteristics of effective teachers, (c) teacher characteristics as related to gender, and (d) the techniques and strategies that districts have adopted to select these quality candidates.

#### *The Effect of Quality Teaching on Student Achievement*

According to Stronge and Hindman (2003), when administrators were asked about the most important factor affecting student achievement, the overwhelming response was the quality of the teacher in the classroom. Stronge and Hindman (2003) stated that “research suggests that curriculum, class size, district funding, family and community involvement, and many other school-related factors all contribute to school improvement and student achievement. But the single most influential school-based factor is the teacher” (p. 48). “Over the years, educational researchers have investigated many factors considered to affect student learning. At the heart of this line of inquiry is the core belief that teachers make a difference” (Wright, Horn & Sanders, 1997, p. 57).

Marzano examined the Wright, Horn, and Sanders study in 2003 and found that the factor that most impacted student achievement continued to be the teacher.

Effective teachers appear to be effective with students of all achievement levels regardless of the levels of heterogeneity in their classes. If the teacher is ineffective, students under that teacher's tutelage will achieve inadequate progress academically, regardless of how similar or different they are regarding their academic achievement. (Marzano, 2003, p. 72)

In addition, Marzano also looked at the impact on achievement differences between students who spend at least one year with an effective teacher and those who spend at least one year with an ineffective teacher.

On the average, the most effective teachers produced gains of about 53 percentage points in student achievement over one year, whereas the least effective teachers produced achievement gains of about 14 percentage points over one year. To understand these results, consider the fact that researchers estimate students typically gain about 34 percentile points in achievement during one academic year. That is, a student who scores at the 50<sup>th</sup> percentile in mathematics in September will score at the 84<sup>th</sup> percentile on the same test given in May. The findings reported indicate that over a year, students in classes of the most effective teachers will gain much more in achievement than expected. However, students in the classes of the least effective teachers will gain much less in achievement than expected. These findings are even more startling when we consider that some researchers have estimated that students gain about 6



percentage points simply from growing one year older and gleaning new knowledge and information through everyday life. (Marzano, 2003, pp. 72-73)

The differences in student achievement with least effective and most effective teachers are shown in Table 3.

Table 3

*Student Achievement Differences Affected by Teachers*

<b>Teacher</b>	<b>Student Achievement Gain in One Year</b>
Least effective	14 percentage points
Most effective	53 percentage points

*Note.* From *What Works in Schools: Translating Research Into Action* (p. 72), by R. J. Marzano, 2003, Alexandria, VA: Association for Supervision and Curriculum Development.

Furthermore, Marzano (2003) also found that the cumulative effect of least effective teachers can be devastating to students. The cumulative effects over three years for students with most effective and least effective teachers are illustrated in Table 4.

Table 4

*Cumulative Effects Over Three Years Between Students With Least Effective versus Most Effective Teachers*

Teacher	Student Achievement Gain over 3 Years
Most effective teacher	83 percentile point gain
Least effective teacher	29 percentile point gain

*Note.* From *What Works in Schools: Translating Research Into Action* (p. 73), by R. J. Marzano, 2003, Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano's 2003 findings argued that the quality of the teacher has a significant impact on student achievement. Further, he stated that over a three-year period, those students who had an effective teacher each year achieved 54 percentile points higher than those students with a least effective teacher. This research estimated that students gain six percentile points each year by experiencing life and just being a year older. These six percentile points multiplied by three years equaled a gain of 18 percentage points. The students with the least effective teacher only gained 29 percentile points over three years while 18 of the percentile points were simply from the students growing one year older. It would seemingly follow then that over a three-year period, the least effective teachers would have been responsible for the students making only an 11 percentile point gain in achievement. This is an example that affirms the importance of selecting highly effective teachers and the impact they have on student achievement.

Rivers and Sanders (2000) looked at equity in education. They pointed out that the term “equity” has multiple meanings, but the most common is that each student makes appropriate academic gains each year. In their research, they asserted that if equity is defined by academic gains, then the expectations for teachers can be determined by academic growth rates. Rivers and Sanders used the Tennessee Value-Added Assessment System for their research. This statewide system measures the impact that teachers and schools have on the academic growth rates of students. This database contains approximately six million student achievement test results from 1991 to 2000. These test scores are linked to specific teachers and allowed the estimation of teacher effectiveness. The results of the research using the Tennessee Value-Added Assessment System have indicated that the academic growth rate of students is most likely a function of the effectiveness of not only schools and districts but, more importantly, that of the teacher. Their major findings may be useful for schools as they attempt to provide an equal educational experience for all students. These are included in Table 5.

Table 5

*Eight Findings for Providing an Equal Educational Experience for All Students*

1. The effect of teachers can be separated from ethnic, socioeconomic, and parental influences.
2. The variability of teacher effectiveness increases across grades and is most pronounced in mathematics.
3. In the extreme, fifth grade students experiencing highly ineffective teachers in grades three through five scored about 50 percentile points below their peers of comparable previous achievement who were fortunate enough to experience highly effective teachers for those same grades.
4. A teacher's effect on student achievement is measurable at least four years after students have left the tutelage of that teacher.
5. Regardless of ethnicity, children of similar previous achievement levels tend to respond similarly to an individual teacher.
6. Teachers who are relatively ineffective tend to be ineffective with all student subgroups across the prior achievement spectrum, whereas teachers who are highly effective tend to be very effective with all student subgroups across the same spectrum.
7. The effect of the teacher far out shadows classroom variables, such as previous achievement level of students, class size, heterogeneity of students, and the ethnic and socioeconomic makeup of the classroom.

8. In the extreme, students testing between the 25<sup>th</sup> percentile and the 50<sup>th</sup> percentile in the fourth grade who also experienced a series of highly effective teachers in grades five through eight could be expected to pass the high-stakes test with a probability of about 80 percent; their peers of comparable previous achievement unfortunate enough to have experienced four very ineffective teachers in the same grades could be expected to pass the same test with a probability of about 40 percent.

*Note.* From “Teacher Quality and Equity in Educational Opportunity: Findings and Policy Implications,” by J. C. Rivers and W. L. Sanders, 2000, Paper presented at Hoover/PRI Teacher Quality Conference, pp. 16-18.

To summarize these eight major findings, teacher effectiveness determines appropriate academic gains for each student, effective teachers provide an equal educational experience for all students, and highly ineffective teachers have a very poor effect on student achievement and those students score significantly below their peers.

Goe (2007) examined the differences between teacher quality and teaching quality. While the first term focuses on such things as certification, college degrees, and teacher test scores, the latter term focuses on what a teacher does in the classroom.

A great deal of research has been done on teacher quality using student learning as the outcome measure. Despite all the time and effort spent researching this topic, in only a few aspects of teacher quality does strong and consistent evidence suggest that this makes a significant difference in student learning. (p. 2)

However, when research concentrates on the connection between what teachers do in their classrooms and student learning, positive correlations exist. For example, Frome, Lasater, and Cooney (2005) used information on teacher practices for middle school teachers and eighth graders' achievement test scores. They found that four teacher quality measures were significantly and positively related to student achievement. These were

1. Teacher Motivation and Expectations for Students. Higher student ratings for motivation and expectations correlated with higher achievement.
2. Instructional Practices. Higher student ratings for practices considered to be effective by the researchers were correlated with higher student achievement. Practices included group work on challenging assignments, oral presentations and written reports on mathematics projects, and explanations of solutions to the class.
3. Mentoring/Induction Experiences. The percentage of teachers within a school who participated in mentoring/induction was significantly and positively correlated with students' mathematics achievement scores.
4. Content and Pedagogical Coursework. The percentage of teachers within a school with a major in mathematics education was significantly correlated with students' mathematics achievement scores. (¶ 11)

To restate, teacher quality, as related to student achievement, can be measured by motivation, expectations, instructional practices, area of certification, and whether or not they collaborate with colleagues.

Holtzapple (2003) used a standards-based teacher evaluation system to compare teachers' evaluation scores with student achievement. Focusing on 246 Cincinnati public school teachers in grades three through eight, she found that teachers who received low

ratings on the instructional domain of the teacher evaluation system had students with lower achievement scores that would have been predicted by prior achievement. She also found that teachers with advanced rankings in this domain had students with higher than expected test scores.

Kannapel and Clements (2005) conducted research designed to determine what made high performing, high poverty schools different from other high poverty schools. They found that in terms of teaching practices, these schools were more likely to (a) conduct frequent assessments, (b) offer students feedback, (c) deliver instruction that is aligned to goals and assessments, (d) demonstrate high expectations for student performance, (e) participate in collaborative decision making, and (f) use student achievement data to drive instructional decisions. These teaching practices may have an impact on student performance and school quality.

Aaronson, Barrow, and Sander (2003) also linked student achievement to teacher practices among 856 Chicago public high school teachers. They found that students who had a teacher who was rated two standard deviations higher than other teachers in quality could add 25% to 45% of an average school year's growth to their mathematics score. In addition, they found that what high quality teachers do in their classrooms may be more important than who they are (their initial qualifications when first hired). Those three studies suggested that teacher quality impacts student achievement. It may be beneficial for school districts to have a structured, thorough, research-based selection process in place to avoid hiring ineffective or low quality teachers, a process that determines what they do more than who they are.

One of the most recent and compelling studies conducted on the influence of the classroom teacher on student achievement was done by Nye, Konstantopoulos, and Hedges in 2004. This Tennessee study of 79 elementary schools in 42 school districts involved randomly assigning students to classes that were controlled for ethnicity, gender, class size, previous achievement, socioeconomic status, and whether or not an aide was present in the class. The researchers answered the question of how influential the classroom teacher is on student achievement.

These findings would suggest that the difference in achievement gains between having a 25<sup>th</sup> percentile teacher (a not so effective teacher) and a 75<sup>th</sup> percentile teacher (an effective teacher) is over one-third of a standard deviation (0.35) in reading and almost half a standard deviation (0.48) in mathematics. Similarly, the difference in achievement gains between having a 50<sup>th</sup> percentile teacher (an average teacher) and a 90<sup>th</sup> percentile teacher (a very effective teacher) is about one-third of a standard deviation (0.33) in reading and somewhat smaller than half a standard deviation (0.46) in mathematics. (Nye et al., p. 253)

The researchers recognized the impact that effective teachers have on student performance. School districts should no longer settle for hiring average teachers since the effectiveness of the teacher may have an influence on student achievement.

Marzano (2007) argued the link between teacher effectiveness and student achievement:

Given the statistical controls employed and the consistency of their findings with other studies at different grade levels, one can conclude that the question as to



whether effective teachers make a significant difference in student achievement has been answered. They do! (p. 2)

Marzano (2007) summarized that those students with the 75<sup>th</sup> percentile teacher will outgain those students with a 25<sup>th</sup> percentile teacher by 14 percentile points in reading and 18 percentile points in math. Similarly, the students with a more effective teacher out gained the others with a 50<sup>th</sup> percentile teacher by 13 percentile points in reading and 18 percentile points in math. Given the large and diverse sample of this study, it may be true that the teacher has a direct influence on student achievement.

In the education community, much emphasis is being placed on closing the achievement gap. The term “achievement gap” refers to the differences in academic performance among ethnic groups. According to NCLB legislation, all students must be performing at a proficient level by the year 2014. Although the achievement gap seems insurmountable, current research demonstrated evidence that effective teachers can close this gap. If low-achieving students are placed with highly effective teachers for several years in a row, they are able to catch up with their more highly-achieving peers (Marzano, 2007).

Gordon, Kane, and Staiger (2006) examined teacher effectiveness as it related to closing the achievement gap. They found that students who were taught by the most effective teachers advanced approximately five additional percentile points as compared to their peers. Those taught by the least effective teachers lost approximately five percentile points. Further, Gordon et al. maintained that if all black students were assigned to four years of highly effective teaching, this would be enough to close the black-white achievement gap. Gordon et al. stated that “ultimately, the success of U. S.

public education depends upon the skills of the 3.1 million teachers managing classrooms in elementary and secondary schools around the country” (p. 5). In summary, the achievement gap has puzzled educators and researchers for years, leading one to assume that teachers are failing to reach and teach every student. Based on these research findings, it may be the case that effective teachers are the key to making a difference; therefore it may be beneficial to identify and examine the characteristics that effective teachers display.

### *The Characteristics of Effective Teachers*

As states become fully committed to providing high-quality teaching through policies and funding, federal policies ought to complement state efforts by focusing on making sure the states know what good teaching is all about and how to best measure it. (Lewis, 2004, p. 420)

What makes teachers effective? What behaviors, attitudes, and characteristics do they possess? Fred Rogers of the *Mister Rogers’ Neighborhood* Public Broadcasting System children’s show said the following:

Do you remember your favorite teachers? They were probably the ones who wanted to learn your name; who had a warm smile; who made you feel that they were glad to be there to help you learn. No matter how old or young we are, we learn best from people who care about us. That relationship grows when teachers are friendly, respectful, and interested in us as unique human beings. (Bafile, 2002, ¶ 6)

Developing a definition of teacher effectiveness can be a difficult task. When asked, some make reference to the impact on student achievement, while others focus on

performance of students in the classroom. Stronge (2007) noted that good teachers have also been called “ideal, analytical, dutiful, competent, expert, reflective, satisfying, diversity-responsive, and respected” (p. x). In research on effective teaching, Mowrer-Reynolds (2008) found that the characteristics of an effective teacher are generally divided into two categories: “Professional skills (pedagogy, subject matter knowledge, policy, cultural knowledge, multiple approaches and teaching style, etc.) and personal teacher characteristics (caring, enthusiastic, fun, humorous, friendly, supportive, respectful, etc.)” (p. 216). It would seem that recognizing and using these two categories could assist school districts in what to look for when recruiting new teachers.

*Professional skills.* The Interstate New Teacher Assessment and Support Consortium is a group dedicated to helping teachers through ongoing professional development. This group is made up of state education agencies and national education organizations. Its mission is to assure that an effective teacher will meet the needs of each student so that all students will learn and perform at high achievement levels. The group developed a list of performance-based standards that all beginning teachers should possess. These included the following listed in Table 6.

Table 6

*Performance-Based Standards for Beginning Teachers*

The teacher:	Understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
	Understands how children learn and develop, and can provide learning

<p>opportunities that support their intellectual, social and personal development.</p>
<p>Understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.</p>
<p>Understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.</p>
<p>Uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.</p>
<p>Uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.</p>
<p>Plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.</p>
<p>Understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.</p>
<p>Is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.</p>

Fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

*Note.* From *Model Standards for Beginning Teacher Licensing, Assessment, and Development: A Resource for State Dialogue* (pp. 15-33) by Interstate New Teacher Assessment and Support Consortium, 1992, Washington, DC: Council of Chief State School Officers.

In summary, performance-based standards brought a much-needed form of accountability in what is expected from teachers.

Although these components are essential, it is teachers' actual performance in the classroom that makes the difference. When examining teacher quality in the classroom, Darling-Hammond and Baratz-Snowden (2007) stated,

We now know teachers whose students demonstrate strong achievement do much more. Effective teachers use many different tools to assess how their students learn as well as what the students know. They use this information to help all students advance from where they are to where they need to be. They carefully organize activities, materials, and instruction based on students' prior knowledge and level of development so that all students can be successful. They know what conceptions students bring with them about the subject and what misconceptions are likely to cause them confusion—and they design their lessons to overcome these misinterpretations. They adapt the curriculum to different students' needs.

(p. 112)

Students who have effective teachers are highly engaged in their studies throughout the day. Teachers' expectations are clear, and models for students are

provided during instruction. Continuous feedback is available to students and they are provided with a strong classroom community that allows students to manage themselves effectively (Darling-Hammond & Baratz-Snowden, 2007).

In their research, Marzano, Pickering, and Pollock (2001) identified nine categories of instructional strategies that effective teachers use to increase student achievement. These include the following: (a) identifying similarities and differences; (b) summarizing and note taking; (c) reinforcing effort and providing recognition; (d) completing homework and practice; (e) using nonlinguistic representations; (f) providing cooperative learning experiences; (g) setting goals and providing feedback; (h) generating and testing hypotheses; and (i) using questions, cues, and advance organizers. Based on these findings, it could be the case that when these instructional strategies are present in the classroom, students achieve at a higher level.

Shellard and Protheroe (2001) researched the components of first grade literacy instruction. Fifteen schools participated in the study and the researchers identified teachers as least effective and most effective at each building. Upon examining the findings, Shellard and Protheroe found that some teaching behaviors were more readily observed in the classrooms with the most effective teachers. These characteristics included (a) high academic engagement; (b) excellent classroom management; (c) encouragement of student self-regulation; (d) a positive, reinforcing, cooperative environment; (e) explicit teaching of skills; (f) an emphasis on literature; (g) extensive reading and writing; (h) matching of accelerating demands of student competence, with a great deal of scaffolding; (i) and strong connections across the curriculum. It would seem that effective teachers share many common teaching behaviors.

Overall, four specific teacher behaviors were observed in this study. First, teachers who were the most effective tended to use more amounts of time preparing for lessons and because of this, fewer behavior problems were noted in these classrooms. Second, the classroom environments in the most effective teachers' classrooms were cooperative in nature and provided students a place where situations were managed positively. Third, students were taught at the appropriate instructional level for each of them. Skills were retaught to students as assessments guided instruction in these classrooms. Last, the most effective teachers actively and purposefully integrated reading and writing continually in all subject areas (Shellard & Protheroe, 2001). It would appear that the most effective teachers use more time preparing lessons, have fewer behavior problems, integrate reading and writing, and teach students at the appropriate level for each.

McMurrer and Protheroe (2006) identified five major dimensions of expert teachers. These dimensions encompass many different teacher behaviors that seem to be effective in the classroom and are defined in Table 7.

Table 7

*Five Major Dimensions of Expert Teachers*

1. Expert teachers can identify essential representations of their subject; they
  - Have deeper representations about teaching and learning and can quickly recognize sequences of events occurring in the classroom which in some way affect the learning and teaching of a topic;
  - Adopt a problem-solving stance to their work;

- Can anticipate, plan, and improvise as required by the situation; and
- Are better decision-makers and can identify what decisions are important and which are less important.

2. Expert teachers guide learning through classroom interactions; they

- Are proficient at creating an optimal classroom climate for learning;
- Have a multidimensionally complex perception of classroom situations and are effective scanners of classroom behavior; and
- Are more context-dependent in what they want/need to know about the ability, experience, and background of students they are teaching.

3. Expert teachers monitor learning and provide feedback; they

- Are more adept at monitoring students problems and assessing their level of understanding and progress, and they provide much more relevant, useful feedback;
- Are more adept at developing and testing hypotheses about learning difficulties or instructional strategies; and
- Are more automatic in that they seem to do more with less effort.

4. Expert teachers attend to affective attributes; they

- Have high respect; and
- Are passionate about teaching and learning.

5. Expert teachers influence student outcomes; they

- Engage students in learning and develop in their students' self-regulation, involvement in mastery learning, enhanced self-efficacy, and self-esteem



as learners;

- Provide appropriate, challenging tasks and goals for students;
- Have positive influences on students' achievement; and
- Enhance both surface and deep learning.

*Note.* From *ERS Focus on Incorporating Research-Based Teaching Strategies* (p. 7) by J. McMurrer and N. Protheroe, 2006, Alexandria, VA: Educational Research Service.

To summarize, expert teachers can identify essential representations of their subject, guide learning through classroom interactions, monitor learning and provide feedback, attend to affective attributes, and influence student outcomes.

*Personal teacher characteristics.* Mowrer-Reynolds (2008) stated “that there is a large body of literature that suggests that while subject matter knowledge is important, teachers’ characteristics matter more when student achievement is at stake” (p. 216). Mowrer-Reynolds also said that communication between teachers and students is imperative and effective teachers know each of their students individually. They know their students both formally and informally and possess a unique understanding of each student’s learning style, personality, academic and personal needs, and likes and dislikes. Stronge (2007) praised effective teachers for knowing how these characteristics may affect performance and behavior in school and caring for their students first as people, then second as students.

Thompson, Greer, and Greer (2004) found that when students were asked about their favorite teachers, it is the personal characteristics about those teachers that were

most often cited. In fact, Thompson et al. examined the reflections of university students about the characteristics of their favorite past teachers who helped them learn the most. The data collected was summarized into twelve common characteristics that students conceptualized as good teaching. Thompson et al. stated, “The twelve personal characteristics of effective teachers our students recalled over and over revolve around an encompassing theme of caring. All of the twelve characteristics in some way epitomize this essential human trait” (¶ 7). The following is a table of the twelve characteristics and a brief description of each.

Table 8

*Twelve Characteristics of Good Teaching*

Fairness	While feelings and competition between classmates can be intense, the memories of unfair teachers reported by the college students are reported in great detail, even after many years have passed since those negative school experiences.
Positive attitude	Students often recalled praise and recognition that teachers gave them as young students, and they point to the confidence and direction that often resulted in their lives.
Preparedness	It is easy for students to tell if a teacher is prepared for class. Even young children know when a teacher is organized and ready for the day’s lessons. The students pointed out that in classrooms where teachers were well prepared, behavior problems were less prevalent.
Personal touch	The students mentioned the fact that their favorite teachers connected

	with them in a personal way. Teachers who show interest in their students have interested students.
Sense of humor	Students recognize the strength reflected in teachers who are not threatened by foolish or silly mistakes that they make.
Creativity	Many of the students remembered unusual things that their teachers did in their teaching and the creative ways they motivated them.
Willingness to admit mistakes	Like everybody else, teachers make mistakes. Teachers who recognize their mistakes and apologize for them when they affect the students provide an excellent model for students.
Forgiving	The student accounts of favorite teachers reflected a willingness to forgive students for misbehavior and a habit of starting each day with a clean slate.
Respect	Favorite teachers were remembered for keeping grades on papers confidential, for speaking to students privately after misbehavior or when the teacher needed clarification, in contrast to public rebuke.
High expectations	Teachers' expectation levels affect the ways in which teachers teach and interact with students. In turn, these behaviors affect student learning. Generally, students either rise to their teachers' expectations or do not perform well when expectations are low or non-existent.

Compassion	The students related numerous stories about how the sensitivity and compassion of a favorite teacher affected them in profound and lasting ways.
Sense of belonging	One thing repeatedly mentioned by the students was the fact they felt like they belonged in the classrooms taught by their favorite teachers. They recalled that these teachers developed a sense of family in their classrooms.

*Note.* From “Highly Qualified for Successful Teaching: Characteristics Every Teacher Should Possess,” by S. Thompson, J. Greer, and B. Greer, 2004, *Essays in Education*, 3, ¶¶ 12-23.

Personal characteristics of effective teachers are not something that they learned in college. However, these characteristics are how students described their former favorite teachers. Personal characteristics of a teacher seem to have an impact on student perceptions of past teachers. These student perceptions could lead one to assume that this may also have a greater impact on student achievement.

According to Hindman, Stronge, and Tucker (2004), truly effective teachers are successful with students in their grade level or subject as long as they are trained in the correlating academic areas. They cite six key indicators associated with this success.

These indicators include

1. Caring. This can be demonstrated in many ways by teachers, but, at its core, caring means teachers understand and value students as unique individuals.
2. Fairness and respect. This trait involves treating students in a balanced and open-minded manner that is considerate of their circumstances. This quality has been called the foundation of effective teaching.
3. Attitude toward the teaching profession. This trait is undoubtedly the pivotal quality that determines a teacher's willingness to develop and grow as a professional. The more positive and enthusiastic teachers are about teaching, the more likely their students will be enthusiastic about learning.
4. Social interactions with students. This trait can take place within the classroom but also beyond. When teachers demonstrate interest in students' lives outside of the classroom, students are encouraged to perform their best in the classroom. Humor, caring, respect, and fairness all are involved in building relationships with students.
5. Promotion of enthusiasm and motivation for learning. The higher the motivation and enthusiasm by the teacher results in higher levels of student involvement and achievement. Effective teachers encourage students to work and reach their potential.
6. Reflective practice. This trait is the process by which all professionals develop expertise. It is by analysis of our actions and their effects on others that we learn from experience and move along the continuum from novice to expert teachers. (Hindman et al., p. 30-31)

In summary, effective teachers are caring, fair, respectful, display a positive attitude about teaching, promote an excitement for learning, and strive to become better teachers.

While tangible attributes, such as experience, strong academic preparation, and verbal and cognitive ability can be important to successful teaching, it is often intangible attributes that mean the most. “Savvy principals know that teachers need to possess several intangible attributes to succeed in the classroom” (Goodwin, 2008, p. 7). According to Goodwin, these intangible attributes include (a) belief that all students can learn, (b) belief in their own abilities, (c) ability to connect with students, (d) with-it-ness, and (e) emotional objectivity. These intangible attributes have a strong impact on effective teaching.

McEwan (2002) included many of these same attributes as she described the ten traits of highly effective teachers. The traits she identified were (a) mission-driven and passionate, (b) positive and real, (c) a teacher-leader, (d) with-it-ness, (e) style, (f) motivational expertise, (g) instructional effectiveness, (h) book learning, (i) strategic, and (j) reflective.

Stronge (2007) examined studies on caring research and came to the following nine conclusions detailed in Table 9.

Table 9

*Nine Conclusions on Caring Research*

- |  |
|--|
| 1. Caring teachers who know their students create relationships that enhance the learning process. |
| 2. Effective teachers consistently emphasize their love for children as one key                    |

element of their success.
3. Teachers who create a supportive and warm classroom climate tend to be more effective with all students.
4. Caring teachers are intentionally aware of student cultures outside the school.
5. Caring teachers truly believe that each student has a right to a caring and competent teacher.
6. Caring teachers appropriately respect confidentiality issues when dealing with students.
7. Caring teachers value care and learning as important qualities for educating students to their full potential.
8. Students who perceive their teachers as caring exert academic effort and social responsibility.
9. Teachers in effective schools go beyond a mere respectful relationship to a caring relationship with students.

*Note.* From *Qualities of Effective Teachers*, by J. H. Stronge, 2007, Alexandria, VA: Association for Supervision and Curriculum Development.

Although “effective teaching” is a term that has multiple layers and implications within the teaching profession, the result is a combination of several factors, including aspects of the teacher’s background, ways of interacting with others, and specific teaching practices (Stronge, 2007). Overall, Stronge said, “The effective teacher cares deeply, recognizes complexity, communicates clearly, and serves conscientiously” (p. 100). Whitaker (2004) described the following interaction with an effective teacher:

I knew a teacher who taught fifth grade for thirty-eight years. She was absolutely phenomenal—the teacher you wish your own children, grandchildren, nieces, and nephews could have. Her spark and energy never gave out. One day I asked her how she managed to stay inspired. She replied, “This is my 38<sup>th</sup> year of teaching fifth grade, but for these students, it’s the first time around.” (p. 6)

Based on these findings, having a caring teacher is the most important factor impacting student success.

*Characteristics of teachers as related to gender.* Dee (2006) looked at theories suggesting that student learning depends on the gender of the teacher.

One theory asserts that the teacher’s gender shapes communications between teacher and pupil, while another says the teacher acts as a gender-specific role model, regardless of what he or she says or does. According to this second theory, students are more engaged, behave more appropriately, and perform at a higher level when taught by one who shares their gender. (p. 70)

Dee investigated the effect of a teacher’s gender using the National Education Longitudinal Survey. The sample for this study included 21,324 eighth graders and two of each student’s teachers. The outcome measures included test scores, teacher perceptions of student performance, and measures of students’ intellectual engagement. The results were statistically significant indicating “an average positive impact on student achievement of four percent of a standard deviation whenever the teacher-student gender was the same” (Dee, p. 73).

Another research study that concentrated on the impact of student gender, teacher gender, and their interaction on academic motivation and engagement was that of Martin



and Marsh (2005). They reported results by administering an instrument called The Student Motivation and Engagement Scale to a combination of 964 eighth and tenth graders.

Counter to popular argument that boys fare better academically under male teachers (and that girls fare better under female teachers), it was found that there existed no such significant interaction between student gender and teacher gender. In fact, the only significant interaction that emerged was that girls reported a better relationship with female teachers than with male teachers, while boys reported fairly similar relationships with both female and male teachers. (Martin & Marsh, p. 330)

Both of these studies collected data from secondary students, and the findings do not necessarily apply to elementary students. It would seem that students from all grade levels would benefit academically and emotionally from a teacher who meets their individual needs regardless of gender. Based on the findings of Martin and Marsh, boys and girls may prefer discussing personal issues with a teacher of the same gender.

Carrington, et al. (2007) studied the impact of academic engagement and motivation and how it relates to students' perceptions of teacher gender. Data were collected from interviews of 300 students in schools in England. Researchers found that students felt that their teachers, regardless of gender, made them work hard and encouraged them to do well in school. It was also important to the students that teachers treated every person equally. Carrington et al. noted that "both boys and girls placed more value on teachers consistency and even-handedness than their gender" (¶ 4). While students expressed interest in speaking to a teacher of the same gender when discussing

personal issues, it did not seem to be significant when discussing an ideal teacher.

Instead, students stressed personality and teaching style rather than the teacher's gender.

The children gave a variety of reasons for valuing their teachers including:

- setting clear expectations in the classroom;
- explaining schoolwork in a clear and accessible manner;
- giving extra rewards such as stickers or points;
- giving clear oral or written feedback on their work, and
- encouraging them. (Carrington et al., ¶ 5)

In summary, individual characteristics and behavior of teachers proved to be more important to students than teacher gender.

Effective teachers, regardless of gender, may be essential to student achievement.

The characteristics that embody effective teachers were present in all areas of the research. A combination of both the professional skills and the personal characteristics of effective teachers were integral to the success of all learners. The question now is how districts can find and hire the most effective candidates.

### *Teacher Selection Processes*

Today more and more pressure is being applied to schools to meet national and state standards. The No Child Left Behind Act not only expanded the role of the federal government but also increased the pressure on schools to demonstrate student achievement. With this thrust for more accountability has come a higher qualification standard for teacher certification. The question is no longer what shall we teach, but it has become who shall teach. While many teachers are protected by teacher association contracts, educational leaders are beginning to

feel the pain of the sword of accountability. The selection of faculty becomes paramount. (Smith, 2008, p. 44)

If asked, nearly any group of school administrators would most likely say that the most critical factor in increasing student achievement and improving schools is an outstanding teaching staff. Most principals believe that there is nothing more important to the overall success of the school than selecting excellent teachers (Kersten, 2008). Stronge and Hindman (2006) wrote that “the goal for everyone involved in the hiring process should be placing a highly qualified and highly effective teacher in front of every student in all schools” (p. 3). According to Peal (2007), “Every child under a principal’s care also deserves to be in a classroom headed by a well-educated, child-loving professional who deeply cares about the whole of that child” (p. 42).

Teacher selection processes have many components including cover letters, resume, transcripts, application, portfolio, recommendations, references, and the interview. Trimble (2001) interviewed five veteran principals about hiring practices. Their comments revealed “three common elements beyond credentials and credit hours: they wanted teachers with a strong work ethic, people skills, and communication skills” (p. 46).

Peterson (2002) maintained that employers should evaluate different criteria during each phase of the interviewing process. These criteria are defined in Table 10.

Table 10

*Evidence for Different Levels of Screening*

<b>First-Level Screening</b> <b>(all applicants)</b>	<b>Second-Level Screening</b> <b>(top four to seven applicants)</b>	<b>Third-Level Screening</b> <b>(top three applicants)</b>
<ul style="list-style-type: none"> <li>• Application forms</li> <li>• Resumes</li> <li>• Cover letters</li> <li>• Recommendations</li> <li>• Job experience</li> <li>• Written statements</li> <li>• Professional-knowledge tests</li> </ul>	<ul style="list-style-type: none"> <li>• Work samples or portfolios</li> <li>• Videotapes</li> <li>• Follow-up phone calls</li> <li>• Extended resume</li> <li>• Essays</li> <li>• District-made tests</li> <li>• Interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Additional follow-up calls</li> <li>• Additional interviews</li> <li>• Performance sample</li> <li>• Personal visits to references</li> <li>• Group interviews</li> <li>• Additional essay</li> </ul>

*Note.* From *Effective Teacher Hiring: A Guide to Getting the Best* (1<sup>st</sup> ed., p. 28), by K. D. Peterson, 2002, Alexandria, VA: Association for Supervision and Curriculum Development.

When selecting processes for hiring teachers, districts have the option to choose processes that are both effective and efficient. Peterson (2002) stated, “In order to

implement school hiring procedures, we first must identify the characteristics of poor hiring. The teacher-selection practices at many schools and districts suffer from poorly conceived recruitment systems, limited applicant pools, and poor training on the part of recruiters” (p. 1).

Federal legislation prohibits employers from asking any discriminatory questions. “Interview questions must be in regard to bona fide occupational qualifications” (Clement, 2000, p. 26). Peterson (2002) suggested avoiding certain types of questions during the interview process. These include leading questions, loaded questions, and trait questions that solicit candidate opinions or preferences. Specific questions that should be avoided during an interview are located in Appendix B.

It is important that school districts have an effective selection process in place. In order to procure teachers that are highly effective, Peterson (2002) recommended that districts adopt a set of guiding principles for the teacher hiring system. Guidelines for this system are illustrated in Table 11.

Table 11

*Guiding Principles of a Teacher-Hiring System*

The teacher-hiring system should:
Conform to legal requirements of personnel selection and hiring.
Be understood and valued by district personnel, the school board, and the community.
Secure the best possible educators and meet district needs.
Be based upon the best objective evidence available.

Exhibit logical analyses of procedures and decisions.
Keep biases in check.
Involve all interested audiences.
Employ multiple and variable data sources.
Promote equality of opportunity for student learning by hiring teachers with different characteristics, experiences, and strengths.
Be based on teacher role expectations derived from national professional standards.
Meet professional standards for sound personnel evaluation, including those of propriety, utility, feasibility, and accuracy.
Support the rights of the candidates, community, and district.
Emphasize assessment of and assistance for beginning teachers.
Be subject to evaluation, validation, refinement, and updating.

*Note.* From *Effective Teacher Hiring: A Guide to Getting the Best* (1<sup>st</sup> ed., p. 8), by K. D. Peterson, 2002, Alexandria, VA: Association for Supervision and Curriculum Development.

To restate, during the hiring process, school districts should have screening levels established, recruitment training for staff, and a set of guiding principles.

Peal (2007) recommended that interview teams consider what is essentially important and design questions around those elements. Asking the right questions can enable an interview team to narrow the sometimes long list of candidates. Clement (2008a) said, “The days of asking hypothetical questions and the standard ‘tell me about

yourself’ are over. To meet the need of filling today’s classrooms with competent and qualified teachers, administrators must systematize and professionalize the teacher selection interview” (p. 47). In order to select the most highly effective teachers, much thought must be placed in the questions that candidates are asked. These questions must get to the root of the candidates’ purpose, knowledge, and philosophy. Tooms and Crowe (2004) reasoned that “thoughtful questions provide candidates ways to demonstrate their strengths, admit their weaknesses, and reveal their beliefs about curriculum, classroom discipline, school culture, collegiality, and commitment to the profession” (p. 52).

Questions to consider are listed in Table 12.

Table 12

*Possible Interview Questions*

Why did you want to become a teacher?
Are you willing to teach subjects and grade levels that require you to stretch professionally?
If you and a colleague are not getting along, what would you do to seek a more collaborative relationship?
In your view, what is the purpose of discipline in the classroom?
What activities would you like to participate in or lead that are outside of your classroom responsibilities?
What curriculum assessments or standards are you familiar with?

Why did you choose to apply for this position?
What was the most creative lesson you ever taught?
What was the most inspiring thing you have done as an educator?
What do you think will impede your ability to contribute to our community?
What sort of assessments do you use in the classroom?
What is your favorite lesson to teach?
If you are hired, in what area do you think you would require the most support?

*Note.* From “Hiring Good Teachers: The Interview Process,” by A. Tooms and A. Crowe, 2004, *Principal*, pp. 50-53.

Not only is asking the right question imperative, but so is seeking the right answer. Ramey (2006) stated that

Asking the right questions can distinguish good from great candidates.

Interviewers should look for top-quality answers that contain three elements: the candidate answers the question that is asked, the candidate gives examples of the right answer in real life, and the candidate provides evidence that he or she has done this or can do it in the school. (p. 35)

When interviewing, Ramey sought the following in the candidate’s answers: (a) a brief explanation of the importance of clear expectations, (b) focus on engaging students from bell to bell, (c) preparation and organization, (d) activities that demonstrate an understanding of the latest brain research, (e) authentic assessment, (f) sense of being



proactive, and (g) an appreciation for the chain of command. Making the decision to recommend a candidate for a teaching position is one of the most important responsibilities of a school district. Therefore, it seems that asking right questions could be a crucial component to really discovering the best candidate.

Some districts utilize specific interviewing procedures in their teacher selection process. Behavior-based interviewing relies on situational questions requiring candidates to use their past experiences to describe how they would deal with unique experiences in the future. According to Deems (1994), “The single best predictor of a candidate’s future job performance is his or her past job behavior” (p. 9). Clement (2008b) suggested that the Interstate New Teacher Assessment and Support Consortium standards serve as a starting point for discussion about what to include in interview questions.

There are two types of behavior-based interviewing: PAR (problem, action, and result) and STAR (situation, task, action, result) (Clement, 2002). Categories for these types of questions include (a) curriculum, (b) planning, (c) classroom management & discipline, (d) assessment, (e) meeting individual students’ needs, (f) communication with parents and others, and (g) professional growth (Clement, 2002). Clement, Kistner, and Moran (2005) stated that one strategy in PAR includes “asking candidates to describe problems for which they were responsible, actions they took to address the problems, and the results of their actions” (p. 59). In STAR, Clement et al., stated “Interviewers who use this technique ask candidates about past experiences and expect them to explain what they did in that situation and the results of their actions” (p. 59).

Hiring a candidate with the right disposition can be invaluable (Wasicsko, 2004). This is a personal characteristic and often is difficult to assess in an interview.

Wasicsko's (2004) research stated that assessing dispositions toward self, dispositions toward students, and dispositions toward teaching "can be used to dramatically increase the odds of identifying potentially successful teachers and rejecting the negative few" (p. 40). Wasicsko (2006) suggested that to systematically and effectively infer a candidate's dispositions, several guidelines should be kept in mind:

1. None of the questions has an absolute right or wrong answer. The best insights are obtained by reflectively listening to the applicants' answers and then inferring their attitudes.
2. Treat the answers as you would any other self-reported information, knowing that applicants will always attempt to present themselves in a positive light.
3. Most candidates rehearse for an interview. Learning about peoples' dispositions requires getting beyond the rehearsed remarks and engaging in conversation on topics that interest them.
4. Start the interview with usual questions—"Why are you a good fit for this position at this time?" or "What is it about this position that interests you?" – before moving to questions such as the ones above. (p. 52)

Peterson (2002) stated that some districts use a standard battery of questions, either in interviews or on a survey, that are scored to yield different applicant answers according to different categories that will often suggest different candidate personality types. Stronge and Hindman (2006) said, "Common issues that can be considered for structured interviews in education include the teacher's relationship with students, colleagues, and parents; knowledge of instructional techniques and their applications; and general background information" (pp. 25-26). It would appear from this research that

asking a candidate to explain past experiences is a good way to find out the quality of his/her teaching performance.

The three most commonly used structured interviews include the Teacher Perceiver Interview, the Haberman Interview, and the Ventures for Excellence Interview. These interviews are used to determine teacher behavior using structured questions without school districts actually observing teachers in classrooms. Structured interviews contain research-based questions, which are asked of all applicants.

The Teacher Perceiver Interview was developed by Selective Research International/Gallup in the 1960's to identify specific strengths of effective teachers. The Teacher Perceiver Interview is a structured interview, which looks for themes that parallel the habits and behavioral patterns found in the most successful teachers. These behaviors included (a) mission, (b) investment, (c) focus, (d) empathy, (e) rapport drive, (f) listening, (g) objectivity, (h) individual perception, (i) input drive, (j) activation, (k) innovation, and (l) gestalt (Faurer, 2004).

The Haberman Star Teacher Interview was created in 1994 by Dr. Martin Haberman of the Haberman Educational Foundation to identify effective teachers and principals, especially those who serve students in at risk and high poverty areas. Haberman developed key dispositions that teachers in urban settings need to be successful: (a) passion for teaching and leading, (b) supporting a positive learning environment through creative problem-solving and persistence, (c) working collaboratively to create a strong, positive school culture, and (d) focus on parents and community as critical partners in the educational process (Haberman Educational Foundation, 2008).

The Ventures for Excellence Interview was developed by Dr. Vic Cottrell in the 1970's. Dr. Cottrell identified specific qualities that help identify effective teachers: (a) positive, (b) investing, (c) committed, (d) communicative, (e) personable, (f) compassionate, (g) motivating, (h) objective, (i) a generator of alternatives, (j) a designer of lessons, and (k) an applicator of learning (Cottrell, 2004).

School districts that use one of these three instruments may rely on the research validity of the structured interview itself. The questions are designed to determine the behavior and performance of the teacher without actually observing him/her teach and interact with students in a classroom setting.

Some districts use rating scales to establish a level playing field among candidates. Using a common scale with behavioral examples can enhance consistency. Rating scales allow for a more professional conversation when evaluating candidates (Scricca, Coppola, & Connors, 2004).

A sample rating scale for teacher applicants could include academic background, knowledge of subject field, teaching of subject field, teaching methodology, knowledge of education, professional commitment, communication skills, human relationships, the desire, passion for teaching, warmth, caring attitude and initiative, enthusiasm for learning. (Scricca et al., p. 51)

Stronge and Hindman (2006) stated, "The use of scoring guides grounds interviewers so that they use the same criteria to evaluate responses" (p. 28). Clement (2008a) stated, "The interviewer needs to decide in advance what answers are sought. A rubric or scale can then be developed as an assessment instrument for each interview question" (pp. 46-47). It is recommended to rate each answer as unacceptable, acceptable,

or target. This rating can also be used to sort the candidate's paperwork before the actual interview takes place (Clement, 2008b). To summarize, structured interviews are used to determine a teacher's classroom behavior without actually observing him/her in a classroom.

### *Summary*

Chapter two included a review of literature on (a) the impact of quality teaching on student achievement, (b) the characteristics of effective teachers (c) teacher characteristics as related to gender, and (d) the techniques and strategies that districts have adopted to select these quality candidates.

Research findings suggested that many factors contribute to student achievement including class size, curriculum, and funding. However, much of the research concluded that the teacher is one, and perhaps the most important, factor affecting student achievement. The gains that students made when placed with an effective teacher were impressive in many studies, and inversely, the effects of those students placed with an ineffective teacher were devastating.

The section on characteristics of effective teachers was divided into two parts, professional skills and personal teacher characteristics. The research has shown that teachers whose students demonstrate strong achievement use certain strategies in their classrooms. Some of these include (a) teaching at appropriate levels, (b) maintaining high student engagement, (c) setting objectives, (d) giving feedback, (e) reinforcing effort, and (f) providing recognition. When students were asked about their favorite teachers, they most often cited personal characteristics. Some of these characteristics in the research

studied included (a) fairness, (b) positive attitude, (c) sense of humor, (d) caring, and (e) respect.

Much thought and preparation is required when selecting new teachers. Interview procedures that are research-based can add to the overall validity of the selection process, in turn providing school districts a better chance of placing effective teachers in every classroom.

In chapter three, the researcher will discuss methodology design. Results will be reported in chapter four. In chapter five, the researchers will provide discussion, interpretations, conclusions, and recommendations.

### Chapter Three - Methodology

On January 8, 2002, NCLB was passed by Congress and signed into law by President George W. Bush. This law reauthorized the Elementary and Secondary Education Act, which was a federal law with significant impact on public education. NCLB was built on four premises: (a) accountability for results, (b) use of scientifically-based research, (c) expanded parental options, and (d) high quality teaching staff.

Selecting and maintaining a high quality teaching staff is a priority for districts around the country. As Darling-Hammond (2005) stated, “In the U.S. , a growing consensus about the importance of teachers has led to reforms of teacher education, the development of professional teaching standards, and the No Child Left Behind requirement that schools employ only highly qualified teachers” (p. 237).

The purpose of this study was to determine the efficiency and effectiveness of a unique and specific teacher selection process, which included three Ventures for Excellence screening tools and the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The study may assist the district by determining the predictive value and quality of these selection tools. This investigation focused on the correlation between three screening instruments used for teacher selection in the Fort Zumwalt School District (seven written application questions, StyleProfile, and the 22-question interview) and teaching performance in the candidates’ first year in the Fort Zumwalt School District, as evidenced by the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score.

This quantitative study addressed the following research question and sub-question,

Research question—Are the teacher selection tools currently being utilized in the Fort Zumwalt School District able to predict first year success?

Sub-question—Is there a difference in prediction related to gender, experience, and elementary and secondary levels?

### *Research Methodology*

A quantitative correlational methodology was selected for this study. “A major purpose of correlational research is to clarify our understanding of important phenomena through the identification of relationships among variables” (Fraenkel & Wallen, 1996, p. 310).

When a correlation is found to exist between two variables, it means that scores within a certain range on one variable are associated with scores within a certain range on the other variable. A positive correlation means high scores on one variable tend to be associated with high scores on the other variable, while low scores on one are associated with low scores on the other. A negative correlation, on the other hand, means high scores on one variable are associated with low scores on the other variable, and low scores on one are associated with high scores on the other. (Fraenkel & Wallen, pp. 309-310)

Another purpose of correlational research is that of prediction. The statistical method used for this is regression. This method is used to describe the relationship between variables, positive or negative. Multiple regression is used when two or more independent variables are used to predict a single dependent variable (Bluman, 2008). If a significant



relationship exists, it becomes possible to predict the score on the dependent variable (Fraenkel & Wallen, 1996).

The methods of analyses were selected based on the data gathered. In the first analysis, a correlation study was used to determine if associations existed among the four variables. In addition, the regression method was used to determine if any of the three independent variables (written application questions, StyleProfile, and the 22-question interview) could predict future performance. The correlation and regression models were the best fit for this quantitative study because the goal was to (a) identify any associations or relationships that existed between the variables and (b) determine the predictive value and quality of the selection tools.

### *Subjects*

The participants in the first part of this study included the candidates who applied and were selected for a teaching position in the Fort Zumwalt School District to begin in August 2007 for the 2007-2008 school year. A total of 107 candidates were selected. Furthermore, these candidates must have completed all of the following: (a) the written application questions, (b) the Style Profile online tool, and (c) the 22-question interview. Twenty of these candidates were not included in the study because they did not complete all of the components of the selection process. The group of 87 candidates that were included in the study was comprised of 35 elementary teachers and 52 secondary teachers. The data were tracked by Fort Zumwalt's Deputy Superintendent for Personnel Services. Individual teacher names were not identified in this research project. Each participant was assigned a number as data were collected from application and interview

documents. These numbers were not attached to any names at any time. There was no identification of participants in this study.

In the second part of this study, a Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District was distributed to the lead building principals in the Fort Zumwalt School District in written form on Wednesday, May 21, 2008 (one school year after the 87 new teachers started teaching in the district). This included 15 elementary principals, four middle school principals, and four high school principals. One hundred seven performance rating scales were sent to administrators and one hundred percent were returned. The Deputy Superintendent was responsible for administering the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District, collecting the data, and recording the data to protect the identity of the candidates in the study.

### *District Demographics*

The Fort Zumwalt School District is located in St. Charles County, Missouri, and its history began in 1869, when the first school was built in O'Fallon, Missouri. The district attendance areas are located in O'Fallon and St. Peters, Missouri. They encompass 126 square miles in the county with approximately 85,000 residents. The district is the largest in St. Charles County and the sixth largest district in the state.

During the years of this study, enrollment averaged 18,700 students. The district consisted of 15 elementary schools, four middle schools, four comprehensive high schools, and one alternative high school. Over the last 30 years, the St. Charles County area has faced rapid growth, thus impacting the number of schools needed in the Fort Zumwalt School District. This rapid growth has been a prominent aspect of Fort

Zumwalt's history. Throughout the 1990s, the district added new schools and building additions to keep up with student enrollment. With the addition of these facilities, the district experienced more available teaching positions and applicants each year.

In order to select the most highly qualified teachers, the district began using the Ventures for Excellence 22-question interview in 1995. This enabled the district to use the same selection tools with every applicant, screening for the most effective teachers. During the 2007-2008 school year, over 2,000 applicants completed a written application (seven questions). After those applications were initially screened, approximately 800 were chosen for a 22-question interview. Of those applicants, approximately 600 completed the StyleProfile. Finally, in the 2007-2008 school year, 107 applicants (see Appendix C) were chosen to fill the needed teaching positions. The subjects involved in this study included those first year teachers who completed all the components for the study.

### *Screening Instruments*

This research project relied on four primary rating-type instruments. Of the four instruments, three were developed by Ventures for Excellence and the fourth instrument was created by the researchers for the purpose of this study. The first of the four instruments was the written questions on the district application (see Appendix D). The Fort Zumwalt School District uses these seven questions as an initial screening tool. These are scored by using a scoring guide. A score of zero through seven is given to each applicant, with seven being the highest.

The second of the four instruments used was the StyleProfile tool. Applicants answer a set of 32 questions online. The resulting profile report is then made available to

the district as part of the application data. The data are presented in a bar graph with applicants being rated on a four-tier system, with tier one being the highest and tier four being the lowest. However, for the purposes of this study, the ratings were recoded to the inverse, with tier four being the highest and tier one being the lowest, to create a scale that could be more clearly understood and interpreted.

The third of the four instruments was the 22-question screening interview. This interview consists of questions relating to three themes. These themes are purpose, human interaction skills, and knowledge of teaching and learning. This screening interview is given by trained district administrators with each question being scored. Applicants score between 0 and 22 on this instrument. The district uses this initial interview, along with the rest of the application data, to determine if the applicant will be called in for a second interview, the face-to-face building specific principal interview.

The fourth instrument used was the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District and was developed by the researchers. This rating scale was created to measure the subjects' teaching performance after their first year in Fort Zumwalt (see Appendix E). This rating scale was designed based on the three components in the Ventures for Excellence interview: purpose, human interaction/relationships, and teaching and learning. The rating scale asks principals to rate their first year teachers based on the teacher's knowledge in the three areas: 1) Purpose—How well did the teacher demonstrate a clear sense of purpose by providing excellent learning and growth opportunities to all students? 2) Human interaction/relationships—How well did the teacher manifest excellent human relationship skills? 3) Teaching and learning—How insightful was the teacher about what

motivates others and how perceptive was he/she about using approaches which brought out the best in students?

The Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District was reviewed and then approved by the Deputy Superintendent of Personnel Services for the Fort Zumwalt School District. Before given to the building principals, the rating scale was piloted among a small group for quality and ease of use. In May 2008, this rating scale was distributed to 24 lead building principals in the district. The principals rated each teacher's purpose, human interaction/relationships, teaching and learning, and performance as a whole in his or her first year in the classroom. Once completed, these rating scales were returned to the Deputy Superintendent's office and tabulated to protect anonymity.

#### *Validity and Reliability*

Validity means the degree to which correct inferences can be based on results from instruments; validity is dependent not only on the instrument itself but also the instrumentation process (Fraenkel & Wallen, 1996). Three of the four instruments used in this study were developed by educational researchers at Ventures for Excellence, led by Dr. Vic Cottrell, in Omaha, Nebraska. These instruments have been tested for validity and reliability by the Ventures for Excellence Corporation using national school district data. The research consisted of a random sampling of both male and female teachers from five different states. The districts, from which these data were gathered, varied in population, socioeconomic status, and ethnic diversity (Cottrell, 2004).

The fourth instrument, the Rating Scale for Teachers in Their First Year in Fort Zumwalt, was created by the researchers based on the information from the Ventures for

Excellence Corporation. Face validity was obtained for this instrument by having the Deputy Superintendent for Personnel Services review the rating scale. In addition, a group of administrators previewed and tested the instrument for accuracy and ease of use.

### *Procedures*

A written letter of consent from the district Superintendent (see Appendix F) was obtained to conduct educational research on the current Fort Zumwalt District Teacher Selection Tools. Before conducting the research, an Institutional Review Board application was filed and then approved on April 21, 2008 by Lindenwood University (see Appendix G, p. 113). The research involved collecting data from personnel files on teachers hired for the 2007-2008 school year. The Deputy Superintendent collected the following data from these files in order to keep the name of each participant confidential: gender, teaching level (elementary/secondary), level of teaching experience, score on the seven written application questions, score on the thirty-two question online StyleProfile, and score on the 22-question interview.

The Deputy Superintendent assigned a number to each participant along with his/her application and interview documents. These numbers were not attached to any names during this study and the participants were not identified at anytime. The numbers were used as a code for the Deputy Superintendent to refer back to the personnel files, if needed.

The Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District was developed by the researchers to gain additional data regarding teacher performance during the participants' first year in the district. Prior to administering the rating scale to lead building principals, a pilot of the study instrument

was conducted with several elementary principals. Survey participants included fifteen elementary principals, four middle school principals, and four high school principals in the Fort Zumwalt School District. Participants received the rating scale on Wednesday, May 21, 2008, at a district level administrative meeting. The responses from the rating scale were gathered and recorded by the Deputy Superintendent.

### *Summary*

In this quantitative study, the researchers investigated the relationship among three Ventures for Excellence screening tools (the seven written application questions, StyleProfile online screening tool, and the 22-question screening interview) and first year teaching performance as measured by the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. Data were gathered from the personnel department in the Fort Zumwalt School District. The Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District was distributed to 23 lead building principals in the same school district to gather data on first year teaching performance.

Data were treated with a multiple regression analysis between each independent variable (seven written application questions, StyleProfile, and 22-question screening interview) and the dependent variable (rating scale score). The goal was to determine the predictive quality of the independent variables. Three of the four instruments used in this study were developed and tested for validity by the Ventures for Excellence Corporation. The fourth instrument, the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District, was created by the researchers. Face validity was obtained by having the Deputy Superintendent and a group of administrators preview the

instrument for ease of use and accuracy. The research findings will be presented in chapter four.



## Chapter Four - Results

Selecting highly effective teachers is of the utmost importance when it comes to student achievement. To help illustrate this point, Darling-Hammond and Berry (2006) tell the story of Jenny Aguerre, an eighth grade student in central Los Angeles:

Although she works hard, Jenny has a reading disability and struggles in most subjects that require processing of text. In third grade, Jenny had a good year. Her teacher, a four-year veteran, understood how to use research-based strategies to help Jenny manage her learning disability. Since then, however, Jenny has had novice teachers each year, many of them on emergency teaching permits with no training in teaching reading or supporting students with disabilities. Jenny increasingly dislikes school and her grades have slipped. She tells her friends that she is thinking of dropping out. Jenny will probably not succeed unless the schools she attends provide her with skillful teachers who know both their content and how to teach it. Studies show that well-prepared and well-supported teachers are important for all students. (pp. 14-15)

The purpose of this study was to determine which specific screening instruments proved to be more predictive of successful teaching performance, therefore allowing the district to use this information to narrow down the number of candidates for the last step in the hiring process, which takes the most time and resources, the building specific principal interview. The three Ventures for Excellence screening tools were (a) written application questions, (b) StyleProfile online tool, and (c) the 22-question screening interview. The researcher designed tool was the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District administered one year after hire.

The following research question and sub-question were investigated.

Research Question—Are the teacher selection tools currently being utilized in the Fort Zumwalt School District able to predict first year success?

Sub-question—Is there a difference in prediction related to gender, experience, and elementary and secondary levels?

Data were collected from two sample groups, including the teachers selected for positions in the district for the 2007-2008 school year and the lead principals in the district. The data collected were analyzed in two ways. A correlational study was conducted to determine if any relationships existed among variables, as well a multiple linear regression analysis to determine if one or more of the selection tools provided a prediction for first year teaching performance in Fort Zumwalt.

The analyses that follow were performed using the Statistical Package for the Social Sciences statistics software program. This is a comprehensive computer software tool that specializes in data analysis.

For the correlational study, seven variables were compared. The codes for these variables are found in Table 13.

Table 13

*Coding of the Variables*

	Range
Level	1=Elementary, 2=Secondary
Gender	1=Female, 2=Male
Experience	1=Experience, 2=No Experience
Written Application	0-7
StyleProfile	1-4
22-Question Interview	0-22
Performance Rating Scale	3-15

Each variable in the study was assigned a number. The first three variables (level, gender, and experience) were assigned either a number 1 or number 2, depending on the applicant. For example, for the variable of level, the number 1 designated an elementary candidate and the number 2 designated a secondary candidate. All of the remaining variables were assigned a coding number that corresponded with the score on that particular tool. The range of possible scores is listed in Table 13 for each of these variables.

*Results for All Teachers*

There were 87 teachers in the study. Of these 87 teachers, 75% were female (65) and 25% were male (22). Secondary teachers represented 60% (52) of the

total population, while elementary teachers represented 40% (35). Finally, 68% (59) of the teachers had no experience, while 32% (28) of the teachers had previous experience.

The remaining descriptive statistics for the teachers involved in the study are detailed in Table 14.

Table 14

*Descriptive Statistics (All)*

	Mean	Standard Deviation	N
Written Application	2.39	1.341	87
StyleProfile	2.72	1.227	87
22-Question Interview	9.78	2.585	87
Performance Rating Scale	11.87	2.112	87

The correlation data for the entire teacher population and the variables are detailed in Table 15. In Table 15, one asterisk (\*) represents significance at the 0.05 level, which means there is less than a 5% chance of the data being incorrect. Two asterisks (\*\*) represent significance at the 0.01 level, which is stronger, representing less than 1% chance of the data being incorrect. In Table 15 'r' indicates the coefficient of correlation, or Pearson's correlation.

Table 15

*Correlations (All)*

		Level	Gender	Experience	Written Application	StyleProfile	22-Question Interview	Performance Rating Scale
Level	r	1.00	0.369**	-0.214*	-0.164	-0.243*	-0.070	-0.273*
	Sig. (2-tailed)		0.000	0.047	0.129	0.023	0.521	0.011
Gender	r		1.00	-0.278**	-0.012	-0.237*	0.064	-0.154
	Sig. (2-tailed)			0.009	0.913	0.027	0.558	0.155
Experience	r			1.00	-0.001	0.127	0.018	-0.088
	Sig. (2-tailed)				0.992	0.243	0.868	0.416
Written Application	r				1.00	0.179	0.179	0.170

	Sig. (2-tailed)					0.096	0.097	0.116
StyleProfile	r					1.00	0.358**	0.184
	Sig. (2-tailed)						0.001	0.088
22-Question Interview	r						1.00	0.244*
	Sig. (2-tailed)							0.023
Performance Rating Scale	r							1.00
	Sig. (2-tailed)							

Note. (\*) indicates  $p < 0.05$ ; (\*\*) indicates  $p < 0.01$

Some significant correlations reported are not germane; hence, they have no relevance to the study. These include the Pearson correlation coefficients ( $r$ ) of 0.369\*\* comparing level to gender, 0.278\*\* comparing gender and experience, and -0.214\* comparing level to experience.

The most important finding reported in Table 15 is the correlation between StyleProfile scores and 22-question interview scores (0.358\*\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 99% confidence, the researcher can state that 12% ( $r^2$ ) of the variation in scores on the 22-question interview can be explained by or related to the Style Profile score. As StyleProfile scores increased, 22-question interview scores also increased. The relationship between 22-question interview scores and Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score was also significant (0.244\*). With 95% confidence, the researcher can state that 5.9% of the variation in the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District can be explained by or related to the 22-question interview. This was also a positive relationship. As 22-question interview scores increased, Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District scores also increased.

Three inverse associations were reported as significant. First, there was an inverse relationship between StyleProfile scores and level (-0.243\*). As StyleProfile scores increased, the level decreased. This means that elementary teachers tended to score higher on the StyleProfile. There was also an inverse relationship reported between level and first year performance in Fort Zumwalt (-0.273\*). Elementary teachers were rated

higher on first year performance in Fort Zumwalt than secondary teachers. The final inverse relationship reported as significant was between StyleProfile and gender (-0.237\*). Females tended to score higher on the StyleProfile.

Three independent variables (written application score, StyleProfile, and the 22-question interview) were entered into the multiple regression equation against the dependent variable, the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The model was run using multiple linear regression, which measured the strongest predictor by removing the weaker independent variables one at a time in each model. Three models were run with the third and final model being illustrated in Table 16. The regression model in totality can be found in Appendix H.



Table 16

*Regression (All)*

Model Summary					
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	
3	0.244	0.06	0.048	2.06	

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Significance
3 Regression	22.845	1	22.845	5.383	0.023
Residual	360.764	85	4.244		
Total	383.609	86			

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
3	(Constant)	9.924	0.869		11.419	.000
	22-Question Interview	0.199	0.086	0.244	2.32	0.023

Once all of the data were filtered in the regression analyses, one model remained, which was the 22-question interview. The results of the analysis showed that the 22-question interview was the strongest predictor of first year performance and showed significance at the  $p < 0.05$  level (0.023) among all of the teachers who were in their first year of teaching in Fort Zumwalt during the 2007-2008 school year.

*Results for Female Teachers*

This study included 65 female teachers. The descriptive statistics for these teachers are listed in Table 17.

Table 17

*Descriptive Statistics (Female)*

	Mean	Standard Deviation	N
Written Application	2.4	1.39	65
StyleProfile	2.89	1.187	65
22-Question Interview	9.88	2.522	65
Performance Rating Scale	12.06	2.228	65

The correlation data for these female teachers is detailed in Table 18.

Table 18

*Correlation (Female)*

		Level	Experience	Written Application	StyleProfile	22-Question Interview	Performance Rating Scale
Level	r	1.00	-0.152	-0.129	-0.250*	-0.038	-0.250*
	Sig. (2-tailed)		0.228	0.304	0.045	0.766	0.045
Experience	r		1.00	-0.119	0.160	0.072	-0.194
	Sig. (2-tailed)			0.345	0.203	0.570	0.121
Written Application	r			1.00	0.216	0.130	0.083
	Sig. (2-tailed)				0.084	0.301	0.512

StyleProfile	r				1.00	0.371**	0.132
	Sig. (2-tailed)					0.002	0.293
22-Question Interview	r					1.00	0.182
	Sig. (2-tailed)						0.147
Performance Rating Scale	r						1.00
	Sig. (2-tailed)						

Note. (\*) indicates  $p < 0.05$ ; (\*\*) indicates  $p < 0.01$

There was one significant positive relationship reported at the  $p < 0.01$  level, between StyleProfile and the 22-question interview (0.371\*\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 99% confidence, the researcher can state that 13% ( $r^2$ ) of the variation in scores on the 22-question interview can be explained by or related to the Style Profile score. As StyleProfile scores increased, so did the scores on the 22-question interview.

Two inverse associations were reported as significant. There was an inverse relationship between level and StyleProfile (-0.250\*) and level and first year performance in Fort Zumwalt (-0.250\*). As the scores on the StyleProfile and first year performance in Fort Zumwalt increased, the level decreased, meaning female elementary teachers were more likely to score high on the StyleProfile and first year performance than female secondary teachers.

The multiple regression analyses on the data for female teachers were run a total of three times using multiple linear regression. The third and final model is located in Table 19. The regression model in totality can be found in Appendix I.

Table 19

*Regression (Female)*

Model Summary					
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	
3	0.182	0.033	0.18	2.208	

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Significance
3 Regression	10.538	1	10.538	2.161	0.147
Residual	302.216	63	4.876		
Total	317.754	64			

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
3	(Constant)	10.472	1.115		9.390	0.000
	22-Question Interview	0.161	0.109	0.182	1.470	0.147

Although one model, the 22-question interview score, remained after the data were filtered, it did not show significance at the  $p < 0.01$  level or the  $p < 0.05$  level.

*Results for Male Teachers*

Twenty-two subjects in this study were male. The descriptive statistics for these male teachers are listed in Table 20.

Table 20

*Descriptive Statistics (Male)*

	Mean	Standard Deviation	N
Written Application	2.36	1.217	22
StyleProfile	2.23	1.232	22
22-Question Interview	9.5	2.807	22
Performance Rating Scale	11.32	1.644	22

The correlation data for these male teachers is detailed in Table 21.

Table 21

*Correlation (Male)*

		Gender	Experience	Written Application	StyleProfile	22-Question Interview	Performance Rating Scale
Gender	r	1.00	-0.029	-0.435*	0.191	-0.115	-0.134
	Sig. (2-tailed)		0.899	0.043	0.394	0.609	0.552
Experience	r		1.00	0.335	-0.172	-0.166	0.046
	Sig. (2-tailed)			0.127	0.443	0.459	0.837
Written Application	r			1.00	0.069	0.335	0.582**
	Sig. (2-tailed)				0.759	0.128	0.004
StyleProfile	r				1.00	0.310	0.245



	Sig. (2-tailed)					0.161	0.272
22-Question Interview	r					1.00	0.459**
	Sig. (2-tailed)						0.032
Performance Rating Scale	r						1.00
	Sig. (2-tailed)						

Note. (\*) indicates  $p < 0.05$ ; (\*\*) indicates  $p < 0.01$

The strongest association reported was between the written application scores and the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District (0.582\*\*). Using the square of the Pearson correlation coefficient along with the significance level, the following can be stated. With 99% confidence, the researcher can state that 33% ( $r^2$ ) of the variation in scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District can be explained by or related to the written application scores. As the scores on the written application increased, so did first year performance in Fort Zumwalt for male teachers. There was also a positive association between the score on the 22-question interview score and Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District (0.459\*). With 95% confidence, the researcher can state that 21% of the variation on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District can be explained by or related to the 22-question interview. As the 22-question interview scores increased, so did first year performance.

There was one significant inverse relationship reported, between level and written application scores (-0.435\*). As written application scores increased, the level decreased. Hence, elementary male teachers were more likely to score high on the written application questions than secondary male teachers.

The multiple regression analyses on the data for male teachers were run a total of three times using multiple linear regression. The third and final model is located in Table 22. The regression model in totality can be found in Appendix J.

Table 22

*Regression (Male)*

Model Summary						
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate		
3	0.582c	0.339	0.306	1.37		

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Significance
3					
Regression	19.235	1	19.235	10.248	0.004
Residual	37.538	20	1.877		
Total	56.773	21			

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
3	(Constant)	9.459	0.65		14.551	0.000
	Written Application	0.787	0.246	0.582	3.201	0.004

Once all of the data were filtered in the regression analyses, one model remained, which was the written application score. The results of the analysis showed that the written application score was the strongest predictor of first year performance in Fort Zumwalt and showed strong significance at the  $p < 0.01$  level (0.004) among the male teachers.

#### *Results for Teachers with and without Experience*

There were 28 teachers in the study with previous teaching experience. There was one positive correlation for this subject group, between written application scores and Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District (0.384\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 95% confidence, the researcher can state that 14% of the variation in scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District can be explained by or related to the written application scores. As application scores increased, so did first year performance in Fort Zumwalt for this group.

There were two inverse relationships noted. There was an inverse relationship between level and first year performance in Fort Zumwalt (-0.463\*). As first year performance in Fort Zumwalt increased, the level decreased, meaning that elementary subjects with experience were rated higher on first year performance. The second inverse relationship was between gender and first year performance in Fort Zumwalt (-0.395\*). Females with experience were rated higher on first year performance in Fort Zumwalt than females without experience. Once all of the data were filtered in the regression analyses, one model remained, which was the written application score. The results of the

analysis showed that the application score was the strongest predictor of first year performance in Fort Zumwalt for those subjects with experience. It showed significance at the  $p < 0.05$  level (0.044).

There were 59 teachers in the study without previous teaching experience. One significant correlation was reported that was germane. This was between gender and level at 0.339\*\*.

There were two significant associations at the 0.01 level. These included the relationship between StyleProfile and the 22-question interview score (0.407\*\*) and the relationship between StyleProfile and first year performance in Fort Zumwalt (0.349\*\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 99% confidence, the researcher can state that 16% ( $r^2$ ) of the variation in scores on 22-question interview can be explained by or related to the StyleProfile score. Also, with 99% confidence, the researcher can state that 12% ( $r^2$ ) of the variation in scores in the first year performance in Fort Zumwalt can be explained by or related to the StyleProfile score. As the score on the StyleProfile increased, so did scores on the 22-question interview and first year performance in Fort Zumwalt.

There was one significant correlation at the 0.05 level, between the written application and the 22-question interview score (0.270\*). With 95% confidence, the researcher can state that 7% of the variation in the 22-question interview score can be explained by or related to the written application score. As the score on the written application increased, so did the score on the 22-question interview.

Two inverse relationships were reported as significant. There was an inverse relationship between level and StyleProfile (-0.380\*\*). Elementary teachers with no

experience tended to score higher on StyleProfile than secondary teachers with no experience. There was also an inverse relationship reported between gender and StyleProfile. Female teachers with no experience tended to score higher on StyleProfile than male teachers with no experience.

Once all of the data were filtered in the regression analyses, one model remained, which was the StyleProfile. The results of the analysis showed that StyleProfile was the strongest predictor of first year performance in Fort Zumwalt and showed strong significance at the  $p < 0.01$  level (0.007) among the teachers with no teaching experience.

#### *Results for Elementary and Secondary Teachers*

There were 35 teachers in the study that were elementary. There was one positive association reported between experience and StyleProfile (0.371\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 95% confidence, the researcher can state that 13% of the variation in StyleProfile score can be explained by or related to the experience of the teachers in the study. This was significant at the  $p < 0.05$  level. As scores on the StyleProfile increased, experience also increased. This means that elementary teachers with experience tended to score higher on the StyleProfile.

Two significant inverse associations were also reported, between gender and StyleProfile (-0.362\*) and between experience and first year performance in Fort Zumwalt (-0.344\*). As scores on the StyleProfile increased, the coding variable for gender decreased. This means that female elementary teachers tended to score higher on the StyleProfile than male elementary teachers. As scores on first year performance in Fort Zumwalt increased, experience decreased. This means that elementary teachers

without prior teaching experience were more likely to be rated higher on first year performance than elementary teachers with prior teaching experience. After the multiple regression analyses, one model, the written application score, remained after the data were filtered, but it did not show significance at the  $p < 0.01$  level or the  $p < 0.05$  level.

There were 52 secondary teachers in the study. One significant correlation was reported at the  $p < 0.01$  level, between the scores on StyleProfile and the scores on the 22-question interview (0.397\*\*). Using the square of the Pearson correlation coefficient, along with the significance level, the following can be stated. With 99% confidence, the researcher can state that 15% ( $r^2$ ) of the variation in scores on the 22-question interview can be explained by or related to the StyleProfile score. As scores on the StyleProfile increased, so did the scores on the 22-question interview for secondary teachers. No other significant relationships were found. After the multiple regression analyses, one model, the 22-question interview, remained after the data were filtered, but it did not show significance at the  $p < 0.01$  level or the  $p < 0.05$  level.

### *Summary*

Chapter four included a disaggregation of data from four instruments used in this quantitative study. Statistical analyses were summarized using data from these four instruments through correlation and multiple regression methods. The data were presented according to the different subject groups analyzed.

In chapter five, the results of the study will be reviewed, findings based on the research questions will be provided, and conclusions and recommendations for further research will be presented.

## Chapter Five – Discussion, Summary, and Conclusions

The importance of selecting highly effective teachers and the impact it has on student achievement is clear. Researchers, such as Marzano (2003) and Stronge and Hindman (2003), have suggested that even one year with an ineffective teacher has a negative effect on student learning.

At the time of this study, the Fort Zumwalt School District used Ventures for Excellence screening tools: the use of the written application questions, the StyleProfile online tool, and the 22-question interview. This investigation used data from these three screening tools and data regarding first year teaching performance as measured by the researcher created Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District to determine the effectiveness of the selection process in Fort Zumwalt. As the district faced increasing demands to improve student achievement during a time of economic crisis, evaluating the efficiency and effectiveness of the district's selection program was essential. Specifically, the research questions were Research Question—Are the teacher selection tools currently being utilized in the Fort Zumwalt School District able to predict first year success?  
Sub-question—Is there a difference in prediction related to gender, experience, and elementary and secondary levels?

In order to answer these research questions, data were collected from four instruments: (a) written application questions, (b) StyleProfile, (c) 22-question interview, and (d) the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The data were then analyzed using a correlational study and a multiple linear regression model.



There were several limitations identified in the study. The 22-question interview was given and scored by a variety of administrators. Although these administrators have been trained, there could be a difference in scoring based on individual perceptions. Two of the instruments, the written application questions and StyleProfile, were taken off site. This could enable a candidate to receive assistance answering the questions and therefore invalidate the responses.

Several delimitations were also present in the study. The population tested in this study was not random. It consisted of only those candidates who applied for and received a teaching job in the Fort Zumwalt School District for the 2007-2008 school year. Since those candidates were selected for school specific interviews, it is probable that their scores on the selection tools, especially the 22-question interview, may have been higher than the general population of applicants applying for teaching positions. The school specific interview with the principal was not included as part of the study. The demographic of the district may further limit the study, in that Fort Zumwalt is largely a middle-income, suburban school district. Furthermore, since only those candidates who received teaching positions in the 2007-2008 school year were included in this study, this limited the number of subjects tested. The results of this study should be interpreted with these limitations and delimitations in mind.

#### *Summary of Findings by Total Population*

There were 87 teachers with various levels of experience included in this research study. A correlational study and a multiple linear regression were performed on the data from these teachers. The most significant relationship found for the total population of the teachers hired for the 2007-2008 school year was between StyleProfile and the 22-

question interview. Those candidates who scored well on the StyleProfile also tended to score well on the 22-question interview. There was also a significant relationship between the 22-question interview and first year performance in the district. Although these relationships were found to be significant through the correlational study, they were not predictions for each other. However, the district should look carefully at StyleProfile scores, since candidates who score high on that tool also tend to score high on the 22-question interview.

While the correlation between the 22-question interview also had a significant association with the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score, the correlation in itself did not predict effective performance. However, once the multiple linear regression was completed, the score on the 22-question interview was shown to be predictive for a high score on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. This is important information for the district, since it showed that the research-based 22-question interview was successful in helping to select highly effective teachers.

There were three inverse associations reported as significant. First, there was an inverse relationship between StyleProfile scores and level. As StyleProfile scores increased, the level of the candidates decreased. This means that elementary candidates tended to score higher on the StyleProfile. There was also an inverse relationship reported between Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District score and level. As performance increased, the level decreased. Elementary candidates also tended to score higher than secondary candidates on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School

District. The final inverse relationship found was between StyleProfile and gender. As the scores on StyleProfile increased, the gender decreased. This showed that females tended to score higher on the StyleProfile online tool than males.

While these findings were significant, the district should continue to evaluate each candidate as an individual, regardless of level or gender.

To answer the research question, “Are the teacher selection tools currently being utilized in the Fort Zumwalt School District able to predict first year success,” the 22-question interview screening tool was the greatest predictor of first year success. The written application questions and StyleProfile did not show any significance in predicting first year success. In reference to the hypothesis, “There will be a significant correlation among all of the variables: (a) score on the written application, (b) score on the StyleProfile, (c) score on the 22-question interview, and (d) score on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District,” there was no significance found among all of the variables. However, individual associations were found as noted.

#### *Summary of Findings by Gender*

When evaluating the data from this research project, it may be beneficial to examine results based on a particular sub-group to assess how these individual groups compared to the population as a whole.

Data was disaggregated by gender in order to compare female candidates with male candidates. This sub-group consisted of 65 female teachers and 22 male teachers.

A correlational study and a multiple linear regression was performed on the data of first year teachers for the 2007-2008 school year who were female and those who were male.

For the female population, one significant positive relationship was reported. Significance was reported on the relationship between the scores on the StyleProfile and the scores on the 22-question interview. As the scores on StyleProfile increased, the scores on the 22-question interview also increased. Although the 22-question interview was the last remaining variable in the regression model, it did not show any predictive value for this population. In other words, there was no clear prediction of first year performance for the female candidates in this study.

Two inverse relationships were reported for the female population. There was an inverse relationship between level and both StyleProfile and first year performance. The elementary female candidates scored higher on both StyleProfile and Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District than the secondary female candidates.

For the male population, the most significant association was between the written application questions and first year performance. As the scores on the written application questions increased, so did the scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The scores on the written application questions also proved to be the most predictive variable for first year performance for this population. In other words, the written application scores were the strongest predictor of male first year performance.

A positive association was reported between the scores on the 22-question interview and male candidate first year performance. As the scores on the 22-question interview increased, so did the scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District.

One inverse relationship was reported between elementary and secondary levels and written application scores of male candidates. As the scores on the application questions increased, the level decreased. Elementary male teachers tended to score higher on the written application questions than secondary males teachers.

To answer the research sub-question, “Is there a difference in prediction related to gender,” there was no variable that proved to be the greatest predictor of first year success for female teachers. The written application score proved to be the greatest predictor of first year success for male teachers. The StyleProfile and the 22-question interview did not show any significant result for predicting first year success for these groups. In reference to the hypothesis, “There will be a significant correlation between the variables by gender,” there was no significance found among the variables; however, individual associations were found.

#### *Summary of Findings by Experience*

Data were disaggregated by level of experience in order to compare candidates with previous teaching experience to those without prior experience. This group consisted of 28 teachers with prior experience and 59 teachers with no experience.

There was one positive correlation found for the group of candidates with experience between the scores on the written application questions and first year performance in the district. As the scores on the written application questions increased,

so did the scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The written application questions were also shown to be predictive of first year performance in the regression model. The researcher may conclude from these findings that experienced teachers may be able to answer the questions on the application in a more accurate manner than those candidates with no previous experience.

Two inverse relationships were found to be significant: 1) between first year performance and gender and 2) first year performance and level. As the scores on the first year performance rating scales increased, the gender and level decreased. This means that elementary females tended to score higher on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District than secondary females and males at both levels.

For those candidates with no previous experience, there were several significant associations reported. One significant association was that between the StyleProfile and the 22-question interview score, which was an expected finding because both are part of the Ventures for Excellence suite of tools. However, the relationship found between StyleProfile and first year performance was also reported as significant for this population of candidates, an interesting finding. As the scores on the StyleProfile increased for those candidates with no experience, so did the scores on the 22-question interview and the scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District. The scores on the StyleProfile were also found to be the most predictive of first year performance on the multiple linear regression model. The

researcher can conclude that the scores on the StyleProfile are important to consider when screening candidates with no previous teaching experience.

There was also significance found in the relationship between the scores on the written application questions and the 22-question interview score, which again was expected because both are part of the Ventures for Excellence suite of tools.

Two inverse relationships were reported as significant. The scores on the StyleProfile online tool were inversely related to level and gender. Elementary females with no experience tended to score higher on StyleProfile.

To answer the research sub-question, “Is there a difference in prediction related to experience,” the written application score proved to be the greatest predictor of first year success for those teachers with at least one year of previous teaching experience. The StyleProfile proved to be the greatest predictor of first year success for those teachers with no previous teaching experience. The 22-question interview was not found to be predictive of first year success for these sub-groups. In reference to the sub-hypothesis, “there will be a significant correlation between the variables by experience,” there was no significance found among all of the variables; however, individual associations were found as noted.

#### *Summary of Findings by Elementary and Secondary Levels*

Data were disaggregated by teaching level in order to compare elementary candidates with secondary candidates. For this study, elementary candidates were those who taught kindergarten through fifth grade, and secondary candidates were those who taught sixth through twelfth grades. This sub-group consisted of 35 elementary teachers and 52 secondary teachers.

There was one positive association that was significant for the elementary population. This relationship was between StyleProfile and experience. As the scores on the StyleProfile online tool increased, so did the level of experience. Elementary teachers with experience tended to score higher on the StyleProfile.

Two significant inverse associations were reported for elementary teachers. The first of these relationships was between StyleProfile and gender. As the scores on the StyleProfile increased, the coding variable for gender decreased, which means that elementary female teachers tended to score higher on the StyleProfile. The other inverse relationship was between first year performance and experience. As the scores on the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District increased, the level of experience decreased. Elementary teachers with no prior experience tended to be rated higher on first year teaching performance.

The last variable left in the regression model for the elementary teachers was written application scores. However, this variable was not found to be significant in its predictive value for first year performance.

There was one significant correlation reported for the secondary teachers between StyleProfile and the 22-question interview. As the scores on the StyleProfile increased, so did the scores on the 22-question interview for this group. There were no other significant associations found for secondary teachers.

The result of the multiple linear regression was not conclusive. Although the 22-question interview remained as the last variable in the analysis, it did not show significant predictive value for first year performance.



To answer the research sub-question, “Is there a difference in prediction related to elementary and secondary levels,” there was no variable that proved to be the greatest predictor of first year success for either elementary or secondary teachers. In reference to the sub-hypothesis, there was no significance found between all of the variables; however, individual associations were found.

*Recommendations for the Fort Zumwalt School District*

Based on the study finding, the following are recommendations for the Fort Zumwalt School District as it selects teachers in the future:

1. Continue to use the research-based 22-question Ventures for Excellence interview as the preferred way to select teachers.
2. Use the StyleProfile online screening tool cautiously and evaluate the tool’s effectiveness with future teacher groups, since an overall lack of predictive value was found in the study.
3. Use the Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District completed by lead building principals each year to review the performance of teachers in their first year in Fort Zumwalt. This will help the district in determining if the current selection process continues to be successful.
4. Continue to evaluate each candidate on an individual basis. While some significant relationships were found between the gender of candidates and the scores on various screening tools, these were not always consistent.
5. Refrain from using the written application questions as a predictive tool.

While the scores on the written application questions showed some predictive

value, it is recommended that for efficiency and effectiveness, the district avoid using this as a predictive tool due to the possibility of location threat. However, the district should continue using the written application questions as a screening tool based on the applicant's grammar skills and quality of answers.

The recommended changes to the Fort Zumwalt School District teacher selection process could save the district time and money. The new effective and efficient teacher selection process is illustrated in Figure 2.

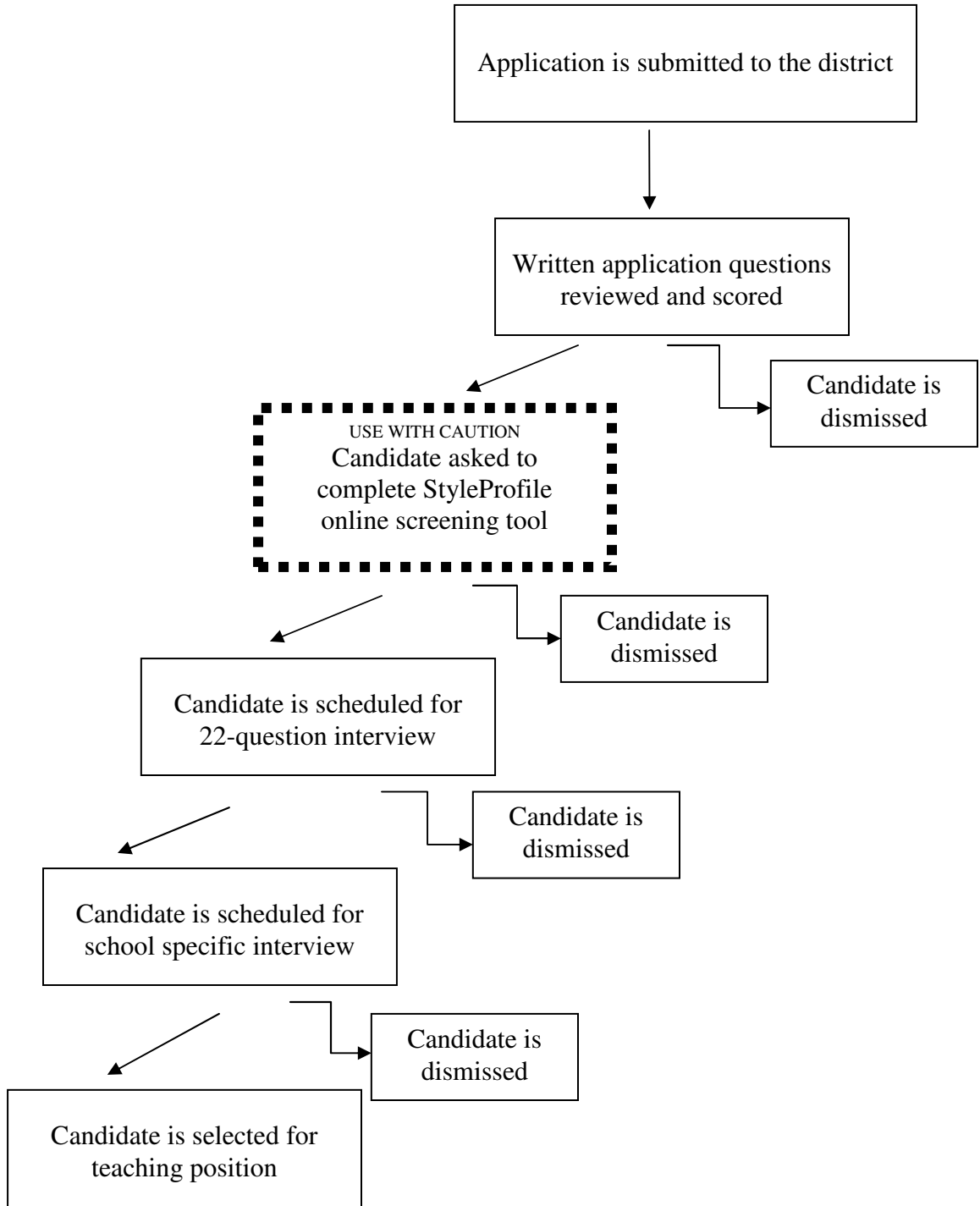


Figure 2. Algorithm Illustrating the Recommended Effective and Efficient Teacher Selection Process in the Fort Zumwalt School District

Note. Dotted line indicates that the StyleProfile should be used with caution.

*Recommendations for Future Research*

The following are recommendations for future studies:

1. Replicate the study with a larger sample size. Although 87 teachers were included, some of the individual groups were small in size. A larger group would make results more generalizable.
2. Gather data from multiple years. This would allow data to be compared from year to year.
3. Replicate this study using data from neighboring districts that also use the Ventures for Excellence screening tools.

*Implications for Effective Schools*

This study proved a strong predictive relationship between the score on the 22-question interview and first year teacher performance. As identified by the Ventures for Excellence selection program, the Fort Zumwalt School District strives to find candidates with the following qualities: (a) demonstrates a clear sense of purpose by providing excellent learning and growth opportunities to all students, (b) is committed to the total development of students and devotes much time and energy toward this goal, (c) manifests excellent human relationship skills, (d) values interacting with people in a caring and supportive manner, (e) identifies with the feelings and thoughts of others in empathetic and helpful ways, (f) is insightful about what motivates others and perceptive about using approaches which will bring out the best in students, and (g) is versatile in utilizing high student involvement to ensure learning (Cottrell, 2004). Given the research findings, this may have implications for university teacher preparation programs. Coursework at the university level may benefit by focusing on Cottrell's teacher qualities

and characteristics (the focus of the Ventures for Excellence screening tools) to prepare students to be highly effective teacher candidates.

The current Ventures for Excellence selection program includes (a) written application questions, (b) StyleProfile, and (c) the 22-question interview. At the time of this study, there was an option to purchase the tools separately even though the Fort Zumwalt School District chose to purchase all three tools as a package. Given the findings that the 22-question interview was the most predictive tool, the Ventures for Excellence Corporation should continue the option to purchase the tools separately to allow school districts to value shop in these current hard economic conditions.

### *Summary*

This study has shown that the use of the Ventures for Excellence selection tools assists the Fort Zumwalt School District in placing high quality teachers in classrooms. The current teacher selection process has enabled the personnel department in Fort Zumwalt to predict first year performance based on the 22-question Ventures for Excellence interview score. Based on the study findings, the new recommended teacher selection process (see Figure 2) will be not only effective, but efficient, saving the district valuable time and resources. The findings may be generalizable to all schools similar to Fort Zumwalt that use Ventures for Excellence.

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Appendix A

Missouri Department of Elementary and Secondary Education FT. ZUMWALT R-II (092087) FINAL Adequate Yearly Progress**								2008	Groups*	Met				
								Communication Arts	8	4				
								Mathematics	8	4				
								Required Action: District Improvement Level 2						
Overall Status		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Communication Arts Status			Not Met	Not Met	Not Met	Not Met	Not Met	Not Met						
Mathematics Status			Not Met	Not Met	Not Met	Not Met	Not Met	Not Met						
Attendance Rate						Met	Met	Met						
Graduation Rate						Met	Met	Met						
COMMUNICATION ARTS		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Annual Proficiency Target		18.4	19.4	20.4	26.6	34.7	42.9	51.0	59.2	67.4	75.5	83.7	91.8	100.0
School Total (All Kids)	PROF	37.1 *	35.1 * Y	35.1 * Y	32.7 * Y	49 * Y	49 * Y	51.7 * Y						
	GROWTH + PROF PCT							60.6						
	LND/PR	2	2.1	1	1.1	1.3	0.1	0.1						
Asian/Pacific Isl.	PROF			45.5 * Y	40.3 * Y	50 * Y	57.1 * Y	61 * Y						
	GROWTH + PROF PCT							67.7						
	LND/PR			0	0	2.7	0							
Black	PROF	19.8 *	18.5 * N	17 * CI	15.9 * NP	29.9 * CI	28.5 * NP	32.5 * NP						
	GROWTH + PROF PCT							44.1						
	LND/PR	3.6	2.4	0.6	0.6	1.6	0.9	0						
Hispanic	PROF	37.5 *	21.7 * N*	23.3 * Y	22.5 * CI	34.5 * CI	39 * CI	37.9 * G						
	GROWTH + PROF PCT							52.7						
	LND/PR	1.8	6.3	0	2.7	2.3	0	0						
American Indian	PROF	20	30 --	26.7 --	25 --	38.5 --	21.4 --	42.9 --						
	GROWTH + PROF PCT							57.1						
	LND/PR	6.3	0	0	0	7.1	0	0						
White	PROF	37.9 *	36.3 * Y	36 * Y	33.9 * Y	50.3 * Y	50.4 * Y	53.1 * Y						
	GROWTH + PROF PCT							61.7						
	LND/PR	1.7	2	1	0.9	1.3	0.1	0.1						
Other/Non-Response	PROF	32 *	24 * Y	38.5 * Y	16.9 * NC	28.6 --	60 --	.						
	GROWTH + PROF PCT							.						
	LND/PR	7	3.8	3	10.5	12.5	0	.						
F/R Lunch	PROF	.	23.8 * Y	26.6 * Y	20.5 * NP	29.7 * S	30.1 * NP	30.1 * NP						
	GROWTH + PROF PCT							45.2						
	LND/PR	.	3.8	1.6	2.2	2.7	0.3	0.2						
IEP	PROF	6.7 *	8 * N	10.4 * N	8.9 * NP	14 * NP	13.4 * NP	15.8 * NP						
	GROWTH + PROF PCT							33.9						
	LND/PR	5.5	6.2	2.1	1.5	6.4	0.3	0.3						

<b>MATHEMATICS</b>		<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Annual Proficiency Target</b>		<b>8.3</b>	<b>9.3</b>	<b>10.3</b>	<b>17.5</b>	<b>26.6</b>	<b>35.8</b>	<b>45.0</b>	<b>54.1</b>	<b>63.3</b>	<b>72.5</b>	<b>81.7</b>	<b>90.8</b>	<b>100.0</b>
School Total (All Kids)	PROF	22.5 *	25.3 * Y	25 * Y	27.6 * Y	48.1 * Y	49.4 * Y	51.8 * Y						
	GROWTH + PROF PCT							59.9						
	LND/PR	1.5	1.2	0.7	0.6	0.4	0.1	0.1						
Asian/Pacific Isl.	PROF			33.3 * Y	36.5 * Y	60 * Y	58.7 * Y	67 * Y						
	GROWTH + PROF PCT							74.6						
	LND/PR			0	0	0	0	0						
Black	PROF	7.1 *	7.3 * N	14.5 * Y	11.7 * NP	26.3 * CI	26.7 * NP	26.3 * NP						
	GROWTH + PROF PCT							39						
	LND/PR	4.2	2.4	0.6	2.7	0.4	0.7	0.2						
Hispanic	PROF	10 *	12.1 * Y	14.9 * Y	12.3 * CI	27.8 * Y	37.3 * Y	36.1 * G						
	GROWTH + PROF PCT							49.7						
	LND/PR	4.8	0	0	0	1.2	0	0						
American Indian	PROF	6.7	25 --	11.1 --	50 --	57.1 --	42.9 --	36.4 --						
	GROWTH + PROF PCT							54.5						
	LND/PR	0	0	0	0	6.7	0	0						
White	PROF	23.3 *	26.7 * Y	25.7 * Y	29 * Y	49.5 * Y	50.9 * Y	53.6 * Y						
	GROWTH + PROF PCT							61.2						
	LND/PR	1.3	0.8	0.7	0.4	0.3	0.1	0.1						
Other/Non-Response	PROF	16.4 *	11.9 * N*	17.3 * Y	12.8 * CI	46.7 --	28.6 --	.						
	GROWTH + PROF PCT							.						
	LND/PR	1.5	8.2	1.3	1.6	0	0	.						
F/R Lunch	PROF	0	15.9 * Y	18.6 * Y	17.9 * Y	29 * Y	29.4 * NP	30.1 * NP						
	GROWTH + PROF PCT							42.4						
	LND/PR	33.3	1.2	0.9	0.9	0.9	0.3	0.2						
IEP	PROF	8.1 *	7.6 * N	6.8 * N	8.9 * NP	15.9 * NP	15 * NP	17.5 * NP						
	GROWTH + PROF PCT							30.6						
	LND/PR	4	3.4	2	1.3	1.2	0.3	0.2						
LEP	PROF	11.1	0 --	9.1 --	5 --	28.4 * Y	24.4 * NP	19.2 * NP						
	GROWTH + PROF PCT							36.5						
	LND/PR	18.2	20	0	0	1	0	0						
<b>ADDITIONAL INDICATOR--ATTENDANCE RATE</b>		<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
School Total (All Kids)					95.4 * Met	95.6 * Met	95.5 * Met	95.5 * Met						
<b>ADDITIONAL INDICATOR--GRADUATION RATE</b>		<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
School Total (All Graduates)					87.8 * Met	88.4 * Met	89.8 * Met	89.7 * Met						

**General Notes:**

School level calculations do not include students that have been in the building less than a full academic year.

District level calculations do not include students that have been in the district less than a full academic year.

To meet AYP all subgroups that met the minimum cell size requirements must meet the Annual Proficiency Target, have tested at least 95% of the students and met the additional indicator requirement.

Additional Indicator -- For both school and district reporting attendance is used at the elementary and middle levels, at the high school level graduation rate is used. (Note: District level reporting is determined by the highest grade level. K-8 uses attendance rate. K-12 uses graduation rate and K-8 attendance rate.) The requirement for MET is: Attendance Rate is equal to or greater than 93% Or shows any improvement from previous year. Graduation Rate is equal to or greater than 85% Or shows any improvement from previous year.

**Additional Indicator Symbols:**

**Y** For Attendance Rate indicates that the group met the requirement based on improvement.

**MY** For Graduation Rate indicates that the group met the requirement based on improvement.

**MYY** For Graduation Rate indicates that the group met the requirement based on improvement using the group of total, indicating that the cell size was too small for that group.

**NMY** For Graduation Rate indicates that the group was not met, indicating that the cell size was too small for that group and the group of TOTAL was used in the determination.

**Definitions:**

**PROF:** The percent of students who are Proficient or Advanced.

**LND:** Level Not Determined - The percent of students who did not receive a MAP score. A Student will be considered LND if the student was absent,

caught cheating or did not have a valid attempt on the test. The percent of students that were LND should be 5.0 percent or below.

**GROWTH + PROF PCT:** Is the percent of students who are Proficient or Advanced plus the percent of students who are on track using the growth calculation.

**NOTE:** For 2007 LND changed to include only those students who were absent all required sessions of the test.

**Symbols:**

\* Indicates the subgroup meets the minimum cell size requirements. Minimum cell size requirements: 30 for all subgroups except IEP and LEP, which have a minimum cell size of 50 for 2004, 2005, 2006 and 2007.

^ If there are fewer than 30 students in the school total, and State Proficiency Target was not met, the current year and two prior years are aggregated.

This only applies to the calculation for the school total, not the disaggregated groups.

@ The group Met the 95% participation using an average of current and prior year, or current year and prior two years.

**AYP MET Symbols:**

**Y** Annual Proficiency Target Met

**CI** Annual Proficiency Target Met with confidence interval

**G** Annual Proficiency Target Met using Growth

**S** Annual Proficiency Target Met using Safe Harbor provision

**SC** Annual Proficiency Target Met using the confidence interval for Safe Harbor

**AYP NOT MET Symbols:**

**N\*** Annual Proficiency Target Met, but did not have a participation rate of at least 95%

**NC** Annual Proficiency Target Met with the confidence interval, but did not have a participation rate of at least 95%

**NP** Annual Proficiency Target Not Met

**NN** Annual Proficiency Target Not Met and participation rate was less than 95%

September 12, 2008



## Appendix B

*Off-Limits Interview Questions*

- How old are you?
- What is your race?
- Of what country are you a citizen?
- Tell me about your accent.
- How tall are you?
- What is your native language?
- How did you acquire your second language?
- What is your marital status?
- Are you a single parent?
- What is your preferred form of address: Miss, Mrs., or Ms.?
- How many children do you have?
- What are your child-care arrangements?
- Do you own or rent your home?
- Do you live alone?
- Do you have any large debts?
- Who is your emergency contact?
- What is your sexual orientation?
- Tell me about your religious beliefs.
- Describe your political beliefs or affiliations.
- Describe your attitude towards unions.
- Of what clubs are you a member?
- To what organizations do you donate money or time?
- Are you physically fit?
- Are you disabled? If so, how severe is your disability?
- Have you been treated for any conditions or diseases?
- Do you use alcohol or drugs on your own personal time? Have you ever had a problem with either?
- What is your military service history?
- Have you ever been arrested?
- Do you have additional outside income?
- What are your retirement plans?

*Note.* From *Effective Teacher Hiring: A Guide to Getting the Best* by Peterson, 2002,

p.63. Alexandria, VA: Association for Supervision and Curriculum Development.

Appendix C

***FORT ZUMWALT SCHOOL DISTRICT***

*Professional Staff Reports*

*Dr. Patty Corum  
Deputy Superintendent  
October 2007*

PROFESSIONAL STAFF REPORTS INCLUDE:

*Staffing Report Summary  
Education Levels of Professional Staff  
New Professional Staff Information  
Elementary School Student/Teacher Ratio  
Middle School Student/Teacher Ratio  
High School Student/Teacher Ratio*

*FORT ZUMWALT SCHOOL DISTRICT*

*STAFFING REPORT SUMMARY*

*2007-2008*

*CERTIFIED STAFF SUMMARY*

	2007-08	2006-07	2005-06
Certified teachers under contract (FTE)	1282.24	1245.48	1221.08
Retired teachers working (FTE)	2.66	3	3.5
Contracted staff (FTE)	10	8.2	7
Positions filled temporarily (FTE)	.5	.50	2
<b>TOTAL CERTIFIED STAFF (FTE)</b>	<b>1295.4</b>	<b>1257.18</b>	<b>1233.58</b>

*NEW HIRES  
LEAVES / RETIREMENTS / RESIGNATIONS  
PROMOTIONS*

	2007-08	2006-07	2005-06
Teachers new to Fort Zumwalt	107	109	119
Teachers on Family Care Leave	9	15	13
Teachers who retired *	21	25	27
Teachers who resigned *	39	45	49
Teachers promoted to administration *	5	2	7

\*effective end of given school year

***FORT ZUMWALT SCHOOL DISTRICT***

***EDUCATION LEVELS OF PROFESSIONAL STAFF***

***2007-2008***

**EAST HIGH SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	11	24%
B.S. + 12	2	4%
B.S. + 24	4	9%
M.A.	16	36%
M.A. + 12	3	7%
M.A. + 24	5	11%
M.A. + 36	1	2%
M.A. + 48	3	7%
Specialist	0	0%
Doctorate	0	0%
	<hr/> 45	<hr/> 100%

**HOPE HIGH SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	2	22%
B.S. + 12	1	11%
B.S. + 24	0	0%
M.A.	4	44%
M.A. + 12	2	22%
M.A. + 24	0	0%
M.A. + 36	0	0%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/> 9	<hr/> 100%

**NORTH HIGH SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	22	24%
B.S. + 12	4	4%
B.S. + 24	1	1%
M.A.	23	26%
M.A. + 12	8	9%
M.A. + 24	4	4%
M.A. + 36	5	6%
M.A. + 48	22	24%
Specialist	0	0%
Doctorate	1	1%
	<hr/> 90	<hr/> 100%

**SOUTH HIGH SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	17	16%
B.S. + 12	9	8%
B.S. + 24	9	8%
M.A.	35	32%
M.A. + 12	9	8%
M.A. + 24	9	8%
M.A. + 36	2	2%
M.A. + 48	18	17%
Specialist	1	1%
Doctorate	0	0%
	<hr/>	<hr/>
	109	100%

**WEST HIGH SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	23	15%
B.S. + 12	8	5%
B.S. + 24	12	8%
M.A.	52	33%
M.A. + 12	19	12%
M.A. + 24	15	10%
M.A. + 36	12	8%
M.A. + 48	14	9%
Specialist	0	0%
Doctorate	1	1%
	<hr/>	<hr/>
	156	100%

**DUBRAY MIDDLE SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	16	22%
B.S. + 12	7	10%
B.S. + 24	8	11%
M.A.	22	31%
M.A. + 12	2	3%
M.A. + 24	2	3%
M.A. + 36	3	4%
M.A. + 48	10	14%
Specialist	2	3%
Doctorate	0	0%
	<hr/>	<hr/>
	72	100%

**NORTH MIDDLE SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	16	20%
B.S. + 12	3	4%
B.S. + 24	4	5%
M.A.	35	44%
M.A. + 12	8	10%
M.A. + 24	5	6%
M.A. + 36	4	5%
M.A. + 48	4	5%
Specialist	0	0%
Doctorate	1	1%
	<hr/> 80	<hr/> 100%

**SOUTH MIDDLE SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	12	16%
B.S. + 12	4	5%
B.S. + 24	3	4%
M.A.	29	39%
M.A. + 12	10	14%
M.A. + 24	7	9%
M.A. + 36	3	4%
M.A. + 48	6	8%
Specialist	0	0%
Doctorate	0	0%
	<hr/> 74	<hr/> 100%

**WEST MIDDLE SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	16	21%
B.S. + 12	5	7%
B.S. + 24	5	7%
M.A.	33	43%
M.A. + 12	5	7%
M.A. + 24	6	8%
M.A. + 36	2	3%
M.A. + 48	3	4%
Specialist	0	0%
Doctorate	1	1%
	<hr/> 76	<hr/> 100%



**DARDENNE ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	10	26%
B.S. + 12	3	8%
B.S. + 24	3	8%
M.A.	17	45%
M.A. + 12	3	8%
M.A. + 24	2	5%
M.A. + 36	0	0%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	38	100%

**EMGE ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	7	22%
B.S. + 12	3	9%
B.S. + 24	1	3%
M.A.	15	47%
M.A. + 12	2	6%
M.A. + 24	2	6%
M.A. + 36	1	3%
M.A. + 48	1	3%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	32	100%

**FOREST PARK ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	8	24%
B.S. + 12	1	3%
B.S. + 24	0	0%
M.A.	17	52%
M.A. + 12	3	9%
M.A. + 24	3	9%
M.A. + 36	1	3%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	33	100%

**HAWTHORN ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	7	18%
B.S. + 12	4	10%
B.S. + 24	0	0%
M.A.	23	59%
M.A. + 12	1	3%
M.A. + 24	4	10%
M.A. + 36	0	0%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	39	100%

**J. L. MUDD ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	8	25%
B.S. + 12	2	6%
B.S. + 24	1	3%
M.A.	13	41%
M.A. + 12	2	6%
M.A. + 24	4	13%
M.A. + 36	0	0%
M.A. + 48	2	6%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	32	100%

**LEWIS & CLARK ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	6	19%
B.S. + 12	4	13%
B.S. + 24	2	6%
M.A.	11	35%
M.A. + 12	1	3%
M.A. + 24	3	10%
M.A. + 36	1	3%
M.A. + 48	2	6%
Specialist	1	3%
Doctorate	0	0%
	<hr/>	<hr/>
	31	100%

**MID RIVERS ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	7	19%
B.S. + 12	2	6%
B.S. + 24	4	11%
M.A.	11	31%
M.A. + 12	3	8%
M.A. + 24	4	11%
M.A. + 36	2	6%
M.A. + 48	2	6%
Specialist	1	3%
Doctorate	0	0%
	<hr/>	<hr/>
	36	100%

**MOUNT HOPE ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	10	30%
B.S. + 12	4	12%
B.S. + 24	1	3%
M.A.	16	48%
M.A. + 12	0	0%
M.A. + 24	0	0%
M.A. + 36	1	3%
M.A. + 48	1	3%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	33	100%

**OSTMANN ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	21	46%
B.S. + 12	5	11%
B.S. + 24	3	7%
M.A.	13	28%
M.A. + 12	1	2%
M.A. + 24	2	4%
M.A. + 36	0	0%
M.A. + 48	1	2%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	46	100%

**PHEASANT POINT ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	13	36%
B.S. + 12	3	8%
B.S. + 24	4	11%
M.A.	5	14%
M.A. + 12	4	11%
M.A. + 24	3	8%
M.A. + 36	1	3%
M.A. + 48	2	6%
Specialist	1	3%
Doctorate	0	0%
	<hr/>	<hr/>
	36	100%

**PROGRESS SOUTH ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	12	20%
B.S. + 12	4	7%
B.S. + 24	4	7%
M.A.	32	53%
M.A. + 12	4	7%
M.A. + 24	3	5%
M.A. + 36	1	2%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	60	100%

**ROCK CREEK ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	5	11%
B.S. + 12	4	9%
B.S. + 24	3	7%
M.A.	18	40%
M.A. + 12	5	11%
M.A. + 24	3	7%
M.A. + 36	2	4%
M.A. + 48	5	11%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	45	100%

**ST. PETERS ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	7	23%
B.S. + 12	2	6%
B.S. + 24	0	0%
M.A.	14	45%
M.A. + 12	5	16%
M.A. + 24	2	6%
M.A. + 36	1	3%
M.A. + 48	0	0%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	31	100%

**TWIN CHIMNEYS ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	6	16%
B.S. + 12	2	5%
B.S. + 24	2	5%
M.A.	17	45%
M.A. + 12	3	8%
M.A. + 24	2	5%
M.A. + 36	0	0%
M.A. + 48	5	13%
Specialist	0	0%
Doctorate	1	3%
	<hr/>	<hr/>
	38	100%

**WESTHOFF ELEMENTARY SCHOOL**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	5	13%
B.S. + 12	0	0%
B.S. + 24	2	5%
M.A.	22	56%
M.A. + 12	4	10%
M.A. + 24	2	5%
M.A. + 36	0	0%
M.A. + 48	3	8%
Specialist	1	3%
Doctorate	0	0%
	<hr/>	<hr/>
	39	100%

**DISTRICT WIDE ASSIGNMENTS**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	0	0%
B.S. + 12	0	0%
B.S. + 24	0	0%
M.A.	8	57%
M.A. + 12	1	7%
M.A. + 24	2	14%
M.A. + 36	0	0%
M.A. + 48	3	21%
Specialist	0	0%
Doctorate	0	0%
	<hr/>	<hr/>
	14	100%

**TOTAL ELEMENTARY SCHOOLS**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	132	23%
B.S. + 12	43	8%
B.S. + 24	30	5%
M.A.	244	43%
M.A. + 12	41	7%
M.A. + 24	39	7%
M.A. + 36	11	2%
M.A. + 48	24	4%
Specialist	4	1%
Doctorate	1	0%
	<hr/>	<hr/>
	569	100%

**TOTAL SECONDARY SCHOOLS**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
B.S.	135	19%
B.S. + 12	43	6%
B.S. + 24	46	6%
M.A.	249	35%
M.A. + 12	66	9%
M.A. + 24	53	7%
M.A. + 36	32	5%
M.A. + 48	80	11%
Specialist	3	0%
Doctorate	4	1%
	<hr/>	<hr/>
	711	100%

**TOTAL FORT ZUMWALT STAFF**

<b>Education level</b>	<b># of Staff</b>	<b>% of Staff</b>
<b>B.S.</b>	<b>267</b>	<b>21%</b>
<b>B.S. + 12</b>	<b>86</b>	<b>7%</b>
<b>B.S. + 24</b>	<b>76</b>	<b>6%</b>
<b>M.A.</b>	<b>501</b>	<b>39%</b>
<b>M.A. + 12</b>	<b>108</b>	<b>8%</b>
<b>M.A. + 24</b>	<b>94</b>	<b>7%</b>
<b>M.A. + 36</b>	<b>43</b>	<b>3%</b>
<b>M.A. + 48</b>	<b>107</b>	<b>8%</b>
<b>Specialist</b>	<b>7</b>	<b>1%</b>
<b>Doctorate</b>	<b>5</b>	<b>0%</b>
	<hr/>	<hr/>
	<b>1294</b>	<b>100%</b>

***FORT ZUMWALT SCHOOL DISTRICT***

***NEW PROFESSIONAL STAFF INFORMATION***

***2007-2008***



## I. Position Summary on New Professional Staff

Elementary Art	2	
Elementary Classroom	27	
Elementary Physical Education	1	
Elementary Special Education Staff	8	
Elementary Speech Pathologist	4	
Elementary Title I	3	
Sub-Total	<b><u>45</u></b>	
Secondary Art	1	
Secondary Business	2	
Secondary Counselor	1	
Secondary Foreign Language	3	
Secondary Language Arts	10	
Secondary Math	9	
Secondary Music	1	
Secondary Physical Education	4	
Secondary Reading	2	
Secondary Science	9	
Secondary Sixth Grade	2	
Secondary Social Studies	4	
Secondary Special Education	13	
Secondary Speech Pathologist	1	
Sub-Total	<b><u>62</u></b>	
		TOTAL 107

## II. Degrees Held

Bachelors	75 (70%)	
Masters	32 (30%)	
		TOTAL 107

## III. Colleges/Universities Represented

Central Methodist	2	
Columbia College	1	
Culver Stockton	1	
Fontbonne University	4	
Hannibal-Lagrange College	1	
Lindenwood University	20	
Missouri Baptist University	3	
Missouri State University	7	
Missouri Valley	1	
Northwest Missouri State	1	
St. Louis University	1	
Southeast University	2	
Truman University	3	
University of Central Missouri (CMSU)	3	
University of Missouri – Columbia	15	

University of Missouri - St. Louis	16		
University of Missouri – Rolla	1		
Webster University	2		
William Woods University	2		
Out-of-State Universities	21		
		TOTAL	107

IV. Previous Years Experience

No Experience	69 (64%)		
Experience	<u>38</u> (36%)		
		TOTAL	107

Experience by years of service

One year	7
Two years	5
Three years	3
Four years	5
Five years	2
Six to ten years	15
Eleven to fifteen years	0
Sixteen to twenty years	0
Twenty-one to twenty-five years	1

Appendix D

**PROFESSIONAL STATEMENTS:**

In your own handwriting, please answer the following questions within the space provided.

What are your three most important reasons for wanting to be a teacher?

How much do you want to know about your students in order to be most helpful to them?

What three (3) things do you most want to know about your students?

What do you need to know in order to begin your lesson planning for a class?

What four key components do you believe you must include in your plan?

When you think about your students, in what major ways do you most want to influence their lives?

What two core teaching strategies do you most use to achieve this result?

Pushing for Positive Peer Influence

Appendix E

# Memorandum

**To:** Fort Zumwalt Administrators

**CC:** Dr. Bernard DuBray, Dr. Patty Corum

**From:** Greg Cicotte, Sharon Ellerbrook, Kim McKinley

**Date:** 5-15-08

**Re:** Rating Scale for Teachers Completing Their First Year in Fort Zumwalt

---

A dissertation research study is being conducted by Greg Cicotte, Sharon Ellerbrook, and Kim McKinley to determine if there is a correlation between the Ventures for Excellence screening tools and actual teaching performance. It is our plan to share the results of the study with the Fort Zumwalt personnel department, administrators, and the Superintendent.

The questionnaires should be turned in directly to Dr. Patty Corum by June 11, 2008 and will remain confidential. If you have any questions regarding the research study, you may contact Greg (636-373-2017), Sharon (314-606-5992), or Kim (314-704-3177). Thanks for your participation!

### **Rating Scale for Teachers Completing Their First Year in the Fort Zumwalt School District**

Please rate the following teacher based on his or her performance during the 2007-2008 school year, with 1 being lowest and 5 being highest. Each section of the rating scale correlates to the three sections in the Ventures for Excellence screening interview: purpose, human interaction skills, teaching and learning. All responses will remain confidential and identifying information will be coded to protect anonymity. Please submit completed rating scales to Dr. Patty Corum at District Office by June 11, 2008. Thank you very much for your time.

Teacher Name: \_\_\_\_\_

---

#### **Purpose**

This teacher demonstrates a clear sense of purpose by providing excellent learning and growth to all students. This teacher is committed to the total development of students and devotes much time and energy toward this goal.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>				<b>Strongly Agree</b>

---

#### **Human Interaction Skills**

This teacher manifests excellent human relationship skills. This teacher values interacting with people in a caring and supportive manner. This teacher identifies with feelings and thoughts of others in empathetic and helpful ways.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>				<b>Strongly Agree</b>

---

#### **Teaching and Learning**

This teacher is insightful about what motivates others and perceptive about using approaches which will bring out the best in students. This teacher is versatile in utilizing high student involvement to ensure learning.

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Strongly Disagree</b>				<b>Strongly Agree</b>

---

#### **Total Teaching Performance**

Purpose + Human Interaction Skills + Teaching and Learning..... \_\_\_\_\_

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Appendix F

**FORT ZUMWALT SCHOOL DISTRICT**  
**DISTRICT ADMINISTRATIVE OFFICES**

110 Virgil Street  
O'Fallon, Missouri 63366

*Honored for "Distinction in Performance" by the State Board of Education*

Telephone: (636) 272-6620  
Metro: (636) 240-2072  
Fax: (636) 272-1059  
Web Site: [www.fzschoools.org](http://www.fzschoools.org)

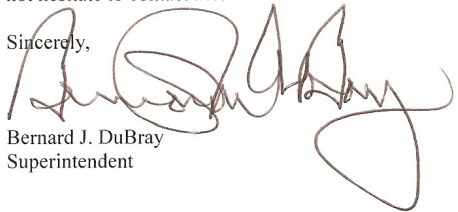
*Dr. Bernard J. DuBray*  
*Superintendent of Schools*

April 22, 2008

Dear Sharon Ellerbrook, Greg Cicotte and Kim McKinley,

The purpose of this letter is to give my permission for you to perform your doctoral study in the Fort Zumwalt School District. Patty Corum has informed me of the nature of your research and I understand that you working closely with her to ensure the anonymity of the data. If you or Lindenwood University has any questions, please do not hesitate to contact me.

Sincerely,

  
Bernard J. DuBray  
Superintendent

C Patty Corum

Board of Education

Mike Swaringim\*  
President

Carol Russell\*  
Vice President

Mary Givens\*  
Member

Barbara Story\*  
Member

Scott Grasser\*  
Member

Mike Price\*  
Member

Jeffrey Kutterer  
Member

\*C.B.M. - Certified Board Member

Appendix G

08-053  
IRB Project Number

**LINDENWOOD UNIVERSITY**  
**Institutional Review Board Disposition Report**

To: Greg Cicotte, Sharon Ellerbrook and Kim McKinley  
CC: Cindy Vitale

The Institutional Review Board has reviewed the revised proposal for research:

**The Institutional Review Board:**

XXXXXX Approves the revised proposal

---

\_\_\_\_\_ Tammi Pavelec \_\_\_\_\_ 4/21/2008  
*Signature IRB Chair* *Date*

Appendix H

**Regression Model Summary (All)**

Mode	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.289a	0.084	0.051	2.058
2	0.276b	0.076	0.054	2.054
3	0.244c	0.06	0.048	2.06

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile

b. Predictors: (Constant), 22-Question Interview, Written Application Score

c. Predictors: (Constant), Written Application Score

**Regression ANOVA (All)**

Model	Sum of Squares	df	Mean Square	F	Significance
1 Regression	32.084	3	10.695	2.525	0.063a
Residual	351.525	83	4.235		
Total	383.609	86			
2 Regression	29.118	2	14.559	3.45	0.036b
Residual	354.491	84	4.22		
Total	383.609	86			
3 Regression	22.845	1	22.845	5.383	0.023c
Residual	360.764	85	4.244		
Total	383.609	86			

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile

b. Predictors: (Constant), 22-Question Interview, Written Application Score

c. Predictors: (Constant), 22-Question Interview

d. Dependent Variable: Performance Rating Scale

**Regression Coefficients (All)**

Model		Unstandardized Coefficients		Standardized Coefficients		Significance
		B	Standard Error	Beta	t	
1	(Constant)	9.473	0.92		10.296	0.000
	Written Application Score	0.187	0.17	0.119	1.102	0.273
	StyleProfile	0.163	0.195	0.095	0.837	0.405
	22-Question Interview	0.154	0.093	0.189	1.664	0.100
2	(Constant)	9.62	0.902		10.671	0.000
	Written Application Score	0.205	0.168	0.13	1.219	0.226
	22-Question Interview	0.18	0.087	0.221	2.071	0.041
3	(Constant)	9.924	0.869		11.419	0.000
	22-Question Interview	0.199	0.086	0.244	2.32	0.023

a. Dependent Variable: Performance Rating Scale



Appendix I

**Regression Model Summary (Female)**

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.201a	0.04	-0.007	2.236
2	0.195b	0.038	0.007	2.22
3	0.182c	0.033	0.018	2.208

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile, b. Predictors: (Constant), 22-Question Interview, Style Profile, c. Predictors: (Constant), Style Profile

**Regression ANOVA (Female)**

Model	Sum of Squares	df	Mean Square	F	Significance
1 Regression	12.81	3	4.27	0.854	0.470a
Residual	304.944	61	4.999		
Total	317.754	64			
2 Regression	12.089	2	6.044	1.226	0.300b
Residual	305.665	62	4.93		
Total	317.754	64			
3 Regression	10.538	1	10.538	2.161	0.147c
Residual	307.216	63	4.876		
Total	317.754	64			

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile

b. Predictors: (Constant), 22-Question Interview, StyleProfile

c. Predictors: (Constant), StyleProfile

**Regression Coefficients (Female)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
1	(Constant)	10.196	1.204		8.47	0.000
	Written Application Score	0.078	0.206	0.049	0.38	0.705
	StyleProfile	0.123	0.258	0.066	0.478	0.634
	22-Question Interview	0.134	0.12	0.151	1.119	0.268
2	(Constant)	10.308	1.159		8.892	0.000
	StyleProfile	0.141	0.252	0.075	0.561	0.577
	22-Question Interview	0.136	0.119	0.154	1.149	0.255
3	(Constant)	10.472	1.115		9.39	0.000
	22-Question Interview	0.161	0.109	0.182	1.47	0.147

a. Gender=Female

b. Dependent Variable: Performance Rating Scale

## Appendix J

## Regression Model Summary (Male)

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.658a	0.433	0.339	1.337
2	0.646b	0.417	0.356	1.319
3	0.582c	0.339	0.306	1.37

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile

b. Predictors: (Constant), 22-Question Interview, Written Application Score

c. Predictors: (Constant), Written Application Score , d. Gender=Male

## Regression ANOVA (Male)

Model	Sum of Squares	df	Mean Square	F	Significance
1 Regression	24.593	3	8.198	4.586	0.015a
Residual	32.179	18	1.788		
Total	56.773	21			
2 Regression	23.702	2	11.851	6.809	0.006b
Residual	33.071	19	1.741		
Total	56.773	21			
3 Regression	19.235	1	19.235	10.248	0.004c
Residual	37.538	20	1.877		
Total	56.773	21			

a. Predictors: (Constant), 22-Question Interview, Written Application Score, StyleProfile

b. Predictors: (Constant), 22-Question Interview, Written Application Score

c. Predictors: (Constant), Written Application Score

d. Gender=Male, e. Dependent Variable: Performance Rating Scale

## Regression Coefficients (Male)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Significance
		B	Standard Error	Beta		
1	(Constant)	7.949	1.085		7.324	0.000
	Written Application Score	0.659	0.255	0.488	2.587	0.019
	StyleProfile	0.176	0.249	0.132	0.706	0.489
	22-Question Interview	0.149	0.116	0.255	1.29	0.213
2	(Constant)	8.121	1.044		7.78	0.000
	Written Application Score	0.652	0.251	0.482	2.597	0.018
	22-Question Interview	0.174	0.109	0.298	1.602	0.126
3	(Constant)	9.459	0.65		14.551	0.000
	Written Application Score	0.787	0.246	0.582	3.201	0.004

a. Gender=Male b. Dependent Variable: Performance Rating Scale

## Professional Vitae

Sharon Lynn Ellerbrook

Sharon Ellerbrook has been involved in education as a teacher or administrator since 1995. She spent ten years teaching kindergarten, first, and second grade students in the Maplewood-Richmond Heights and Fort Zumwalt school districts before becoming an administrator in the Fort Zumwalt School District in 2006. She currently serves as the principal at J. L. Mudd Elementary.

Sharon earned her bachelor's degree in early childhood education from the University of Missouri-St. Louis in 1995. She earned her master's degree (1999) and her doctoral degree (2009) in educational administration from Lindenwood University in St. Charles, Missouri.