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Impact on student achievement through the use of the Six Traits of Writing Model

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IMPACT ON STUDENT ACHIEVEMENT THROUGH THE
USE OF THE SIX TRAITS OF WRITING MODEL

by

Michael G. Nygaard

Bachelor of Science, North Dakota State University, 1985

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

May

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ABSTRACT

This study had two purposes; the first was to study 12 English teachers' scoring of 30 randomly selected student writing samples gathered in the years of 2005, 2006, and 2007 in the Fargo Public School District. The 12 teachers were separated into three groups. Group A (four teachers) served as the control group, as they have been trained and currently score student writing samples. Group B (four teachers) were teachers who have been trained in the use of the Six Traits of Writing Model, but have not scored student writing samples. Group C (four teachers) were teachers who have neither received training using the Six Traits of Writing Model nor scored student writing samples.

The second purpose of this study was to investigate the professional development training teachers have received on the Six Traits of Writing Model or other writing programs. A qualitative survey was given to the teachers in Groups A, B, and C to solicit responses and perceptions they have on writing programs.

Writing samples using the Six Traits of Writing Model have been collected and scored by the Fargo Public School District trained English teachers beginning in 2002. The Six Traits of Writing Model was first used in this school district beginning the school year of 2002-2003. All teachers in the Fargo Public School District have been trained in using the Six Traits of Writing Model, and, every year, teachers new to the district are

trained in using the Six Traits of Writing Model. The Six Traits of Writing Model is incorporated district wide and across every curriculum.

The Six Traits of Writing Model focuses specifically on the following six components when analyzing student writing samples. They are ideas and development, organization, word choice, voice, sentence fluency, and conventions and presentation.

Based on the data collected, the researcher found that the results revealed that teachers from Groups A, B, and C did score writing samples differently based on training and practice, although it was not significant. Additionally, the qualitative survey provided perceptive data from teachers as to the effectiveness or ineffectiveness of professional development programs used in the past and currently.

CHAPTER I

INTRODUCTION

Elected officials today are demanding accountability for the success of every student enrolled in public schools. In 2002, President Bush signed into law the No Child Left Behind (NCLB) Act of 2001. In a U.S. Department of Education (n.d.b) document, it is reinforced in NCLB that “this new law embodies his education reform plan and is the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since it was enacted in 1965” (Introduction section, para. 1). Additionally, the document states, “We need to test children on their academic knowledge and skills for the same reason we take them to the dentist to see whether or not they have cavities—because we need to know” (Measuring Student Progress section, para. 2). States and school districts have accepted this challenge and are looking for new and effective programs as well as better utilizing existing practices for improving teacher performance that enhance students’ writing skills.

The urgency to produce better results in schools for student achievement today has been placed on educators, administrators, and school boards serving United States schools. The U.S. Department of Education (n.d.b) has acknowledged that “the first principle of accountability for results involves the creation of standards in each state for what a child should know . . . in reading and math” (Introduction section, para. 2). The

emphasis by the federal government regarding accountability places the responsibility on the states.

The most effective way to improve the achievement of our students is to improve the quality of teaching. No effort to improve the quality of education for all students, especially for the most disadvantaged, can succeed unless it changes the way in which teachers teach and students learn. (Sparks & Hirsh, n.d., What Can Be Done? section, para. 1)

Together, states and K-12 school organizations across the country are developing and implementing staff development programs to try to increase student achievement. A plethora of staff development programs, along with learning programs for students, have saturated the field of education and force school districts to be methodical and analytical when planning staff development as well as curriculum programming. Smith and Gillespie (2007) report, "School districts, **professional** agencies, and teacher-training colleges . . . offer a menu of topics such as cooperative learning or classroom management, and training on topic areas such as math, science, or language" (p. 10).

Each state then has the responsibility to develop standards that govern the curriculum in schools. Staff development and curriculum programs that actually work take time, money, and effort to implement and will provide school districts with desired results. If desired results are not achieved, it is likely that poor planning and poor programming assisted in producing poor results.

Purpose of the Study

This study had two purposes. The first purpose was to investigate the professional development training teachers have received on the Six Traits of Writing Model (STWM) or other writing programs. A qualitative survey was given to the

teachers in Groups A, B, and C to solicit responses and perceptions that they have on writing programs.

The second purpose was to investigate the reliabilities of three groups of four English teachers' scoring of 30 randomly selected student writing samples gathered during 2005, 2006, and 2007 in the Fargo Public School District (FPSD). The 12 teachers were separated into three groups. Group A served as the control group as they had been trained in using the STWM and presently collect and score student writing samples. Group B had been trained in the use of the STWM, but had not scored student writing samples. Group C had not received training using the STWM, nor had they scored student writing samples using the STWM scoring rubric.

The STWM was first used in the FPSD beginning the school year of 2002-2003. Writing samples using the STWM have been collected since the 2002-2003 school year. Both the model and the rubric were introduced to the district upon the arrival of a new superintendent. Since its adoption, the STWM has been modified by school district representatives to fit the needs of the FPSD. All teachers in the FPSD have been trained in using the STWM and, every year, teachers new to the district are trained in using the STWM. The STWM is incorporated district wide and utilized in all curriculums.

This study included 30 student scored writing samples collected randomly from grades 9 and 11 compiled by the FPSD during 2005, 2006, and 2007 school years. The findings of this study may assist the district in continuing this program, utilizing different components for professional development, or an abandonment of the STWM because of lack of effectiveness in achieving positive results.

Significance of the Study

Writing skills are a necessary tool students must secure before they exit their primary and secondary educational training. Re-teaching at the college entry level or at a new job is expensive, time consuming, and unnecessary. Higher education, the business world, and elected officials expect students be able to demonstrate appropriate writing skills prior to leaving the K-12 educational experience. Appropriate professional development and continuing support for teachers scoring writing skills must be incorporated with teachers as they prepare students for matriculation from high school. Schools and educators are being held accountable for students and must produce better results through improved teaching practices and student performance. “Employers need to have confidence that a high school diploma means something, that a graduate has the knowledge and skills needed to succeed” (U.S. Department of Education, n.d.b, Measuring Student Progress section, para. 7).

Research Questions

The following research questions guided this study:

1. Has the STWM writing program impacted student writing skills as perceived by the English teachers?
2. What were the reliabilities of the three groups of teachers rating the writing samples?
 - a. Group A: Four English teachers trained in the STWM and have scored students’ writing samples in the years of 2005, 2006, and 2007 using the STWM and the STWM scoring rubric.
 - b. Group B: Four English teachers trained in the STWM but did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.

- c. Group C: Four English teachers NOT trained in the STWM and did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.

Definitions of Terms

The following terms and definitions provide information to support the readers' understanding of key elements of this study:

Fargo Public School District (FPSD): The FPSD is located in southeast North Dakota along the Minnesota border and Red River of the North. The school district is the largest in the state in terms of student enrollment in grades K-12 with 10,500 students enrolled for the 2005-2006 school year.

District planning: A school district's vision and strategic plan intended for the staff and students of its school district.

Legislative mandates: Statutes passed by state legislatures that establish the governance and curriculum of the schools within their state.

No Child Left Behind (NCLB): The 2001 reauthorization of the federal Elementary and Secondary Education Act.

Professional development: Opportunities for teachers to engage in training providing the latest research to assist teachers with classroom practices.

Six Traits of Writing Model (STWM): A template intended to focus and analyze student writing skills based on six traits, which are ideas, organization, conventions, voice, word choice, and sentence fluency (Appendix A).

Staff: Certified classroom instructors.

Student performance: Standardized test scores gathered from students' work regarding a particular subject or content area.

Assumptions

An assumption of this study was the scoring of student writing samples between the three groups of teachers would be different from Groups A and B, Groups A and C, and Groups B and C. The assumption is, because of the different level of training, implementation, and practice, the teachers in the three groups will score the student writing samples differently.

Another assumption of this study was that student writing skills have improved and that the use of the STWM has had an impact on student writing skills.

Researcher Bias

The researcher is an employee of the FPSD and serves in a building in which the STWM is used.

Delimitations

Teachers who score the student writing samples may vary in training received in using the STWM, which could lead to discrepancies during the individual scoring of student writing samples. Additionally, the monitoring of the implementation of the program across the curriculum in the FPSD itself may vary during the course of the study at the elementary, middle, and high school levels. Also, teacher implementation of the STWM in the classroom setting may have varied over the course of the years being studied as well as the degrees of implementation at the different grade levels.

Overview

Chapter II includes a review of the literature. The methodology and design of the study are presented in Chapter III. Chapter IV presents the results from this study.

Chapter V will follow with a summary, discussion, conclusions, and limitations and concludes with recommendations for the FPSD and for future research regarding the STWM.

CHAPTER II

REVIEW OF LITERATURE

The researcher conducted a review of the literature to provide background information about the government's changing role in education and the testing and accountability requirements placed on educational institutions. Also reviewed were professional development models, change theories, complexity theories, adult learning theory, and models of writing programs available for schools. This information is reported in order to provide a research based foundation and a historical basis for this study and presented a base of information on why testing of writing skills is necessary.

Federal Government in Education

Thattai (2001) reports the early history of American public education was developed in the 19th century and "Jefferson was the first American leader to suggest creating a public school system" (Early History section, para. 1). Thattai reported the earliest form of public education was in the New England colonies of Massachusetts, Connecticut, and New Hampshire in the 1600s and found reformers becoming more engaged in securing education for all children by the mid 1800s. Leaders in the reform movement were:

Horace Mann in Massachusetts and Henry Barnard in Connecticut. Mann started the publication of the *Common School Journal*, which took the educational issues to the public. The common-school reformers argued for the case on the belief that common schooling could create good citizens, unite society and prevent crime and poverty. As a result of their efforts, free public education at the elementary

level was available for all American children by the end of the 19th century. (The Beginning of the Public Education System section, para. 1)

When Mann became secretary of education in Massachusetts, he “helped to create a statewide system of ‘common schools,’ which referred to the belief that everyone was entitled to the same content in education” (Wikipedia, n.d., History section, para. 5). Mann’s and other education reformers’ work in the mid 19th century served as the precursor to the creation of the Department of Education, as reported by the U.S.

Department of State (n.d.):

The original Department of Education was created in 1867 to collect information on schools and teaching that would help the States establish effective school systems. While the agency’s name and location within the Executive Branch have changed over the past 130 years, this early emphasis on getting information on what works in education to teachers and education policymakers continues down to the present day. (History section, para. 1)

Government involvement and commitment to education has evolved and continues today as politicians shape and mold educational policy found in the recent passage of the No Child Left Behind (NCLB) legislation. This law has many facets; but, in particular, the law has taken on the issue of accountability in public education. West (1995) asserts “the role of the federal government in educational affairs, federal intervention in the . . . funding [of] public education did not become influential until the beginning of the 20th century” (p. 4). The federal government has stayed out of education because of their interpretation of the Constitution and the belief that education was a responsibility of the state. However, NCLB suggests the federal government wishes to have some influence on the shaping of the educational system in the interest of the national needs.

In a question posed in the September 2005 Phi Delta Kappa/Gallup Poll about knowledge and views of NCLB, the following were noted:

- More Americans know more about NCLB.
- The more Americans know, the less they like it.
- Americans accept the goals but reject the strategies.
- If a large number of schools fail to make AYP, the public is at least as likely to blame the law as it is to blame the school. (Rose & Gallup, 2005, slide 5)

Emerick, Hirsh, and Berry (2004) reviewed accountability portions of the NCLB legislation to determine if highly qualified means high quality. The authors studied results from research conducted in 24 schools in 12 districts by the Southeast Center for Teaching Quality (SECTQ) in four states: Alabama, Georgia, North Carolina, and Tennessee. Emerick et al. identified a difference between the United States Department of Education (USDE) and teachers and administrators interviewed by the SECTQ regarding what a highly qualified teacher should look like. The USDE has “chosen to emphasize content knowledge and give little attention to instructional practice” (“Highly Qualified” Does Not Ensure High Quality section, para. 1). Further, the USDE requires teachers to pass a standardized test of content knowledge. In contrast, teachers and administrators interviewed by SECTQ indicated that content knowledge alone is insufficient criteria to label a teacher as highly qualified, but “called for additional emphasis on skills such as understanding the developmental stages of student learning, using multiple types of student assessment data, and revising instruction on a daily basis” (“Highly Qualified” Does Not Ensure High Quality section, para. 2). Three major findings from the survey conducted by SECTQ in which more than 160 educators

participated were that (a) “highly qualified” does not ensure high quality, (b) hard-to-staff solutions are hard to find, and (c) using the same approaches will lead to the same results.

We live in a society today that has reached new heights on expectations of what skills students should possess when they depart their formal K-12 educational experience (Lefkowitz, 2004). Carey (2002) believes that schools are being challenged to meet the demands of an economy that is increasingly orientated toward knowledge and information skills necessary to compete in a global society, which in turn leads to mandates. NCLB legislation passed by the U.S. Congress has raised the stakes of accountability and tried to define what a highly qualified teacher should look like or least possess in the ways of credentials. Additionally, Emerick et al. (2004) point out the best and worst case scenarios regarding NCLB: the best scenario being a sustained effort to recruit and retain quality teachers, and the worst scenario being capacity and expertise barriers too great to overcome.

The federal government’s role has traditionally been limited in scope in the funding and influence of the K-12 educational setting, but recent legislation and debates have crept into the national spotlight. Carey (2002) reported the need to produce citizens who can be creative and compete in a global economy has caught the attention of national leaders as well as state and local officials. There seems to be an underlying belief that a strong educational system is imperative to our success as a country on the world stage. Additionally, Carey reports, “the United States spent approximately \$412 billion on public elementary and secondary education during the 2001-2002 school year—making it the largest single area of direct public expenditure, exceeding even national defense” (p. 3). The figure includes funding from the federal level at 7%, the state level 49%, and

44% from the local level and includes all expenses incurred through staffing, retirement, buildings, transportation, and so on. This still does not seem to be enough, and the distribution of responsibility of funding seems to be lacking at the state level and burdensome at the local. West (1995) reports, “National education goals influence state and local educational goals, and the success of public education as a whole is dependent on the funding made available for public schools” (p. 13).

Providing funding and holding the recipients accountable for a measurable product have become political and cumbersome and policies surrounding the financing of public K-12 education are complicated. What does not seem to follow is the funding necessary to properly carry out the mandates for the increased cost of doing business. An example of an unfunded mandate can be found in the special education laws of NCLB, which has never been funded at the level that the federal government promised (Carey, 2002). Dewitt (2006) affirms the shortcomings in funding noted by Sen. Edward Kennedy’s comment that “the most recent appropriations bill ‘shortchanges’ NCLB by \$1 billion” (p. 1). The current education system provides legislative mandates and funding for K-12 education through federal, state, and local statutes and taxes.

Verstegen (2002) argues that the funding system that states have developed over the years is broken and it is long overdue for an overhaul. Verstegen states,

Current state school finance systems are antiquated and obsolete. They were created in the 1920s and 1930s to support a minimum education necessary to function effectively in an industrial era. Since then, nearly every other aspect of society and schooling has experienced dramatic change, yet school finance systems have remained largely the same. (para. 2)

Additionally, Verstegen (2002) notes, “the new finance systems should rest on a concept of quality education for all children, not basic or minimum education” (para. 3).

Verstegen also suggests changes offer a dramatic paradigm shift in the thinking of what education should mean beyond the minimum level as well as to whom defines and what quality education means and looks like. West (1995) reported that additional funding of the system should be provided: "Since 1917, there have been 44 state legal challenges to public K-12 school funding schemes" (p. 10).

Courts in America have also weighed in on educational issues regarding funding at the national and state levels. Court decisions and their influence have caused policymakers to revisit laws and scrutinize educational policy. Imber (2004) addresses equity and full state funding of education from a philosophical and legal point of view:

The philosophical answer is that it is simply wrong to favor some children and disfavor others in what the U.S. Supreme Court in *Brown v. Board of Education* called "perhaps the most important function of state and local governments." When, as is often the case now, the children most in need of education are the most disfavored, the wrong is compounded.

The legal answer is that as long as state constitutions place the ultimate responsibility for education with the state itself, the state has a legal duty to ensure that education is equitably provided to all its children. The state cannot avoid this duty by creating school districts and subjecting children to the vicissitudes of the communities in which they happen to reside. (*Equity vs. local control* section, paras. 4-5)

Testing and Accountability Requirements

Copland and Knapp (2006) suggest the demands of the public are reflected through the legislative mandates continually revised and changed by the political agencies which govern our society and that, for the past 100 years, public schools have been good at meeting the needs of some children. Copland and Knapp further note that, whether or not we agree with the politics that have shaped recent education policy, one thing is clear: It is imperative that all children learn to high standards. Merely meeting

the needs of some students is no longer good enough for today's public schools and the scrutiny of policymakers and citizens.

Testing and accountability of student performance is more frequent and has become increasingly definitive in the specific areas of what subject matter and when the testing should occur. The U.S. Department of Education (n.d.b) reports that, in 2002, President Bush signed into law the No Child Left Behind Act of 2001. This new law embodied an educational reform plan and has been the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since it was enacted in 1965. Additionally, it is reported that the new law redefines the federal government's role in K-12 education and is designed to help close the achievement gap between disadvantaged and minority students and their peers. This law has changed the culture of America's schools so that they define their success in terms of student achievement and invest in the achievement of every child. The act is based on four basic principles:

1. stronger accountability for results,
2. increased flexibility and local control,
3. expanded options for parents, and
4. an emphasis on teaching methods that have been proven to work.

NCLB and changes and modifications to the law continue to be made by lawmakers in hopes of making the bill more effective, educators more accountable, and providing a source of data collection that is measurable. Wagner (2003) addresses federal mandates that facilitate change as did the passage of NCLB and reports,

Now that many new state tests have been put in place, a great deal—and nothing at all—has changed in the universe of public education. What has changed is the frequency of standardized testing in schools and the consequences for educators and students of not performing well on these tests. (p. 665)

Accountability is addressed in the NCLB legislation by the U.S. Department of Education (n.d.a):

The NCLB Act will strengthen Title I accountability by requiring States to implement statewide accountability systems covering all public schools and students. These systems must be based on challenging State standards in reading and mathematics, annual testing for all students in grades 3-8, and annual statewide progress objectives ensuring that all groups of students reach proficiency within 12 years. Assessment results and State progress objectives must be broken out by poverty, race, ethnicity, disability, and limited English proficiency to ensure that no group is left behind. School districts and schools that fail to make adequate yearly progress (AYP) toward statewide proficiency goals will, over time, be subject to improvement, corrective action, and restricting measures aimed at getting them back on course to meet State standards. Schools that meet or exceed AYP objectives or close achievement gaps will be eligible for State Academic Achievement Awards. (Increased Accountability section, para. 1)

North Dakota Statutes

Statutes in education governing the citizens of North Dakota, found in Article VIII, Section 2 of the *North Dakota State Constitution* (2007), provide the legal framework for establishing education in the state of North Dakota. Article VIII, Section 2 states,

The legislative assembly shall provide for a uniform system of free public schools throughout the state, beginning with the primary and extending through all grades up to and including schools of higher education, except that the legislative assembly may authorize tuition, fees and service charges to assist in the financing of public schools of higher education. (p. 18)

Additional mandates are also found in the *North Dakota State Constitution* (2007). Article VIII, Section 4 gives the legislative body the authority to “take such other steps as may be necessary to prevent illiteracy, secure a reasonable degree of uniformity in course of study, and to promote industrial, scientific, and agricultural improvements” (p. 18).

Education and testing are primarily a responsibility of individual states. Testing requirements for state governing agencies of schools can be found in statutory requirements in every state. The *Cumulative Supplement of the North Dakota Century School Code* (2007) provides testing information in 15.1-21-08:

1. The superintendent of public instruction shall administer to public school students a test that is aligned to the state content and achievement standards in reading and mathematics. This test must be administered to all public school students in at least one grade level selected within each of the following grade spans: grades three through five; grades six through nine; and grades ten through twelve. Beginning no later than the 2005-06 school year and annually thereafter, the superintendent of public instruction shall administer the reading and mathematics test to all public school students in grades three, four, five, six, seven, eight, and eleven. (p. 105)
2. Beginning no later than the 2007-08 school year and annually thereafter, the superintendent of public instruction shall administer a test that is aligned to the state content and achievement standards in science. This test must be administered to all public school students in at least one grade level selected from three through five; in at least one grade level selected from six through nine; and in grade eleven. The superintendent of public instruction may not administer the grade eleven test after December first of each school year. (pp. 105-106)

Education is a responsibility of the states; however, unfunded mandates from both federal and state policymaking agencies make it difficult to meet all of the requirements placed on educational institutions. The U.S. Department of State (n.d.) reports that of an estimated “\$909 billion being spent nationwide on education at all levels for school year 2004-2005, about 90 percent comes from State, local, and private sources” (Overview section, para. 1). Equity and delivery of educational services are issues facing states; however, the adequacy issue of funding education remains in question. The NASBE Study Group on Funding Education in the 21st Century (1997) suggests a call for a national dialogue on school finance in which the following issues would be addressed:

- 1) Developing a statewide strategic plan for education and basing funding levels on what it will take to achieve the goals of that plan;
- 2) Targeting state funds in ways that research and best thinking say will most likely lead to achieving the goals. This will likely include increasing state department capacity to provide assistance; and
- 3) Helping schools and districts track and target their money to ensure they have the capacity to meet their individual needs and goals (and ensuring they have their own strategic plan and uniform accounting system in place that enables all concerned to see what the goals are and how the money is spent in terms of meeting those goals). This will likely increase state assistance and involvement with those districts that are not meeting goals. (p. 24)

Professional Development

Owens (2002) reported that human resources are valuable, and they must be properly prepared to do their work and have the necessary resources available in order to be successful. In the case of educational organizations, they are often the most valuable resources available to create and maintain a high-performing organization. Retaining quality teachers into the profession of education is a challenging, costly, and an ongoing process. Owens also suggests when building human capital, it is insufficient to assume that if employees do not actually quit, the state of the organization's human resource is acceptable. Carroll (2007) reports that teachers dropping out of education costs the nation over \$7 billion a year and states,

Until we recognize that we have a retention problem we will continue to engage in a costly annual recruitment and hiring cycle, pouring more and more teachers into our nation's classrooms only to lose them at a faster and faster rate. This will continue to drain our public tax dollars, it will undermine teaching quality, and it will most certainly hinder our ability to close student achievement gaps. (p. 1)

Professional development provides opportunities for teachers to participate in different types of training and learning experiences. Most professional development allows teachers to engage in opportunities to learn about the latest research in teaching

and learning. Smith and Gillespie (2007) define the traditional professional development model as “short-term or one-session workshops, trainings, seminars, lectures, and conference sessions” (p. 10). Fullan (1990) talks not only about staff development, but also institutional development as being important and that there are “changes in schools as institutions that increase their capacity and performance for continuous improvements” (p. 11). Fullan additionally asserts that when implementing change, collegiality and collaborative work cultures are likely to produce positive results for the staff and students.

Hawley and Valli’s (2000) learner-designed principles for professional development are more specific and identify a number of design principles for learner-centered professional development. The learner-designed principles are:

- Professional development should be driven by analyses of the differences between (a) goals and standards for student learning and (b) student performance.
- Professional development should involve teachers in the identification of what they need to learn and, when possible, in the development of the learning opportunity and/or the process to be used.
- Professional development should provide learning opportunities that relate to individual needs but are, for the most part, organized around collaborative problem solving.
- Professional development should be continuous and ongoing, involving follow-up and support for further learning, including support from sources external to the school that can provide necessary resources and outside perspectives.
- Professional development should incorporate evaluation of multiple sources of information on outcomes for students and processes that are involved in implementing the lessons learned through professional development.

- Professional development should provide opportunities to engage in developing a theoretical understanding of the knowledge and skills to be learned.
- Professional development should be integrated with a comprehensive change process that addresses impediments to and facilitators of student learning. (Learner-centered Design Principles section, paras. 3, 5, 9, 11, 13-14, 16)

Sparks (1994) made the observation that the stakes in education have never been higher. Therefore, professional development plans must look closely at how and what types of programs are introduced to achieve the means of increased student achievement and how change impacts the educational system. Sparks stated,

During the past 20 years, it has gone by many names—in-service education, staff development, professional development, and human resource development. But whatever it was called, it too often was essentially the same thing—educators . . . sitting relatively passively while an “expert” “exposed” them to new ideas or “trained” them in new practices. The success of this endeavor was typically judged by a “happiness quotient” that measured participants’ satisfaction with the experience and their assessment regarding its usefulness in their work. (para. 1)

V. Richardson (2003) adds that there has been concern and frustration by the fact that, while the research is evident on the characteristics of effective staff development programs, these features are not commonly seen in practice. V. Richardson asserts,

Most . . . staff development . . . conducted with K-12 teachers derives from the short-term transmission model; pays no attention to what is already going on in a particular classroom, school, or school district; offers little opportunity for participants to become involved in the conversation; and provides no follow-up. We have been engaged in this form of staff development for years, knowing full well that this approach is not particularly successful. (p. 401)

V. Richardson (2003) reports from many studies that research based professional development exhibits a number of different characteristics. Professional development should “be schoolwide, be long-term with follow-up, encourage collegiality, and foster agreement among participants on goals and vision” (p. 401). Additionally, V. Richardson

asserts there should be “a supportive administration; [teachers should] have access to adequate funds for materials, outside speakers, substitute teachers; acknowledge participants’ existing beliefs and practices; make use of an outside facilitator/staff developer; [and district leaders] develop buy-in among participants” (p. 401).

Thompson (2001) states, “We live in a time when both politicians and the general public are demanding educational accountability” (p. 361). The current climate in society regarding education is a concern of the citizens of states as well as the nation. The U.S. Department of Education (2002) states,

States can use the funds to improve teacher knowledge in one or more of the subjects they teach, increase skills in methods for improving student behavior, or learn how to teach students with disabilities. Yet, one-day or short-term workshops or conferences are no longer considered acceptable professional development experiences. (p. 1)

Zucker (2001) reported that there are a number of different professional development programs being utilized by districts across the country in the hopes of achieving the mandates set forth by elected officials. He further asserts that “we know more [now] than we did in the 1980s about providing professional development experiences that can lead teachers to change classroom practices” (para. 4). Zucker referred to “a three-year study of the Eisenhower Program [that] collected data each year from teachers in five states. The data . . . [revealed] that professional development does change teaching practice” (para. 4). Finally, Zucker offers three points of data showing how professional development does change teaching practices:

- If the activities are focused on specific higher-order teaching strategies; such as using problems that have no obvious solution;
- If certain structural features are present; for example, if the activity is organized as a study group or as a teacher network, if teachers are involved

for many hours and over a long period of time, and if several teachers who work together participate collectively; and

- If the nature of the activities is well-designed; for example, teachers have active learning opportunities, the content focus is clear, and the ideas being promoted are aligned with state and local goals and standards. (para. 4)

Professional development is a major planning component of school districts and requires time, the financial resources to sustain programs, staff buy-in, and administrative support. Maldonado (2002) states, “Professional development days are now considered a requirement for most teachers in grades K-12. In some states, maintaining a certain number of ‘professional development’ hours per year is necessary to remain certified” (p. 1). Maldonado reported that there are a number of effective ways that professional development can occur and are effective means by which student achievement improves. The effective professional development models reported are (a) content-specific material activities, (b) inquiry-based learning, (c) collaborative grouping, and (d) learning communities. Maldonado concludes his findings with this belief:

The structural and activity characteristics of an effective professional development need to be considered and implemented in a thoughtful and conscientious manner. Not only is it important to ensure that practices and strategies learned in professional development are implemented and extended in the classroom, the primary goal of increased student learning should occur as well. (p. 10)

Snow-Renner and Lauer (2005) provide a number of suggestions and recommendations in their work for McREL and their analysis of professional development. Their first recommendation is to strengthen the evidence base and should include rubrics in the design. Specifically, the authors target:

- Evidence that the professional development proposed is of high quality (e.g., has measures to ensure duration, considerable follow-up, active learning, and is focused on specific content and instructional strategies).

- Evidence that teacher instruction is examined as an outcome with descriptions of how instructional change is measured.
- Evidence that an achievement measure is used to assess impact on student learning and that the measure meets criteria for technical qualities (e.g., reliability, validity). While achievement on accountability measures is important, it also is important to measure student achievement on tests that are closely tied to the actual curriculum that the professional development addresses.
- Evidence that the research or evaluation design can attribute changes to the effect of the professional development. This may require comparing groups of teachers and students who don't participate in training or if that is not feasible, measuring teachers' attributions about changes in practice due to a professional development program. (p. 17)

Snow-Renner and Lauer (2005) suggest that a long-term view to professional development must be taken. Teacher instruction and student learning take time and in their review of the NCLB mandates they found that "NCLB's timeline for progress is too short and its accountability measures too far from the classroom for schools to see the effects of even high-quality professional development on student achievement" (p. 18).

Snow-Renner and Lauer (2005) also suggest that there needs to be a focus on the particular area of district and teacher need. The study points out that many small schools or remote schools simply do not have the resources or expertise to accomplish the necessary requirements without ample support. One way this might be addressed is through policy which supports technology-delivered professional development opportunities. Finally, Snow-Renner and Lauer recommend pooling intellectual and financial resources. This can be accomplished by states establishing clearinghouses containing professional development programs as well as examples of programs created by individual schools, districts, and vendors.

Change Theory

Change theories are a part of the psychological and social evolution of civilization and evident in research regarding human development. Current research regarding change continues to build upon the work of the earlier scientists in the study of change and human development. Hoy and Hoy (2003) state, “The most well known and widely used taxonomy [Bloom’s] is the **cognitive domain**. Six basic objectives are listed in this thing or cognitive domain (Bloom, Engelhart, Frost, Hill, & Krathwohl, 1956)” (p. 159):

1. *Knowledge*: Remembering or recognizing something without necessarily understanding, using, or changing it.
2. *Comprehension*: Understanding the material being communicated without necessarily relating it to anything else.
3. *Application*: Using a general concept to solve a particular problem.
4. *Analysis*: Breaking something down into its parts.
5. *Synthesis*: Creating something new by combining different ideas.
6. *Evaluation*: Judging the value of materials or methods as they might be applied in a particular situation. (pp. 159-160)

Theorists, medical researchers, social scientists, human scientists, as well as a multitude of other fields of study, continue to build and add to the work of their predecessors in their respective field. Baumgartner (2001) reports, “Theories [serve] as a . . . lens through which we view the life course; that lens illuminates certain elements and tells a particular story about adult life” (p. 29). Applied to the solitude of the classroom teacher, most teachers will fall into one of the four lenses, which are “behavioral/mechanistic, cognitive/psychological, contextual/sociocultural, and integrative” (p. 29). A closer look at Baumgartner’s work finds the behavioral/mechanistic approach views people as “machines whose response to external forces results in development. This [in turn] asserts that past behavior predicts future

behavior and that people's machine-like minds do not construct knowledge but instead absorb existing knowledge" (p. 29). The psychological/cognitive approach "focuses on an individual's 'internal developmental processes' in interaction with the environment" (p. 30). "The contextual/sociocultural perspective . . . works from the point of view that adult development cannot be understood apart from the sociohistorical context in which it occurs" (p. 30). "The integrated approach to adult development takes a holistic view of adult development. This perspective is focused on how the intersections of mind, body, and sociocultural influences affect development" (p. 32).

The idea of implementing a new program in an educational setting, such as the STWM, may change teaching styles and methods of assessing student writing samples. Bridges (2000) defines change as "*an event that is situational and external to us*" (p. 5) and further theorizes,

[Change] occurs when something old stops and something new starts. The change may be a work or life event, such as a new job, . . . a new relationship, a geographic move, someone leaving your work-team, someone joining your work-team, the completion of a project, a merger or downsizing, or the announcement of a new policy. (p. 5)

Complexity Theory

A challenge facing educational leaders when any change regarding professional development occurs that involves a paradigm shift is anxiety and chaos. Hord, Rutherford, Huling-Austin, and Hall (1987) report that change is a process, and "one of the most persistent tendencies of those who do not appreciate the complexities of change is to equate change with handing over a new program" (p. 5). Hord et al. also suggest that change is accomplished by individuals, is a highly personal experience, involves growth—all intertwined to some degree and relatively complex in its makeup. These

concerns are confirmed by Zellermyer and Margolin (2005) in their work regarding the complexity theory. Their work focused on student teacher supervisors in an elementary teacher training program at a four-year college and found anxiety, chaos, and a lack of direction for those involved challenging, frustrating, insightful, and thought provoking. An implication of their work states, "Complexity theory allowed us to recognize that agents may change themselves but are usually unable to change others. As they change, the community as a whole changes" (p. 1302). Zellermyer and Margolin's work indicates that the process of change, while chaotic, does occur, is transitional, and is complex.

Adult Learning Theory

The term lifelong learning has become commonplace in the vernacular of societies worldwide. As societies continue to evolve and communication is more readily available, so do new avenues of learning surface. Brookfield (in press) states, "Despite the plethora of journals, books and research conferences devoted to adult learning across the world, we are very far from a universal understanding of adult learning" (p. 1). Brookfield specifies four major areas of research regarding adult learning: the self-directed learner, the critical reflective learner, the experiential learner, and the learning to learn or lifelong learners. Imel (1999) adds to this list by identifying the transformative learner, the adult learning occurring in relation to technology, and the increasing popularity of collaborative/group learning. Drago-Severson et al. (2001) found how the developmental levels of learners shape their experiences in their literacy programs:

Development, from our point of view, involves more than learning new skills or acquiring new knowledge, which we refer to as informational learning. Development also involves transformational learning: a qualitative shift in how people know and understand themselves, their worlds, and the relationship between the two. (p. 6)

Lieb (1991) suggests a number of strategies instructors might use to understand how adults learn best and identified characteristics of adult learners. Lieb found that learners being autonomous, self-directed, having the freedom to direct themselves, and an accumulation of life experiences shapes the knowledge base of learners. Lieb adds that additional strategies might include goal setting by adults which leads to obtaining an objective, understanding the relevance of learning, and the practicality on why learning something may be of use to them in their work and as an adult. Finally, adult learners need to be shown respect during the process of learning.

Helsing et al. (2001) view adult development as “a lifelong process, meaning that even as adults we continue to grow and become more complex” (p. 10). Additionally, Helsing et al. identified the three most common levels of development for adults for speakers of other languages: instrumental, socializing, and self-authoring. Helsing et al. found “learners with an Instrumental way of knowing wanted their teachers to provide clear explanations, corrections on written and oral work, and step-by-step procedures [for directions and] . . . identified good teachers as those who made them learn” (p. 13). The instrumental learners view knowledge as a kind of possession and a means to an end. Additionally, instrumental learners view knowledge as a right or wrong, comes from an external authority and serves to meet one’s goals and objectives.

Helsing et al. (2001) report the “socializing learners . . . felt supported in their learning when teachers explained concepts well and talked slowly . . . [and] expected

their teachers to value their ideas and themselves” (p. 13). The socializing learners view knowledge as general information that one should acquire in order to understand social roles and meet the expectations of authoritative figures. The socializing learner also views knowledge as an objective truth and sees knowledge being handed down by experts and authoritative figures.

Helsing et al. (2001) found the self-authoring learners “saw their teachers as authorities and sources of knowledge, . . . [and] viewed themselves and each other as generators of knowledge” (p. 13). The self-authoring learners view knowledge as tools for analyzing experiences and the desire to learn comes from a self-driven desire to learn. The self-authoring learner also sees knowledge as a means to broaden one’s understanding of self and their contribution to society. Finally, their study also found that “learners . . . were experiencing multiple types of changes that influenced several, if not all, aspects of their lives. . . . As learners extended their skills and knowledge, their confidence and feelings of success also grew” (p. 14).

Teacher Induction

Auton, Berry, Mullen, and Cochran (2002) suggest evidence exists to move forward and utilize some of the existing programs for staff development which improve teaching practices and, in theory, student performance. Some programs in place, such as teacher induction, hope that by “paying attention to quality professional learning for beginners, the district also increased quality professional learning for veteran teachers” (para. 1). Auton et al. also found that teaching coaches, usually veteran teachers who learned from their experiences from being a coach, learned more about their profession

and felt that they had improved as teachers. Some areas identified specifically in

Auton et al. (2002) found:

- An increased appreciation for reflective practice which coaches realized they were more reflective of their own teaching techniques.
- A greater sense of effective teaching in their own classrooms which led to bringing new ideas into their classrooms.
- A different and new perspective on professionalism which the coaches felt taught them to be better leaders and being problem solvers, rather than part of the problem.
- A renewed sense of commitment to teaching with enthusiasm that helped them to fulfill professional desires.

Cherubini (2007) provides a definition for the theoretical grounding of teacher induction, which “is generally understood as ‘the support and guidance provided to novice teachers in the early years of their teaching careers’” (p. 2). He further reports that “induction programs be attentive to beginning teachers’ ‘instructional, professional, cultural, and political needs’” (p. 2). Cherubini also reported that Canadian educational systems are looking at American institutions and how they are working with institutions of higher education to provide teacher training using the induction model. Canadians appear interested in this model with the hope of having teachers better prepared when entering the classroom as well as retaining teachers once they are in the field.

Collaboration

Garmston (1997) reports, “For students to benefit from adult collaboration, educational communities must learn to collaborate. Some of this can be taught. Some not” (para. 5). Garmston offers three goals that evoke the benefits of collaboration:

1. Collaboration means working together to invent, create, solve problems, and produce results, which, in turn, offers support to peers and is conducive to moving toward a common goal.
2. Collaboration moves staffs from isolation to integration and offers the reward of cumulative effects of improvements of the collective whole.
3. Collaboration requires the use of more complex and intertwined teaching skills to the point where teachers are able to perform instinctively in different settings without giving much thought to the process. “Just as accomplished chess players can envision several possible moves on the board without consciously employing step-by-step strategies of analytical thinking, our goal is [to] make collaboration automatic” (para. 27).

Murphy (2001) advocates the team approach to staff development and asserts that “effective staff development requires staff members to learn and apply collaborative skills to conduct meetings, make shared decisions, solve problems, and work collegially” (para. 1). School leaders can assist by ensuring that teachers have time, support, and an environment where teachers feel comfortable practicing collaborative skills. This, in turn, is intended to lead to better and more collaborative decision making and more effective teaching practices as a greater base of knowledge is tapped for its experience.

Fulton, Burns, and Goldenberg (2005) studied teachers learning in a networked community. Their research indicates that collaborative work among veteran and new teachers can benefit from the use of technology in new and exciting ways. This is not only effective and collaborative within their own building, but also branches out to districts within their state and beyond and creates a much larger network of teachers collaborating. Fulton et al. report, "One-third of America's new teachers leave teaching sometime during their first three years, and almost half depart after the first five years" (p. 2). The pairing of veteran teachers, along with new teachers, will aid in retaining teachers in the profession by offering a new and well networked meshing of support from experienced teachers providing support and feedback to teachers new to the profession. Fulton et al. suggest the intent of this technological collaboration is to provide a network structure that "will facilitate resource sharing and collaboration both *within* and *across* districts" (p. 2), with the hope that it will enable new teachers to become successful.

Peer Reflective Practice

Distad, Chase, Germundsen, and Brownstein (2000) suggest that putting heads together and peer reflective practice groups are an effective way to tap a great wealth of knowledge. Reflective practice groups hope to reveal the challenges teachers face and examine individual teaching practices. Distad et al. suggest,

Although good teachers have always reviewed their teaching and adjusted their practices, reflection was often a solitary process. Sharing professional issues and teaching dilemmas with other teachers can improve teacher effectiveness, student learning, and professional satisfaction. (para. 1)

Dunne, Nave, and Lewis (2000) confirm the theory that peer reflective practice and putting heads together was more satisfying for teachers in comparison to other forms of professional development and reported three reasons why:

- It is continual.
- It is focused on their own teaching and their own students' learning.
- It takes place in a small group of supportive and trusted colleagues within their own school. (Collaborative Professional Development section, para. 5)

Another type of professional development opportunity available is peer reflective practice and is reported by Ferraro (2000). Her work found that reflective practice provided teachers with a deeper understanding of their own teaching style and eventually led to a more effective teacher. Ferraro reports that reflective practice was introduced by Donald Schon in 1987 and recommended,

Reflective practice . . . [is] a way for beginners in a discipline to recognize consonance between their own individual practices and those of successful practitioners. As defined by Schon, reflective practice involves thoughtfully considering one's own experiences in applying knowledge to practice while being coached by professionals in the discipline. (p. 2)

Mentorship

Another type of professional development that has been gaining acceptance and use by school districts is mentoring. Davis (2001) found that it is beneficial to utilize the mentor and mentee model and reports that mentoring was not a common practice a few years ago. Also, Davis found that educators recognized mentorship as a productive relationship between an experienced teacher and one new to the profession. Ingersoll and Smith (2004) wrote, "The overall objective of teacher mentoring . . . is to provide newcomers with a local guide" (p. 30). Ingersoll and Smith also suggest mentorship is appealing in the sense that it provides for newcomers another professional to assist during indoctrination into a new institution and should include:

- [A] mentor . . . in the same subject area

- [Assessment of the] degree of helpfulness of the mentor provided
- Participation in seminars or classes for beginning teachers
- [A] common planning time with other teachers in their subject area
- [Have] regularly scheduled collaboration with other teachers on issues of instruction
- [Participation] in a network of teachers (e.g., one organized by an outside agency or over the internet)
- [Have] regular supportive communication with their principal, other administrators, or department chair
- Reduced teaching schedule
- Reduced number of preparations
- Extra classroom assistance (e.g., teacher aides). (p. 33)

Ingersoll and Smith (2004) suggest it is beneficial to have the mentor and the mentee in the same curriculum area. However, it is not mandated that it be done this way and may be impossible for small teaching staffs as resources are limited. There is not a set formula for mentors or mentorship programs, but professional relationships gleaned from such an experience may last for years.

Teacher Portfolios

Another model of professional development that might be utilized by school districts is teacher portfolios. J. Richardson (2003) writes, “Both the adult learners and staff development leaders bear responsibility for ensuring that what is learned is later used in practice” (para. 4). Hawley and Valli (2000) report, “After decades of debate, educators and policymakers, as well as the general public, are coming to the realization that the most powerful influence on students’ learning is the quality of teaching that students experience” (para. 1). Hawley and Valli further assert if we continue to conduct

professional development as we always have via workshops, conferences, and presentations, we can “expect little return on our investments” (para. 1). Additionally, Hawley and Valli suggest that their learner-designed principles are a new means by which to conduct meaningful professional development.

Andrejko (1998) advocates the use of teacher portfolios as a means of assessing teachers’ knowledge, delivery methods, and understanding of content. Andrejko states, “Teacher portfolios can be powerful tools for gathering information about teacher practice and evaluating the progress being made toward goals set by our building, our district, and our profession” (para. 1). Andrejko also suggests that any method of staff development intended for the purpose of improving teaching practices are welcome as long as the outcome improves student learning. He further asserts the portfolio process is one means by which teachers can begin by articulating their goals for the year, plan how to implement their goals, build a portfolio to support their professional development experiences over the course of the school year, select samples of their work which they believe exhibit growth as a professional, and reflect on accomplishments and shortcomings once they have gone through the school year.

With the information age upon us with the rapid development of technological tools available, portfolios are easily stored and readily available from year to year. Interactive Television (ITV) course offerings, Blackboard opportunities, online courses, as well as a continued barrage of technological advances, continue to provide new and different avenues for teachers to learn, build, create, and add to their portfolios. With changes that continue to impact the methods of educational delivery, teachers need to be well prepared for the future. Cook (2002) points out that there are 25 states, which

permit cyber charter schools, and that Pennsylvania already has seven cyber charters. With the rate by which these schools are coming online, there are bound to be issues of quality, competence, and adherence to federal, state, and local guidelines. This particular venue of delivery of educational services is fast moving, ever changing, and constantly evolving. Maintaining an up-to-date portfolio will keep teachers abreast of constant changes and put teachers in a better position to be prepared to meet the changing needs of the educational community.

Teaching Writing Skills

Research for several methods of professional development for teachers and the impact or effectiveness that each may have on student learning have been explored. Specific programs used for the intent of improving writing skills are available for school districts to use when planning professional development.

The 6 + 1 TRAIT Model focuses on specific skills and provides a framework for assessing student writing samples. Culham (2003), in *6 + 1 Traits of Writing*, provides background data on this model: “In the mid 1980s, researchers from the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon, took the lead in developing a performance assessment for writing that was comprehensive, reliable, and teacher- and student-friendly” (p. 10).

During the early phases of this research, a review of literature uncovered “the work of another pioneer, Paul Diederich (1974), and assimilated his thinking and research into their own” (p. 10). Diederich had identified five characteristics that were common among readers: ideas, usage, organization and analysis, wording and phrasing, and flavor (Culham, 2003).

It is this significant work, and that of others such as Alan Purves (1992) in his decade-long study on international writing assessment, that served as springboards for the development of the 6 + 1 TRAIT model. The teachers' research process ensured that the model was grounded in experience and empirical research. (Culham, 2003, p. 11)

Spandel (2001) confirms that "among the true pioneers in this effort is Paul Diederich (1974), whose early research in identifying and describing the salient traits of quality writing yielded some of the clearest and most precise definitions up to that time" (p. 40). The 6 + 1 traits used today includes ideas, organization, voice, word choice, sentence fluency, conventions, and the + 1 is presentation (Culham, 2003).

Another model for teaching writing skills is Writing in the Content Areas Benjamin (1999). Benjamin teaches English and is the department leader at Hendrick Hudson High School in Montrose, New York, and an adjunct professor at Brooklyn College. Benjamin's work is broken down into two parts—Part I: Steps and Strategies, which offers a basic guide to approach learning through writing in the content areas, and Part II: Applications, which addresses the writing process in subjects other than English. Writing in the Content Areas does not address specific traits, but focuses on concepts identified as steps and strategies, such as framing the task, support, short statements, vocabulary, and organizers (e.g., frames, clusters, and stems). In the applications portion of the focus on writing in the content areas the focus is the writing process across the board, journaling and notebooks, note-taking for future use, and research and investigation for a more in-depth and comprehensive writing project. This model lends itself to developing writing skills via building blocks and writing specific to pre-determined needs not only in the language arts curriculum, but to the other disciplines in the field of education (Benjamin, 1999).

Description of the Model

The STWM has been in use by the FPSD for the last six years. It was introduced to the district upon the arrival of a new superintendent in 2002. Gigstad and Malm (2002) provide information regarding the STWM and identify six characteristics of student writing samples:

1. Organization: focuses on the structure, sequence, and connections of students' work;
2. Conventions: focuses on the mechanics, grammar/usage, and editing of students' work;
3. Ideas: focuses on the concept of the content and examples and details of students' work;
4. Voice: focuses on students' work as it relates to audience, purpose, and point of view;
5. Word choice: examines students' use of vocabulary, meaning, and message in their writing; and
6. Sentence fluency: examines sentences for flow, style, and rhythm.

A prompt, which is an idea or theme, is pre-determined prior to the students engaging in a writing exercise. Once the prompt is determined, the writing process begins. Teachers who score the writing samples use standardized scoring rubrics, referred to as the STWM scoring rubric, for each of the six traits and score student writing samples in team formation. A scoring rubric is used to analyze student work on various topics selected for writing samples. Modes of writing utilized for obtaining student writing samples include descriptive writing, narrative writing, expository or

informational writing, persuasive writing, technical writing, and business writing (Gigstad & Malm, 2002).

Student Performance

For each student writing sample, each one of the six traits is graded against a five-point scoring rubric, 1 representing the weakest and 5 representing the strongest usage of the six traits (Appendix B). For each of the traits, at least two teachers score the same student writing sample. Once this has been completed, the teachers who scored the same writing sample compare and discuss the scores assigned to the different rubrics. If there is a discrepancy regarding the scores, they discuss the rubric until they agree upon the same score. This process is how scores are calibrated. The calibrated score is then the final score assigned to that particular writing sample. All writing samples are scored using the same rubric and are calibrated by teachers who have been trained to use the STWM (Gigstad & Malm, 2002).

Fargo Public School District

Student writing samples from the Fargo Public School District provide the data for this study. The *North Dakota School District Profile Demographics 2005-2006* (North Dakota Department of Public Instruction, 2007) provides the following information about the Fargo Public School District:

District

Grades Served	K-12
Number of Schools	22

<u>Grade Level</u>	<u>Enrollment</u>	<u>FTE Classroom Teachers</u>
K-6	5656	254.5
7-8	1704	70.53

9-12	3387	175.15
Total K-12	10747	500.18

<u>Full-time Equivalent Staff in School District</u>	<u>FTE</u>
Admin/Superintendents, Principals	36.17
Classroom Teachers	500.18
Other Licensed Staff	319.62
Support Staff	414.4
Total FTE Staff	1270.37

(p. 2)

Selection of the Six Traits of Writing Model

The STWM has evolved and been adopted by school districts across the United States. It offers a template for assessing student writing samples with specific and defined standards of what skills students are expected to demonstrate. Richardson (2000) states, "To be effective, teachers must know their subject matter so thoroughly that they can present it in a challenging, clear, and compelling way" (para. 2). If this is true, then teachers must also possess tools and assessment models which are clear and can provide valid data to determine the effectiveness of their teaching. The STWM is one instrument that does provide feedback.

History of Planning

The history of planning for the implementation of the STWM was gleaned from a teacher in the district who has been instrumental in the research and incorporation of this model into the FPSD. This information is from an interview (S. Gigstad, personal communication, October 28, 2006) conducted by the researcher.

Nygaard: All right, let's get going here. Uh hum, how was it determined that the six traits model would be used in this district?

Gigstad: I don't have the date; do you know the starting date?

Nygaard: I'm thinking four, five years ago.

Gigstad: Oh, I'm thinking a little longer than that. We'd have to go back to when Dr. Chin was here. Um, after Dr. Flowers arrived and you know he was very concerned with writing and writing to learn, um, he invited Dr. Beverly Chin from Missoula. OK, if we can find that date, I honestly don't know offhand, but it must be six/seven years ago at least. So Dr. Chin came in the summer and all the administrators and a few teachers spent three days with her in August, and then that was fall.

Nygaard: And how was it determined that it would be Dr. Chin and not Dr. Peters?

Gigstad: I don't know; you'd have to ask Dr. Flowers that.

Nygaard: You don't know why this particular . . .

Gigstad: I believe he had met her at a conference or had seen her or something like that. She came and spent a whole week plus doing professional development with writing, um, K-12, and heavily attended, um, by administrators, OK, then that fall on a totally separate issue about 20 elementary teachers went to a little conference type thing in Minneapolis, pretty sure it was Minneapolis. I learned about that via the language arts study committee, so maybe October/November, whatever, um, it was reported by someone that these elementary teachers had gone to a six traits conference and were just enthralled and came back and said, "Oh, we have to do this, we have to have it."

If you're a language arts teacher it was really six of one and a ½ dozen of the other and in fact it wasn't until years later that we discovered that Dr. Chin actually had written the preface for Ruth Culham's book with Culham who was the six traits guru, so their all intermingled.

Nygaard: Oh, OK.

Gigstad: But, we didn't know that at the time. So they came back and said we want six traits. So, via elementary, district office, whatever, it was decided that we would go with the six traits.

Nygaard: So, really it came from the ground up.

Gigstad: Um, huh, ah, we were a little, hmm, hesitant just because all of this time and money had been spent with Dr. Chin and they didn't research very well. In fact she came back that following January and looked at a few of us and said, "What happened, what's going on?" Because it was obvious to her something had occurred, just happened, and we explained this very situation, and she smiled and said, "I know these people because I have worked with them." Too bad it hadn't all kinda come together in the beginning. So that's how it went to six traits. Then we in the next year, I believe it was the next summer. Instead of sending secondary people to a six traits conference (whisper: They couldn't spend the money on us). So they brought someone in from six traits, they couldn't get the, Vicki Spandel was the original head honcho. But, by that time she had broken off and formed her own little thing, ah, Ruth Culham took over; we couldn't get her so we had

someone named Sally Shore come in and train us that summer, Sally Shore. She was pretty mediocre as far as we were concerned. We were trained at the, I believe it was the Doublewood Inn probably, no, Holiday Inn, um, a lot of elementary again; we were trained but it was very elementary orientated so we had to come up with something better (Nygaard: Uh huh), and so that following year is when Mary Ann and I started making this class, because Dr. Flowers decided everybody in the district would be trained (Nygaard: OK). Elementary was to take care of K-6 and we were supposed to take care of 7-12.

Implementation of Six Traits of Writing Model

In the summer of 2002, the FPSD offered in-service training for teachers in the district. The in-service was "Writing Across the Curriculum Using the 6-Traits of Writing Model" (Ringdahl et al., 2002). A summary of the results and purpose of the project found participants of this summer writing project worked collaboratively to research and develop an understanding of the STWM, create a yearlong calendar for STWM introduction and implementation, design curriculum (multiple lesson plans) for each grade level, and gather and condense training information for all staff. This district initiative specified,

The focus of the 2002-2003 school year will be primarily in introducing and encouraging staff to utilize the 6 Traits of Writing in their classroom. Staff will be trained on each trait approximately one month prior to classroom implementation by the summer writing participants. Additionally, staff will be encouraged to attend workshops conducted throughout the year to gain a better understanding of the model. Each staff member will be provided with a binder of information including a brief synopsis of each trait, rubrics for evaluating each trait, and a collection of lesson plans written by this year's summer writing participants. Throughout each month of the school year, staff will be learning about each trait and will then be expected to implement it in their classrooms. A

student writing sample will be collected prior [to] teaching the students the 6 Trait concepts and at the conclusion of teaching all 6 traits. A school-wide finale (wrap up) will take place in May, 2003. (p. 1)

Summary

The researcher reviewed legislative mandates placed upon education. The researcher also studied change, learning and professional development theories, staff development models, selection of the STWM and a description, a school district profile, the history, and additional data gleaned from interviews.

The methodology and design of the study are presented in Chapter III. Chapter IV presents the results from this study. Chapter V will follow with a summary, discussion, conclusions, and limitations and concludes with recommendations for the FPSD and for future research regarding the STWM.

CHAPTER III

METHODS

Chapter III presents the methods that guided the research study. The chapter includes the study's purpose and provides the description of the instrument, population, the data collection format, and data analysis format.

Purpose of the Study

This study had two purposes. The first purpose was to investigate the professional development training teachers have received on the STWM or other writing programs. A qualitative survey was given to the teachers in Groups A, B, and C to solicit responses and perceptions that they have on writing programs.

The second purpose was to investigate the reliabilities of three groups of four English teachers' scoring of 30 randomly selected student writing samples gathered during 2005, 2006, and 2007 in the FPSD. The 12 teachers were separated into three groups. Group A served as the control group as they had been trained in using the STWM and presently collect and score student writing samples. Group B had been trained in the use of the STWM, but had not scored student writing samples. Group C had not received training using the STWM, nor had they scored student writing samples using the STWM scoring rubric.

The STWM was first used in the FPSD beginning the school year of 2002-2003. Writing samples using the STWM have been collected since the 2002-2003 school year.

Both the model and the rubric were introduced to the district upon the arrival of the new superintendent. Since its adoption, the STWM has been modified by school district representatives to fit the needs of the FPSD. All teachers in the FPSD have been trained in using the STWM and, every year, teachers new to the district are trained in using the STWM. The STWM is incorporated district wide and utilized in all curriculums.

This study included 30 student scored writing samples collected randomly from grades 9 and 11 compiled by the FPSD during 2005, 2006, and 2007 school years. The findings of this study may assist the district in continuing this program, utilizing different components for professional development, or an abandonment of the Six Traits of Writing Model because of lack of effectiveness in achieving positive results.

Research Questions

The following research questions guided this study:

1. Has the STWM writing program impacted student writing skills as perceived by the English teachers?
2. What were the reliabilities of the three groups of teaches rating the writing samples?
 - a. Group A: Four English teachers trained in the STWM and have scored students' writing samples in the years of 2005, 2006, and 2007 using the STWM and the STWM scoring rubric.
 - b. Group B: Four English teachers trained in the STWM but did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.
 - c. Group C: Four English teachers NOT trained in the STWM and did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.

Population

Three groups of teachers were selected for this study based on their training and scoring and knowledge of the STWM. The three groups have distinct and specific characteristics regarding their professional development and knowledge of the STWM. The teachers agreed to this study and were mailed or delivered a survey participation form detailing the purpose of the study (Appendix C). The description of the three teacher groups includes:

- Group A: Consists of four English teachers employed by the FPSD who have been trained in use and scoring of the STWM and served as the control group for this study.
 - This group has been scoring student writing samples regularly since the inception of the use of this model.
 - The control group scored the randomly selected writing samples for this research during the 2005, 2006, and 2007 school years.
 - This group of teachers has scored writing samples together since the 2002-2003 school year, and score approximately 850 writing samples as a group each year.
- Group B: Consists of four English teachers employed by the FPSD who have been trained in use and scoring of the STWM.
 - Group B teachers have never scored a writing sample, but two of the teachers have worked with the teachers from Group A as colleagues during the same time period.

- The other two teachers from Group B had been trained but had only worked with the Group A teachers as colleagues for a short amount of time.
- Group C: Consists of four English teachers not employed by the FPSD who have NOT been trained in use and scoring of the STWM.
 - Group C has had little, if any, exposure to the STWM.

Description of Writing Samples

The randomly collected writing samples for this study were writing samples submitted by students attending a high school in the FPSD. The writing samples were from students who were in either grade 9 or 11 during the 2005, 2006, and 2007 school years.

The researcher randomly selected 10 student writing samples from each year: 2005, 2006, 2007. Every fifth writing sample was selected from the collection of student writing samples maintained by the FPSD for each year until a total of 10 writing samples for each year were collected. Because the writing samples were randomly selected, it is possible to have a writing sample from a student who was a freshman in 2005 and a junior in 2007.

Description of Rubric for Scoring Writing Samples

The STWM includes the STWM scoring rubric, which has been in use by the FPSD since the 2002-2003 school year. Both the model and the rubric were introduced to the district upon the arrival of the new superintendent. Permission was granted by the FPSD to conduct this research (Appendix D) and to use the STWM and FPSD student writing samples.

Prompts were used to create student writing samples that the district collects every year. The prompts utilized in the STWM and used by the FPSD for obtaining student writing samples include descriptive writing, narrative writing, expository or informational writing, persuasive writing, technical writing, and business writing (Gigstad & Malm, 2002).

The STWM scoring rubric provides a template to support teachers' continuity of assessment of student writing samples. The STWM scoring rubric includes:

- Organization: focuses on the structure, sequence, and connections of students' work;
- Conventions: focuses on the mechanics, grammar/usage, and editing of students' work;
- Ideas: focuses on the concept of the content and examples and details of students' work;
- Voice: focuses on students' work as it relates to audience, purpose, and point of view;
- Word choice: examines students' use of vocabulary, meaning, and message in their writing; and
- Sentence fluency: examines sentences for flow, style, and rhythm.

The STWM scoring rubric was used to analyze student work on various writing topics selected for writing samples (Gigstad & Malm, 2002).

Collection of Data

The researcher used the following steps to gather data and information for this study:

Step One: The researcher collected the writing samples for this study from the FPSD school librarian who keeps copies of yearly scored student writing samples by English teachers. All of the original writing samples and scores since 2002 are housed at the district office. The librarian is also trained in scoring student writing samples and has worked with the STWM since its implementation in the FPSD. The librarian serves as the liaison to the teachers who score the writing samples and district offices which compile and maintain the scores every year.

Step Two: Every fifth writing sample was selected (i.e., 5, 10, 15, 20, etc.) from the collection of student writing samples maintained by the FPSD for each year until a total of 10 writing samples for each year were collected. Because the writing samples were randomly selected, it is possible to have a writing sample from a student who was a freshman in 2005 and a junior in 2007. Ten randomly selected writing samples from the year of 2005, the year of 2006, and the year of 2007 were collected. Writing samples selected had been scored and calibrated by the Group A teachers trained in the STWM. A total of 30 scored writing samples of students' work were collected. The writing samples were then distributed to teacher Groups B and C to assess and score. The teachers from Groups B and C did not have access to the original writing sample scores by teacher Group A.

A writing sample consists of a writing prompt presented to students. Students are instructed to write a paragraph. The paragraph in length should be a minimum of seven to eight sentences and should not be longer than one page in length.

Distribution of Writing Samples

Teacher Group A had already scored the writing samples used for this study and had no need to revisit the writing samples. Each of the 30 samples were coded numerically and by year.

Teacher Group B received the directions and writing samples via hand delivery. Each returned the scored writing samples in an envelope provided by the researcher. The teachers were asked to return their scored writing samples within 10 days to the researcher's mailbox.

Teacher Group C received the writing samples with instructions for assessing and asked to return the writing samples via the U.S. Mail service. They were provided postage and an addressed envelope to return the scored writing samples back to the researcher within 10 days.

If teacher Groups B and C did not return the writing samples within the given time frame, the researcher followed up with a phone call.

Scoring Collection

Groups B and C received a copy of the five-point scoring rubric for the STWM, which Group A trained teachers currently use.

Groups B and C were instructed to read the writing samples and assign a score on a scale of 1 to 5 for each of the six traits. Each teacher was asked to score the writing samples alone, using the STWM scoring rubric provided, and to not share or discuss this process with other professionals.

A scoring template was created with each of the six traits listed. Teachers were asked to place their scores on the scoring template in accordance with the writing sample they were scoring (Appendix E).

Timeline

Groups B and C were asked to score the writing samples within a period of two weeks. The writing samples were either hand delivered or mailed to the teachers of Groups B and C on January 21, 2008, and returned no later than February 5, 2008.

Survey Instrument

A survey regarding professional development was created by the researcher and distributed to all 12 teachers in this study. The survey was developed through a review of the literature, input and suggestions from the STWM teacher trainers, as well as administrative staff in the FPSD (Appendix F). The survey focused on (a) training received regarding scoring student writing samples and (b) scoring of student writing samples using a scoring rubric provided.

Procedures for Data Analysis

The survey results will be analyzed using qualitative methods of research. Codes, key words, patterns and other analytical data that emerge from the survey data will be identified by the researcher, advisor, and selected faculty members. Data from the survey will be reported in Chapter IV in narrative form.

Quantitative data compiled are presented in table format. The scoring of 30 student writing samples returned by the 12 teachers was entered at the Bureau of Educational Services and Applied Research at the University of North Dakota. Statistical

methods of analysis utilized for this study included ANOVA, t-test, and Cronbach's alpha. Chapter IV presents the results from this study.

Chapter V will follow with a summary, discussion, conclusions, and limitations and concludes with recommendations for the FPSD and for future research regarding the STWM.

CHAPTER IV

RESULTS

This study had two purposes. The first purpose was to investigate the professional development training teachers have received on the STWM or other writing programs. A qualitative survey was given to the teachers in Groups A, B, and C to solicit responses and perceptions that they have on writing programs.

The second purpose was to investigate the reliabilities of three groups of four English teachers' scoring of 30 randomly selected student writing samples gathered during 2005, 2006, and 2007 in the FPSD. The 12 teachers were separated into three groups. Group A served as the control group as they had been trained in using the STWM and presently collect and score student writing samples. Group B had been trained in the use of the STWM, but had not scored student writing samples. Group C had not received training using the STWM, nor had they scored student writing samples using the STWM scoring rubric.

The data results are presented following the sequence of questions on the survey. Of 12 surveys administered, 11 were returned. Teachers 3 and 4 from Group A combined their answers and turned in one survey.

It is likely that because of how an individual responded to survey question number 6 there was no reason to answer any of the remaining questions. If a teacher responded "no" to question 6, they were finished with the survey. This fact gives

substance to why there were so many “no responses” from the teachers to questions 7 through 10. This will be discussed further in Chapter V in the limitations section of this study.

The first three questions of the survey collected teacher demographic data. The 10 open-ended questions collected data regarding professional development and the teachers’ perception regarding the STWM. The following tables and narrative response report the findings of the survey.

The STWM was first used in the FPSD beginning the school year of 2002-2003. Writing samples using the STWM have been collected since the 2002-2003 school year. The STWM was introduced to the district upon the arrival of a new superintendent. Since its adoption, the STWM and the STWM scoring rubric have been modified by school district representatives to accommodate the needs of the FPSD. All teachers in the FPSD have been trained in using the STWM and, every year, teachers new to the district are trained in using the STWM. The STWM is incorporated district wide and across the curriculum. The data are presented in tables and narrative responses.

Survey Questions: Demographics

Teachers 3 and 4 from Group A reported their answers together and returned one survey.

Note that 7 of the teachers in this survey had 11 or more years of teaching in the classroom and 6 of the 7 were from the FPSD. Three of the teachers in Group C, who did not have training in the STWM, and were not from the FPSD, had 10 or fewer years as a classroom teacher. One of the teachers from Group C had more than 20 years in the classroom.

Table 1. Survey Question 1 Regarding Demographics: Years of Teaching (N=11).

Years of Teaching	Group A	Group B	Group C
1-5			3
6-10			
11-15		1	
More than 20	3	3	1

Survey Question 2: Gender: _____ Female _____ Male. (N=11)

Of the 11 surveys returned, 10 teachers were female and 1 was a male.

Survey Question 3: List your major(s). (N=11)

All 11 of the returned teacher surveys listed English as their major.

Research Questions and Open-ended Questions

Research question 1: Has the STWM writing program impacted student writing skills as perceived by the English teachers?

The open-ended questions garnered a variety of responses to the questions asked in the survey. One strong similarity that came through was that teachers from all three groups used some type of scoring rubric when assessing student writing samples. Teachers had already used the scoring rubric provided by the STWM or they had developed their own rubric.

Open-ended questions from number 6 on solicited numerous “no response” to the remaining questions on the survey. This is attributed to the fact that if teachers answered “no” to this question, they were finished with the survey.

Survey Question 1: Describe how you assess student writing: (i.e., Do you use a rubric? Do students complete peer reviews? Do teachers as a team assess writing? Is writing assessed annually? Are there mandated writing assignments?). (N=10)

Group A: (Reminder, teachers 3 and 4 combined their answers on the survey.)

Teacher 1: I assess student writing throughout the process through conferencing and peer reviews, using the 6 trait rubric. When the student's final draft is assessed by me, they have the opportunity to "fix" problems.

Teacher 2: I assess student writing with a variety of methods. I assess process. We use peer review. I use written conferences. I assess using a rubric. I assess holistically for both single and multiple traits.

Teachers 3 and 4: No response.

Group B:

Teacher 5: Expectations are laid out in the assignment sheet. Informal one-on-one conferences are provided if needed. Rough drafts are peer-reviewed and edited. Final assessment is made with a rubric/eval sheet.

Teacher 6: I always use a rubric. I usually choose at least 3 out of the 6 traits when grading. There are mandated writing assignments in my class and student, at times, complete peer reviews.

Teacher 7: My students participate in peer reviews and I use the "Six Trait" rubric to assess their writing. The "Six Trait" model is used throughout my school's English dept.

Teacher 8: I use the 5-point scoring rubric for six traits.

Group C:

Teacher 9: Rubric created by teacher, peer eval, 1st and 2nd drafts, required writing assignments.

Teacher 10: Rubric, peer reviews.

Teacher 11: I do use a rubric and the students do complete peer reviews plus a personal writing critique.

Teacher 12: Usually a rubric; I sometimes utilize peer reviews but not as a final assessment measure, just during the writing process.

Most of the teachers utilize peer review or use a scoring rubric when assessing student writing samples. The scoring rubric used by teachers from Group C appears to be self designed by the teachers and all mention use of peer review.

Table 2. Survey Question 2: Have You Been Trained in the Six Traits of Writing Model? (N=11).

	Yes	No
Group A	3	0
Group B	4	0
Group C	1	3

Survey Question 3: Describe your professional development experience regarding the training you received on the Six Traits of Writing Model? (N=8)

Group A:

Teacher 1: I've been to district level training and the train-the-trainer training—they were excellent.

Teacher 2: I have gone to three separate train the trainer workshops as well as district and building level 6-traits training.

Teachers 3 and 4: Professional development in the 6 traits included two separate summer workshops. One was a last minute substitute presenter; the other presenters—an author—was very good. The latter actually recognized the need for secondary level samples but acknowledged it was in short supply.

Group B:

Teacher 5: Six Traits training was offered over three sessions. Some departmental activities have utilized Six Trait knowledge and training, and most rubrics and assessments have been based on six traits.

Teacher 6: I attended a class called "Writing Across the Curriculum with the 6-Trait Model." In this class, we learned about a variety of methods to use in incorporating the 6-Trait model in the classroom.

Teacher 7: I attended an all-day presentation on the “6 Traits” model, given by an expert on the writing program.

Teacher 8: I received 15 hours of training that included demonstrations of each trait and sample papers to be scored with another teacher.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: Not enough I’m afraid. Use the “voice” and “content” most often. Need to do more!

Eight of the English teachers in this study who returned surveys had been formally trained in the use of the STWM. As part of the training they were also provided with a scoring rubric to use when assessing student writing samples. The teachers from Group C had little or no training in the STWM or any other writing program. Teachers from Group C did acknowledge using rubrics to score student writing samples, but they were primarily a format they had created as individual teachers.

Survey Question 4: What were the strengths of the Six Traits of Writing training? (N=8)

Group A:

Teacher 1: Strength—common assessment, common language.

Teacher 2: The in-depth train the trainer workshops were most helpful because they provided a number of chances to score papers and compare scores.

Teachers 3 and 4: 6-Traits creates a common language for educators and student alike across the curriculum. The emphasis of writing to learn is important for both teachers and students alike. The training across disciplines reinforces this practice.

Group B:

Teacher 5: Activities and assignments were realistic and applicable.

Teacher 6: Lots of materials/ideas were given to use in the classroom.

Teacher 7: "Six Traits" is successful because of its accessibility to instructors and to students. The training emphasizes the positive results.

Teacher 8: I think our use of the 5 point scoring rubric here at South levels the grading field-at least in the English department.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: Good aspects and ideas.

It appears teachers who have been trained to use the STWM found something valuable about the program. Some positive responses included the scoring rubric and the common language used throughout the English department as well as across the curriculum.

Survey Question 5: What were the weaknesses of the Six Traits of Writing training? (N=8)

Group A:

Teacher 1: Focuses on assessment and not the process of writing. Needs to be used along with other writing models.

Teacher 2: The 6-traits model concentrates on assessment not on method of teaching writing.

Teachers 3 and 4: 6-traits materials are readily available on the elementary level K-6 or K-8. Secondary materials are scarce. Fargo Public Schools designated instructors to write and create easy-to-use appropriate secondary applications/handouts.

Group B:

Teacher 5: There has been no follow-up or next-level training (as far as I know).

Teacher 6: Not all of the information applied to my classroom.

Teacher 7: One day was a very brief period in which to learn an entire writing program.

Teacher 8: If I were to grade all six traits using the 5 point rubric, many total point scores would indicate lower grades than papers deserve. I usually score more points for ideas, organization and sentence fluency.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: I correct an essay with everything in mind—not just for 2 aspects.

One of the comments that stands out regarding the STWM is more of an assessment instrument than a tool for teaching teachers how to teach students to write. Also, it is interesting to note in the comments that with the amount of variables in the STWM, some teachers will pick and choose what they feel are more important traits to address. For example, teacher 8 usually scores more points for ideas, organization, and sentence fluency whereas teacher 12 corrects an essay with everything in mind.

Survey Question 7: Please describe the other professional development for assessing students' writing that you have received. (N=4)

Group A:

Teacher 1: Writing across the curriculum, readers'/writers' workshop model.

Teacher 2: No response.

Teachers 3 and 4: Beverly Chin's writing cadre. Writing across the curriculum.

Table 3. Survey Question 6: Have You Had Any Professional Development Regarding the Assessing of Student Writing Samples Other Than the Six Traits of Writing Model? (N=11).

	Yes	No
Group A	2	1
Group B	1	3
Group C	1	3

Group B:

Teacher 5: No response.

Teacher 6: I have participated in two summer sessions of Northern Plains Writing Project (15 credits) in Minot.

Teacher 7: No response.

Teacher 8: No response.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: Writing procedure, writing classes.

The majority of teachers, 7 of the 11, who completed the survey, had no additional training in writing programs due to their “no response” to questions from number 6 on in the survey. It is not clear from the questions asked in the survey if the opportunity for additional training in the writing areas was offered as professional development, but teachers did not take advantage of the opportunity.

Survey Question 8: Describe the strengths of the other professional development for assessing students' writing. (N=4)

Group A:

Teacher 1: Focus in how to instruct students on writing.

Teacher 2: No response.

Teachers 3 and 4: Beverly Chin provided a number of activities for teaching writing.

Group B:

Teacher 5: No response.

Teacher 6: Strengths include hands-on writing and assessment projects and assignments, strong peer support, and a knowledgeable, inspiring instructor/director.

Teacher 7: No response.

Teacher 8: No response.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: Lots of good ideas that I can incorporate into my classroom.

Again, the responses to this question were limited. However, feedback provided suggests the writing opportunities are positive opportunities for teachers and students.

Survey Question 9: Describe the weaknesses of the other professional development for assessing students' writing. (N=3)

Group A:

Teacher 1: Lack of common language.

Teacher 2: No response.

Teachers 3 and 4: The Beverly Chin professional development (pd) concentrated on method rather than for assessment.

Group B:

Teacher 5: No response.

Teacher 6: I can't think of any weaknesses in the program.

Teacher 7: No response.

Teacher 8: No response.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: No response.

The overwhelming response to the weakness of other writing programs is that of "no response."

Survey Question 10: What three factors do you believe impact student successful writing? (N=4)

Group A:

Teacher 1: Emphasis on the writing process, time to brainstorm, draft with teacher guidance, requiring student revision based on assessment.

Teacher 2: No response.

Teachers 3 and 4: Practicing the process and emphasizing it. Time to complete the assignment using the process. Teacher understanding of good quality work.

Group B:

Teacher 5: No response.

Teacher 6: Three factors I consider most valuable in student writing are reading ability and interest, topic options, and classroom prep and review of the fundamentals.

Teacher 7: No response.

Teacher 8: No response.

Group C:

Teacher 9: No response.

Teacher 10: No response.

Teacher 11: No response.

Teacher 12: Good assessment piece. Lots of writing with evaluations. Topics that are interesting and valuable.

Eight teachers elected not to write anything; this suggests that even though there is a program in place, STWM, the teachers do not identify three factors that they perceive impact successful student writing. For the teachers who did not respond to this question, it might be that the teachers believe there are more than three factors that impact successful student writing. The teachers who did respond to this question indicate that both student and teacher assessment and evaluation of writing are two factors impacting student success. It is also stated the more a student practices and writes, the better writer the student becomes.

Qualitative Research

Qualitative research provides and adds another aspect to research to complement the plethora of statistical data available in research on the STWM. Glesne (1999) suggests the description of the data gathered is an important and necessary component of the qualitative process in order to not only stay true to the research, but to also garner meaning from the research conducted.

The process of analyzing responses from the survey's qualitative questions involved reading all of the group responses for each of the questions in the survey. Once the responses were read for each question, the researcher looked for common responses for that particular question. The researcher used this same method of analysis for each of the questions in the survey. Once this process was completed, the researcher looked for themes or patterns that emerged from the responses. Once the themes and patterns were identified from the survey, information was grouped. Key words or phrases which could be identified as themes or patterns were utilized to group the findings. Teachers from the control group and district administrators were asked to review this information also and ascertain if they identified and agreed/disagreed with the findings of the researcher.

Themes identified were:

1. Peer evaluations
2. Professional development
3. Student achievement

Patterns identified for the three groups were as follows:

Group A:

1. Used a variety of methods to assess student writing
2. Assess student writing through peer review and conferencing
3. Find common language and common assessment as a strength of the STWM

Group B:

1. Used the five-point scoring rubric
2. Use peer reviews and the five-point scoring rubric for assessment
3. Were varied in what they felt were the strengths of the STWM

Group C:

1. Usually used a scoring rubric they had developed themselves
2. Used peer review in assessing student work
3. No assessment could be made of their value of the STWM since they have had little or no exposure to the model

Commonalities among the three groups of teachers were they were all English teachers, they all scored student writing samples using some type of rubric, and teachers from all three groups used peer review to some degree in assessing student writing.

What the three groups of teachers did not have in common was training and experience in using the STWM and the STWM scoring rubric. Teachers in Group A had a distinct advantage over Groups B and C, as they have had years of experience in using the STWM and the STWM scoring rubric. Additionally, the teachers from Group A serve as trainers and scorers for the STWM for the FPSD. Teachers from Group C were at the greatest disadvantage, as they lacked the training and the experience in using the STWM and the STWM scoring rubric.

Research question 2: What were the reliabilities of the three groups of teachers rating the writing samples?

- a. Group A: Four English teachers trained in the STWM and have scored students' writing samples in the years of 2005, 2006, and 2007 using the STWM and the STWM scoring rubric.
- b. Group B: Four English teachers trained in the STWM but did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.
- c. Group C: Four English teachers NOT trained in the STWM and did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.

To determine the reliability of the teacher ratings of the 30 samples, Cronbach's alpha (reliability) and discrimination indexes were calculated. The results for Group A teachers are provided in Table 4.

Table 4. Cronbach's Alpha and Discrimination Indexes for Scale Items for Teacher Group A (N=4).

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
Teacher 1A		
aa1	.766	.974
aa2	.873	.974
aa3	.795	.974
aa4	.813	.974
aa5	.866	.973
aa6	.731	.974
Teacher 2A		
ab1	.801	.974
ab2	.755	.974
ab3	.841	.974
ab4	.787	.974
ab5	.829	.974
ab6	.784	.974

Table 4 (cont.)

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
Teacher 3A		
ac1	.800	.974
ac2	.718	.975
ac3	.806	.974
ac4	.642	.975
ac5	.797	.974
ac6	.693	.975
Teacher 4A		
ad1	.742	.974
ad2	.865	.974
ad3	.812	.974
ad4	.768	.974
ad5	.797	.974
ad6	.803	.974

The overall reliability and Cronbach's alpha for Group A teachers is .975. The results indicate teachers in Group A are consistent in their scoring of student writing samples and there is not a significant difference from one teacher to the next within the group.

To determine the reliability of the teacher ratings of the 30 samples, Cronbach's alpha (reliability) and discrimination indexes were calculated. The results for Group B teachers are provided in Table 5.

Table 5. Cronbach's Alpha and Discrimination Indexes for Scale Items for Teacher Group B (N=4).

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
Teacher 1B		
ba1	.785	.970
ba2	.744	.970
ba3	.698	.970
ba4	.719	.970
ba5	.618	.971
ba6	.688	.970
Teacher 2B		
bb1	.851	.969
bb2	.763	.970
bb3	.816	.969
bb4	.637	.971
bb5	.862	.969
bb6	.827	.969
Teacher 3B		
bc1	.777	.970
	68	

Table 5 (cont.)

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
bc2	.724	.970
bc3	.666	.971
bc4	.713	.970
bc5	.826	.969
bc6	.836	.969
Teacher 4B		
bd1	.747	.970
bd2	.834	.969
bd3	.650	.971
bd4	.805	.969
bd5	.757	.970
bd6	.793	.969

The overall reliability and Cronbach's alpha for Group B teachers is .971. The results indicate teachers in Group B are consistent in their scoring of student writing samples and there is not a significant difference from one teacher to the next within the group.

To determine the reliability of the teacher ratings of the 30 samples, Cronbach's alpha (reliability) and discrimination indexes were calculated. The results for Group C teachers are provided in Table 6.

Table 6. Cronbach's Alpha and Discrimination Indexes for Scale Items for Teacher Group C (N=4).

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
Teacher 1C		
ca1	.764	.960
ca2	.717	.961
ca3	.759	.960
ca4	.750	.961
ca5	.740	.961
ca6	.636	.962
Teacher 2C		
cb1	.709	.961
cb2	.639	.961
cb3	.702	.961
cb4	.665	.961
cb5	.752	.961
cb6	.783	.960
Teacher 3C		
cc1	.667	.961
cc2	.719	.961
cc3	.755	.960

Table 6 (cont.)

Scale Item	Discrimination Index	Cronbach's Alpha If This Item Is Deleted
cc4	.674	.961
cc5	.721	.961
cc6	.762	.960
Teacher 4C		
cd1	.700	.961
cd2	.685	.961
cd3	.756	.960
cd4	.553	.962
cd5	.652	.961
cd6	.742	.961

The overall reliability and Cronbach's alpha for Group C teachers is .962. The results indicated that teachers in Group C are consistent in their scoring of student writing samples and there is not a significant difference from one teacher to the next within the group.

Do the three groups agree in the ratings of the writing samples? To answer this question, t-tests for dependent sample were conducted comparing Group A to Group B, Group A to Group C, and Group B to Group C to identify possible differences in the ratings of the writing samples. The results are provided in Table 7.

Table 7. Means and t-Test Results Comparing the Three Groups of Teachers on the Overall Total Score From the Writing Sample.

Group	Mean A	Mean B	Mean C	t-value	p
A to B	87.8	77.9	75.5	4.57	<.001
A to C	87.8	77.9	75.5	4.87	<.001
B to C	87.8	77.9	75.5	1.20	.238

The results of the overall total score indicate that there is a difference in the means and t-test results of teachers scoring student writing samples from Group A to Group B. This may be due to the teachers in Group A score student writing samples on a regular basis whereas the Group B teachers have had the training, but do not score student writing samples on a regular basis.

There is a difference in the results from Group A to Group C. The greater difference between these two groups again may be Group A had been trained and regularly scores student writing samples, but the majority of Group C teachers had not been trained in the STWM. None of the Group C teachers score student writing samples on a regular basis using the STWM scoring rubric provided.

The mean and t-value difference between Group B and Group C teachers show that Group B teachers scored the writing samples higher than Group C, but not significantly.

The results suggest teachers score student writing samples differently depending on the amount of experience and training teachers received in using the STWM and the STWM scoring rubric.

Summary

This chapter contained the results of the professional development survey in qualitative and quantitative terms. Cronbach's alpha, t-test, and quantitative methods were used to report comparisons between English teachers with different levels of STWM training and their scoring of 30 randomly selected student writing samples.

The results indicate that there is a difference in the way teachers score student writing samples based on experience, practice, and application of the STWM. Professional development provided an opportunity for eight of the teachers in this study to be trained in a program that was intended to improve student writing skills. The teachers in this study perceived the STWM does accomplish this goal, and the STWM provides a common language and a common rubric to be used by all teachers. The STWM is a writing model that transcends the different disciplines in the field of education and provides a common assessment tool which is adaptable to all disciplines within the field of education.

Chapter V includes a summary, discussion, conclusions, and limitations and concludes with recommendations for the FPSD and for future research regarding the STWM.

CHAPTER V
SUMMARY, DISCUSSION, CONCLUSIONS, LIMITATIONS,
AND RECOMMENDATIONS

Summary

Chapter V contains a summary, discussion, and conclusions drawn from the results of the information gathered. Additionally, the limitations are discussed and there are recommendations for the FPSD and further research regarding the STWM.

This study had two purposes. The first purpose of this study was to investigate the professional development training teachers have received on the STWM or other writing programs. A qualitative survey was given to the teachers in Groups A, B, and C to solicit responses and perceptions that they have on writing programs.

The second purpose was to study the reliabilities of three groups of four English teachers' scoring of 30 randomly selected student writing samples gathered during 2005, 2006, and 2007 in the FPSD. The 12 English teachers were separated into three groups. Group A served as the control group as they had been trained and currently score student writing samples. Group B had been trained in the use of the STWM, but had not scored student writing samples. Group C had not received training using the STWM, nor had they scored student writing samples.

Discussion

The National Staff Development Council (2005) reports,

What teachers know and do influences students' academic success. The need for ongoing professional learning that deepens teachers' understanding of their content area and expands their instructional repertoire is essential to improving student learning. (para. 4)

It was reported in Chapter II that Owens (2002) found that human resources are valuable, and they must be properly prepared to do their work and have the necessary resources available in order to be successful. The FPSD commitment to professional development regarding STWM continues presently. Teachers new to the district receive training in the STWM and receive support from their colleagues in the different disciplines. The FPSD also has the STWM and the STWM scoring rubric published in the student handbook every year. Student writing samples continue to be collected by the FPSD and scored every year.

When change theory was discussed in Chapter II, the phrase that kept jumping out throughout this study was the simple phrase put forth by Bridges (2000), who defined change as "an event that is situational and external to us" (p. 5). With the implementation and the continued support of the use of the STWM in the FPSD, the leaders forced change to occur district wide that is both situational and external to teachers and students. The change was systemic in nature, as all teachers were asked to be trained and use the STWM. Of course, there was dissention in some of the curricular areas of the educational spectrum, which continues to this day, but, for the most part, both teachers and students have benefited from this change.

Additionally, change theory discussed in Chapter II, specifically Bloom's findings regarding how learning occurs, is relevant to what the FPSD has implemented with the

STWM. The knowledge of terminology applies as teachers are aware of what they should be looking for in student writing samples (e.g., word choice or voice). Comprehension is applicable as teachers, having been trained, know specifically what to look for in student writing samples, and students clearly understand what components of their work that they will be scored on. Application continues to build on previously learned information for the students, as the STWM is a longitudinal program for the FPSD. Therefore, students will have multiple opportunities to create writing samples using a variety of prompts. Analysis is one of the key pieces of what the district hopes to understand as the teachers in the FPSD score the writing samples. It is from analyzing student writing samples that teachers become better at utilizing the STWM and ultimately provide feedback to students that assists students in becoming better writers. Synthesis is applicable due to the opportunity students are afforded to apply their prior knowledge of writing along with creativity generated by the use of prompts, providing an opportunity to create something new. Writing samples provide an end product that warrants an evaluation; this provides a product that allows for teachers to judge the value of the material students created. For better or for worse, students receive feedback that will allow them to continue to improve and refine their writing skills, the purpose of the STWM.

Conclusions

Research question 1: Has the STWM writing program impacted student writing skills as perceived by the English teachers?

The researcher would have to conclude that the majority of responses to research question one is that the STWM did, in fact, impact student writing skills to some degree.

A perceived impact indicated by the Group A teachers would be the STWM has improved student writing as well as provided a uniform means of assessing student writing samples. A conclusion of teachers in Group B indicates the STWM provided a variety of options for student writing; however, the teachers were not uniform in what they felt were the benefits of the STWM. Of the teachers in Group C, only one teacher responded, so it would be difficult to draw a conclusion regarding their answer to research question one.

Research question 2: What were the reliabilities of the three groups of teachers rating the writing samples?

- a. Group A: Four English teachers trained in the STWM and have scored students' writing samples in the years of 2005, 2006, and 2007 using the STWM and the STWM scoring rubric.
- b. Group B: Four English teachers trained in the STWM but did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.
- c. Group C: Four English teachers NOT trained in the STWM and did NOT score student writing samples during the years of 2005, 2006, and 2007 using the STWM or the STWM scoring rubric.

The overall reliability and Cronbach's alpha for Group A teachers is .975. This indicates a high reliability of the English teachers in Group A scoring the student writing samples closely with other English teachers within Group A.

The overall reliability and Cronbach's alpha for Group B teachers is .971. This indicates a high reliability of the English teachers in Group B scoring the student writing samples closely with other English teachers within Group B.

The overall reliability and Cronbach's alpha for Group C teachers is .962. This indicates a high reliability of the English teachers in Group C scoring the student writing samples closely with other English teachers within Group C.

The mean and t-test results indicated differences in scoring among the different groups of teachers. Group A to Group B results find a t-value of 4.57, indicating a significant difference in the values the different groups scored the student writing samples. Group A to Group C results find a t-value of 4.87, indicating even a greater significance of the scoring of student writing samples than from Group A to Group B. Group B to Group C results find a t-value of 1.20, indicating that Group B teachers scored the student writing samples higher, but not significantly.

A conclusion drawn from the data gathered is the Group A teachers had a distinct advantage over the other two groups in this study. The advantages teachers from Group A had were they were trained in the STWM, have years of experience using the STWM scoring rubric to score student writing samples, and conduct the STWM training for the FPSD. As a group, Group A teachers scored student writing samples consistently as a group and, overall, higher than either Group B or Group C.

Group B English teachers did score student writing samples lower than Group A, but higher than the teachers from Group C. Even though teachers from Group B did not have a plethora of experience scoring student writing samples, they had been trained in the STWM and had at least been exposed to the scoring rubric. Group B teachers had the opportunity to practice during their training experience, and teachers scored the writing samples closely within their group. A conclusion that might be drawn from this is that the training they received in the STWM was sufficient enough to allow for Group B

teachers to be more familiar and comfortable with the STWM scoring rubric than teachers from Group C, but not Group A.

Group C English teachers scored the same student writing samples lower than did either Group A or Group B. Again, there was consistency among the scores within the group itself, and the researcher finds this fact even more difficult to explain as Group C English teachers were neither trained in the STWM nor the use of the STWM scoring rubric. A conclusion gleaned from this is that having the same scoring rubric gave all teachers the same instrument to use when assessing student writing samples. Since all teachers in the study were English majors, it was, therefore, easy to adapt to a scoring rubric that had many of the traits and terminology they all had been exposed to in their college preparation programs. The major difference in the variation in the scoring that occurs in this study between the three groups of teachers is largely based on the experience level that each group of teachers had using the STWM. The level of training and teacher experience using the STWM appear to be the two major factors which set the three groups apart and how they used the STWM scoring rubric and scored student writing samples.

Another conclusion that could be drawn from the results of this study is that the STWM, the training provided, and the time and money committed to the program do have a significant impact on how teachers score student writing samples. The STWM, at least in the perception of the practitioners, the teachers, does assist in students developing better writing skills.

Limitations

One limitation that emerged from this study was the lack of responses to the questions on the survey. As indicated previously, this is due to the fact once teachers answered “no” to question 6, they were finished with the survey. Therefore, many of the questions in the survey ended up being irrelevant to where they were professionally as teachers. Having selected the teachers for this study, the researcher should have had a battery of questions for the teachers who answered “no” to question 6 that would have provided additional insight into professional development needs and/or recommendations rather than just the STWM.

Another limitation is the pool of teachers selected for this study. All of the teachers for the study were selected by the researcher, and eight of the teachers were from the FPSD while four were from a different district. Teachers in Group A and Group B had been trained and had at least some exposure to the STWM, and all of these teachers were from the FPSD.

Finally, two teachers in Group A actually combined their answers and submitted only one survey back to the researcher.

Recommendations

The recommendation of this researcher is that the FPSD continue to utilize the STWM and train teachers new to the district. There were differences between how the three groups of teachers scored the same student writing samples; however, the difference in how the groups scored within their group was statistically reliable. How the groups scored the same student writing sample against each other provided data that showed a larger gap between Groups A and C than the scoring difference between Groups A to B

and Groups B to C. This difference in scoring the same student writing sample may be due largely to the training and application opportunities that teachers in Groups A and B had in their professional development regarding the STWM for which Group C did not.

A recommendation for the FPSD based on the results of the survey is to continue using the STWM. The teachers' perception is that the STWM and the STWM scoring rubric provide a common template that can be used by all disciplines. The perception of the Group A teachers is that the STWM is working and student writing skills continue to improve. This group of teachers also perceives it is important for all teachers to be a cognoscente of the importance of student writing in all content areas.

One recommendation for further study of the STWM might be a longitudinal study with a cohort group of students the researcher follows for a longer period of time. Additionally, the researcher should use a cohort of teachers trained in the STWM and use of the STWM scoring rubric for the same duration of time.

APPENDICES

6-TRAIT QUICK GUIDE

Ideas and Development

- Clear main point
- Focused information
- Relevant, interesting details and original insight

The KEY: *Does the reader learn information quickly and easily?*

Organization

- Clear main idea (thesis) in introduction
- Structure (beginning, middle, and end) that connects *all* subpoints to the main idea
- Clear transitions
- Ending that reinforces the main point

The KEY: *Did the organization help understand the key points or issues?*

Word Choice

- Wording and phrasing are precise
- Language is simple, natural, and clear
- Verbs are strong and active
- The writer avoids jargon and clichés

The KEY: *Does the choice of language make it easy to understand the topic?*

Voice

- The writer knows the audience
- Tone is appropriate for the topic and purpose
- The writing is engaging and sincere

The KEY: *Is the voice engaging and credible for the audience and purpose?*

Sentence Fluency

- Sentences are complete, direct, and concise
- Sentence beginnings and lengths are varied
- Sentences are purposeful

The KEY: *Do the sentences flow effectively when read aloud?*

Conventions and Presentation

- Basic conventions (spelling, punctuation, grammar, and capitalization) are correct
- Sentence structure and paragraph breaks are appropriate
- If used, citations are correct and complete

The KEY: *Is the text edited and polished?*

	5	4	3	2	1
<p>IDEAS</p> <p>Content Examples/Details Development</p>	<ul style="list-style-type: none"> • Focused, interesting main idea • Strong, relevant, specific examples • Insightful details fit audience/purpose • Thorough explanation of the topic 	<ul style="list-style-type: none"> • Easily understandable main idea • Effective examples • Original details but some may be general • Appropriate explanation of the topic 	<ul style="list-style-type: none"> • Identifiable main idea • Supporting examples developing but limited • Predictable details • Reasonably clear topic but simplistic or basic 	<ul style="list-style-type: none"> • Main idea beginning but unclear • Few or irrelevant examples • Insufficient details • Development minimal; topic not focused; too broad 	<ul style="list-style-type: none"> • Lacks central idea • No clear examples; random thoughts • Extremely limited/unclear details • No sense of purpose; too short
<p>ORGANIZATION</p> <p>Structure Sequence Connections</p>	<ul style="list-style-type: none"> • Structure enhances ideas; inviting introduction and satisfying conclusion • Effective, creative sequencing • Smooth, effective transitions • Reader moves easily through the text 	<ul style="list-style-type: none"> • Clear, developed beginning, middle, and end • Logical sequencing • Transitions tie ideas together • Flow of ideas is controlled 	<ul style="list-style-type: none"> • Identifiable beginning, middle, and end • Sequencing logical but may be formulaic • Transitions present but some may be common • Flow of ideas may be slow or choppy 	<ul style="list-style-type: none"> • Structure is difficult to follow • Attempts sequencing • Ineffective or overused transitions • Reader is forced to reread 	<ul style="list-style-type: none"> • Fails to provide beginning, middle, and end • Lacks sequencing or direction • Lacks transitions • Pace drags; reader frequently confused

	5	4	3	2	1
<p>CONVENTIONS</p> <p>Mechanics Grammar/Usage Editing</p>	<ul style="list-style-type: none"> • Strong, effective control of mechanics enhances readability • Spelling is correct even of more difficult words • Punctuation, capitalization, and paragraphing are effective • Grammar and usage are consistently correct • Needs almost no editing 	<ul style="list-style-type: none"> • Errors are few and do not interfere with readability • Spelling is usually correct • Punctuation, capitalization, and paragraphing are sound with few errors • Few grammar and usage errors do not distort meaning • Needs little editing 	<ul style="list-style-type: none"> • Reasonable control of mechanics but limited errors may affect readability • Spelling of common words is usually correct • Punctuation, capitalization, and paragraphing are attempted but not always correct • Occasional grammar and usage errors may distort meaning at times • Needs moderate editing 	<ul style="list-style-type: none"> • Errors in some areas of mechanics impede readability • Spelling errors are frequent • Punctuation, capitalization, and paragraphing are ineffective or distracting • Frequent grammar and usage errors show limited knowledge of rules • Needs significant editing 	<ul style="list-style-type: none"> • Numerous errors make reading difficult • Spelling errors numerous even of common words • Punctuation, capitalization, and paragraphing are often missing or incorrect • Grammar and usage errors are excessive and affect meaning • Needs extensive editing

	5	4	3	2	1
<p>VOICE</p> <p>Audience Purpose Point of View</p>	<ul style="list-style-type: none"> • Writer quickly engages reader; strong interaction between reader and writer • Strongly committed to topic which comes to life • Begs to be read aloud; sincere; expressive; convincing 	<ul style="list-style-type: none"> • Writer recognizes audience; communicates message • Committed to topic • Appropriate point of view; shows some originality 	<ul style="list-style-type: none"> • Writer shows some awareness of audience • Purpose/mode of writing present but inconsistent • Occasional sense of writer behind the words 	<ul style="list-style-type: none"> • Limited sense of audience; doesn't acknowledge needs of reader • Little commitment to topic • Inappropriately informal or personal 	<ul style="list-style-type: none"> • Lack of audience awareness; mismatch for the intended reader • No defined purpose/mode of writing • Writer lacks a sense of involvement; flat; lifeless
<p>WORD CHOICE</p> <p>Vocabulary Meaning Message</p>	<ul style="list-style-type: none"> • Powerful, varied, broad range of vocabulary • Thoughtfully placed terms or expressions • Words effectively communicate message in an interesting, precise, and natural way 	<ul style="list-style-type: none"> • Accurate, precise vocabulary • Purposeful, clear meaning but rarely experiments with language • Words convey the intended message 	<ul style="list-style-type: none"> • Appropriate but ordinary vocabulary • Functional expressions; may have some fine moments • Terms convey message but passive verbs or clichéd expressions may interfere 	<ul style="list-style-type: none"> • Colorless, generic vocabulary • Expressions may impair understanding; monotonous repetition • Inappropriate; unimaginative terms or slang detract from message 	<ul style="list-style-type: none"> • Limited vocabulary • Misused words interfere with meaning • Inadequate, imprecise terms or expressions; fails to communicate message

	5	4	3	2	1
<p>SENTENCE FLUENCY</p> <p>Flow Style Rhythm</p>	<ul style="list-style-type: none"> • Sentences are carefully crafted to enhance meaning • Consistently strong, varied sentence structure; creative connections • Invites expressive oral reading; logical structure 	<ul style="list-style-type: none"> • Complete, correct sentence structure • Connections between phrases/sentences present but may not be refined • Reader moves easily through text 	<ul style="list-style-type: none"> • Basic, simple sentence structure • Some sentence variety attempted but may be mechanical • Parts of text may invite oral reading 	<ul style="list-style-type: none"> • Some incomplete or rambling passages • Monotonous, repetitive sentence patterns • Awkward constructions force reader to reread 	<ul style="list-style-type: none"> • Fragmented, choppy, confusing sentences; unnatural phrasing • Endless conjunctions • Very difficult to follow or read aloud

(Created by S. Gigstad and M. Malm, 2003)

Appendix C Teacher Survey and Participation Form

My name is Michael Nygaard, and I am currently a doctoral student in the Educational Leadership Program at the University of North Dakota. I am researching assessment of student writing with the Six Traits of Writing Model and professional development for teachers assessing student writing. I am requesting your assistance in completing a survey regarding professional development and scoring of student writing samples.

Specifically, I will be asking for your assistance in two areas; they are:

- responding to a professional development survey focusing on training received regarding assessing student writing samples, and
- scoring of thirty student writing samples.

DIRECTIONS:

- 1) Survey--Please fill out this survey regarding your professional development experiences and scoring programs for assessing student writing samples.
- 2) Score the writing samples provided. There are ten writing samples from the years of 2005, 2006, and 2007 for a total of thirty writing samples.
 - a. A scoring rubric is provided called the "5 point scoring rubric for 6 Traits."
 - b. Read the writing sample and score it according to the scoring rubric provided for each of the six traits. There is a stamped scoring template provided on each of the writing samples for you to record your scores.
 - c. Please return the survey and the writing samples, after you have scored them, back to me in the enclosed, self addressed envelope.

NO names will be used in the research. No school districts will be identified. No compensation will be given for participating in this research, but do know that your willingness to participate may help assessment of student writing programs and professional development.

This research has received UND's Institutional Review Board's approval # 200801-167. If you have questions regarding your rights as a research subject, or if you have any concerns about the research, you may contact me, my advisor, Dr. Sherry Houdek, or the University of North Dakota Institutional Review Board at (701) 777-4279.

Michael Nygaard
701-446-2006
nygaarm@fargo.k12.nd.us

Dr. Sherry Houdek
701-777-2394
sherryl.houdek@und.edu

Appendix D
FPSD Permission Form

RECEIVED

AF 4800 MAY 31 2006

RESEARCH STUDY REQUEST

I hereby request permission to conduct a research study in the Fargo Public School District during the period from May 2006 to May 2007.

TOPIC: The Six Traits Writing Model and Impact on Student Writing Skills.

If this request is granted, I agree to abide by Administrative Policy 4800: refer to the FPS web site at www.fargo.k12.nd.us

Signature of Researcher Neil J. Hagg

Institution of Higher Education University of North Dakota

Signature of Graduate Advisor J. Handick, Ed.D. (UND)

Date May 11, 2006

In addition to completing the Research Study Request Form, a copy of the following items are attached for review:

1. Abstract of the project (Attached)
2. Questionnaire(s) to be used (NA)
3. Consent letter to be sent to parents (NA)

Endorsement: This request is approved disapproved

Administrator: T. M. Anthony

Date 6/9/06

A copy of this approval form must be presented to the school building principal before conducting any survey. The principal has the final approval to conduct a survey in a school building.

Please print your name and the mailing address where you want this form returned:

Name: Michael G. Nygaard

Street Address: 1840 15th Ave. S.

City, State & Zip: Fargo, ND 58103

Appendix E
Scoring Tabulation Template

Sample _____ Scores					
Ideas	Organization	Conventions	Voice	Word Choice	Sentence Fluency

Sample _____ Scores					
Ideas	Organization	Conventions	Voice	Word Choice	Sentence Fluency

Sample _____ Scores					
Ideas	Organization	Conventions	Voice	Word Choice	Sentence Fluency

Sample _____ Scores					
Ideas	Organization	Conventions	Voice	Word Choice	Sentence Fluency

Sample _____ Scores					
Ideas	Organization	Conventions	Voice	Word Choice	Sentence Fluency

Appendix F
Professional Development Survey

DEMOGRAPHICS:

1. Years of teaching:

____ 1-5 ____ 6-10 ____ 11-15 ____ 16-20 ____ More than 20

2. Gender: ____ Female ____ Male

3. List your major(s):

QUESTIONS: Please answer the following questions. You may use additional paper if you need.

1. Describe how you assess student writing: (i.e. Do you use a rubric? Do students complete peer reviews? Do teachers as a team assess writing? Is writing assessed annually? Are there mandated writing assignments?).

2. Have you been trained in the Six Traits of Writing Model? ____ YES ____ NO
(If you answered no to this question, skip to question 6.)

3. Describe your professional development experience regarding the training you received on the Six Traits of Writing Model?

4. What were the strengths of the Six Traits of Writing training?

(PLEASE TURN THIS SURVEY OVER AND COMPLETE THE QUESTIONS)

5. What were the weaknesses of the Six Traits of Writing training?

6. Have you had any professional development regarding the assessing of student writing samples other than the Six Traits of Writing model?

Yes _____ No _____

(If you answer no, you are finished with the survey. If you answer yes, please complete the remainder of the survey.)

7. Please describe the other professional development for assessing students' writing that you have received.

8. Describe the strengths of the other professional development for assessing students' writing.

9. Describe the weaknesses of the other professional development for assessing students' writing.

10. What three factors do you believe impact student successful writing?

THANK YOU! Please return this survey _____ by _____.

REFERENCES

- Andrejko, L. (1998, Fall). The case for the teacher portfolio: Evaluation tool carries a wealth of professional information. *Journal of Staff Development, 19*(4). Retrieved October 17, 2005, from <http://www.nsd.org/library/publications/jsd/andrejko194.cfm>
- Auton, S., Berry, D., Mullen, S., & Cochran, R. (2002, Fall). Induction program for beginners benefits veteran teachers, too. *Journal of Staff Development, 23*(4). Retrieved October 17, 2005, from <http://www.nsd.org/library/publications/jsd/auton234.cfm?printPage=1&>
- Baumgartner, L. M. (2001, October). *NCSALL, 5*(B), 29-34.
- Benjamin, A. (1999). *Writing in the content areas*. Larchmont, NY: Eye on Education.
- Bridges, W. (2000). *Transition: The personal path through change*. Minneapolis, MN: Inscape Publishing, Inc.
- Brookfield, S. (in press). Adult learning: An overview. In A. Tuinjmman (Ed.), *International encyclopedia of education*. Oxford, ENG: Pergamon Press.
- Carey, K. (2002, November). *Overview of K-12 education finance*. Washington, DC: Center on Budget and Policy Priorities. (ERIC Document Reproduction Service No. ED472446)
- Carroll, T. G. (2007). *Policy brief: The high cost of teacher turnover*. Retrieved March 28, 2007, from <http://www.eric.ed.gov/ERICWebPortal/Home.portal?>

- Cherubini, L. (2007, Fall). Speaking up and speaking freely: Beginning teachers' critical perceptions of their professional development induction. *The Professional Educator*, 29(1). Retrieved October 18, 2005, from <http://www.theprofessionaleducator.org/articles/archives/fall2007.pdf>
- Cook, G. (2002, September). The cyber charter challenge. *American School Board Journal*, 189(9). Retrieved March 2, 2005, from <http://www.asbj.com/specialreports/0902Special%20Reports/S2.html>
- Copland, M. A., & Knapp, M. S. (2006). *Connecting leadership with learning: A framework for reflection, planning, and action*. Retrieved February 4, 2008, from <http://www.ascd.org/portal/site/ascd/template.chapter/menuitem.5d91564f4fe4548cdeb3ffd...>
- Culham, R. (2003). *6 + 1 traits of writing: The complete guide grades 3 and up*. New York: Scholastic Professional Books.
- Davis, O. L., Jr. (2001). A view of authentic mentorship: Editorial. *Journal of Curriculum and Supervision*, 17(1). Retrieved March 9, 2004, from <http://www.ascd.org/publications/jcs/2001fall/davis.html>
- Dewitt, S. (2006). President heralds NCLB success in year four, promises to defend accountability. *NewsLeader*, 53(6), p. 1.
- Distad, L. S., Chase, B., Germundsen, R., & Brownstein, J. C. (2000, Fall). Putting their heads together: Peers add to the progress in Reflective Practice Groups. *Journal of Staff Development*, 21(4). Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/jsd/distad214.cfm?printPage=1&>

- Drago-Severson, E., Helsing, D., Kegan, R., Broderick, M., Portnow, K., & Popp, N. (2001, October). Our developmental perspective. *NCSALL*, 5(B), 5-6.
- Dunne, F., Nave, B., & Lewis, A. (2000, December). *Critical friends groups: Teachers helping teachers to improve student learning* (Research Bulletin No. 28). Retrieved March 28, 2008, from <http://www.pdkintl.org/research/rbulletins/resbul28.htm>
- Emerick, S., Hirsh, E., & Berry, B. (2004, November). Does highly qualified mean high-quality? *ASCD Info Brief*. Retrieved January 11, 2005, from <http://www.ascd.org/portal/site/ascd/template.MAXIMIZE/menuitem.1f7f8e4alb4bac58dd1b2110d3108a0...>
- Ferraro, J. M. (2000). *Reflective practice and professional development*. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education. (ERIC Document Reproduction Service No. ED449120)
- Fullan, M. G. (1990). Staff development, innovation, and institutional development. In B. Joyce (Ed.), *Changing school culture through staff development* (pp. 3-25). Alexandria, VA: Association for Supervision and Curriculum Development.
- Fulton, K., Burns, M., & Goldenberg, L. (2005, December). Teachers **learning** in networked communities: The TLINC strategy. *Phi Delta Kappan*, 87(4). Retrieved April 4, 2008, from <http://www.pdkintl.org/t2t/k0512ful.pdf>
- Garmston, R. J. (1997, Fall). Can collaboration be taught? *Journal of Staff Development*, 18(4). Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/jsd/garmston184.cfm>

- Gigstad, S., & Malm, M. (2002). *Modes of writing*. (Available from Susan Gigstad, 1840 15th Ave S, Fargo ND 58103)
- Glesne, C. (1999). *Becoming qualitative researchers: An introduction* (2nd ed.). New York: Longman.
- Hawley, W. D., & Valli, L. (2000, August). *Learner-centered professional development* (Research Bulletin No. 27). Retrieved February 6, 2008, from <http://www.pdkintl.org/research/rbulletins/resbul27.htm>
- Helsing, D., Drago-Severson, E., Kegan, R., Portnow, K., Popp, N., & Broderick, M. (2001, October). Three different types of change. *NSCALL*, 5(B), 10-14.
- Hord, S. M., Rutherford, W. L., Huling-Austin, L., & Hall, G. E. (1987). *Taking charge of change*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Hoy, A. W., & Hoy, W. K. (2003). *Instructional leadership: A learning-centered guide*. Boston: Allyn and Bacon.
- Imber, M. (2004). Equity in school funding: Providing an equitable education to all children is a tricky legal and fiscal balancing act. *School Spending: The Business of Education*. Retrieved April 12, 2006, from <http://www.asbj.com/schoolspending/Imber1004.html>
- Imel, S. (1999). *New views of adult learning: Trends and issues alert no. 5*. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education. (ERIC Document Reproduction Service No. ED429211)
- Ingersoll, R. M., & Smith, T. M. (2004). Do teacher induction and mentoring matter? *NASSP Bulletin*, 88(638), 28-39.

- Lefkowitz, L. (2004, March). School finance: From equity to adequacy. *McREL Policy Brief*, 1-7.
- Lieb, S. (1991, Fall). Principles of adult learning. *VISION*. Retrieved February 20, 2008, from <http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/adults-2.htm>
- Maldonado, L. (2002). *Effective professional development: Findings from research*. New York: College Entrance Examination Board.
- Murphy, M. (2001, March). The team approach to staff development. *Results*. Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/results/res3-01murp.cfm>
- NASBE Study Group on Funding Education in the 21st Century. (1997, October). *Financing student success: Beyond equity and adequacy*. Alexandria, VA: National Association of State Boards of Education.
- National Staff Development Council. (2005). *Results-based staff development: Continuing research in elementary, middle, and high school literacy programs*. Retrieved October 18, 2005, from <http://www.nsd.org/connect/projects/resultsbased.cfm?printPage=1&>
- North Dakota century school code: 2007 cumulative supplement*. (2007). Charlottesville, VA: Matthew Bender & Company, Inc.
- North Dakota Department of Public Instruction. (2007, April 5). *School district profile demographics 2005-2006*. Retrieved April 8, 2008, from <http://www.dpi.state.nd.us/dpi/reports/Profile/0506/ProfileDistrict/09001D.pdf>

- North Dakota state constitution*. (2007). Retrieved February 21, 2007, from <http://www.legis.nd.gov/constitution/const.pdf>
- Owens, R. G. (2002). *Organizational behavior in education: Adaptive leadership and school reform* (8th ed.). Boston: Allyn & Bacon.
- Richardson, J. (2000, November). Learning by doing: Teachers learn content by immersing themselves in subjects. *Results*. Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/results/11-00rich.cfm?printPage=1&>
- Richardson, J. (2003, October/November). Build a bridge between workshop and classroom: Follow-up activities put training into practice. *Tools for Schools*. Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/tools/tools10-13rich.cfm?printPage=1&>
- Richardson, V. (2003). The dilemmas of professional development. *Phi Delta Kappan*, 84(5), 401-406.
- Ringdahl, R., Wacha, R., Bollinger, K., Larson, J., Benson, B., & Strand, M. (2002). *Writing across the curriculum: Using the 6-traits of writing model* (Project #02-36). Fargo, ND: Fargo Public Schools.
- Rose, L. C., & Gallup, A. M. (2005, September). *The 37th annual Phi Delta Kappa/Gallup poll of the public's attitudes toward the public schools* [PowerPoint slide show]. Retrieved April 12, 2006, from <http://www.pdkintl.org/kappan/kpollpdf.htm>

- Smith, C., & Gillespie, M. (2007). *Research on professional development and teacher change: Implications for adult basic education*. Retrieved March 22, 2007, from http://64.233.167.104/search?q=cache:-1RorPpD6KMJ:www.ncsall.net/fileadmin/resources/ann_rev/smith-...
- Snow-Renner, R., & Lauer, P. A. (2005). *Professional development analysis*. Retrieved March 22, 2007, from http://www.mcrel.org/PDF/ProfessionalDevelopment/5D5IR_Prof_dvlpmt_analyss.pdf
- Spandel, V. (2001). *Creating writers: Through 6-trait writing assessment and instruction* (3rd ed.). New York: Addison Wesley Longman.
- Sparks, D. (1994). A paradigm shift in staff development. *Journal of Staff development*, 15(4). Retrieved October 18, 2005, from <http://www.nsd.org/library/publications/jsd/sparks154.cfm?printPage=1&>
- Sparks, D., & Hirsh, S. (n.d.). *A national plan for improving professional development*. Retrieved October 18, 2005, from <http://www.nsd.org/library/authors/NSDCPlan.cfm?printPage=1&>
- Thattai, D. (2001). *A history of public education in the United States*. Retrieved April 8, 2008, from <http://www.servintfree.net/~aidmn-ejournal/publications/2001-11/PublicEducationInTheUnitedStates.html>
- Thompson, S. (2001). The authentic standards movement and its evil twin. *Phi Delta Kappan*, 82(5), 358-362.
- U.S. Department of Education. (n.d.a). Stronger accountability. Executive summary: Archived information. *ED.gov*. Retrieved February 4, 2008, from <http://www.ed.gov/nclb/overview/intro/execsumm.html>

- U.S. Department of Education. (n.d.b). Stronger accountability. Testing for results: Helping families, schools and communities understand and improve student achievement. *ED.gov*. Retrieved November 2, 2005, from <http://www.ed.gov.nclb/accountabilty/ayp/testingforresults.html>
- U.S. Department of Education. (2002, October). Strategies for improving teacher quality. *ED.gov*. Retrieved October 18, 2005, from <http://www.ed.gov/admins/tchrqual/learn/tqstr/edlite-slide008.html>
- U.S. Department of State. (n.d.). The federal role in education. *InfoUSA*. Retrieved April 8, 2008, from http://usinfo.state.gov/infousa/education/overview/federal_role_education.html
- Verstegen, D. A. (2002, October). The new finance: Today's high standards call for a new way of funding education. *School Spending: The Business of Education*. Retrieved April 12, 2006, from <http://www.asbj.com/resources1002verstegen.html>
- Wagner, T. (2003). Reinventing America's schools. *Phi Delta Kappan*, 84(9), 665-668.
- West, P. R., Sr. (1995, November). *Financing the future of education & explaining public K-12 funding cost for the 21st century: A school finance primer*. (ERIC Document Reproduction Service No. ED404751)
- Wikipedia. (n.d.). *History of education in the United States*. Retrieved April, 8, 2008, from http://en.wikipedia.org/wiki/History_of_education_in_the_United_States
- Zellermayer, M., & Margolin, I. (2005). Teacher educators' professional learning described through the lens of complexity theory. *Teachers College Record*, 107(6), 1275-1304.

Zucker, A. A. (2001). The growing need for professional development. *Mathematics Education Dialogues*. Retrieved October 18, 2005, from http://www.nctm.org/dialogues/2001-05/20010505_print.htm