

2008

A study of the evaluation procedures for professional development among public school districts in Virginia

Colleen Cannington Bryant
College of William & Mary - School of Education

Follow this and additional works at: <https://scholarworks.wm.edu/etd>



Part of the [Educational Administration and Supervision Commons](#)

Recommended Citation

Bryant, Colleen Cannington, "A study of the evaluation procedures for professional development among public school districts in Virginia" (2008). *Dissertations, Theses, and Masters Projects*. William & Mary. Paper 1539618351.

<https://dx.doi.org/doi:10.25774/w4-a3aq-f231>

This Dissertation is brought to you for free and open access by the Theses, Dissertations, & Master Projects at W&M ScholarWorks. It has been accepted for inclusion in Dissertations, Theses, and Masters Projects by an authorized administrator of W&M ScholarWorks. For more information, please contact scholarworks@wm.edu.

**A STUDY OF THE EVALUATION PROCEDURES FOR PROFESSIONAL
DEVELOPMENT AMONG PUBLIC SCHOOL DISTRICTS IN VIRGINIA**

Professional Development Evaluation Procedures

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Education

by

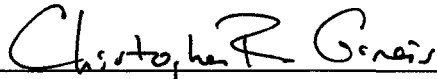
Colleen Cannington Bryant

December 2007

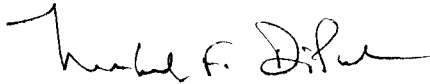
**A STUDY OF THE EVALUATION PROCEDURES FOR PROFESSIONAL
DEVELOPMENT AMONG PUBLIC SCHOOL DISTRICTS IN VIRGINIA**

By Colleen Cannington Bryant

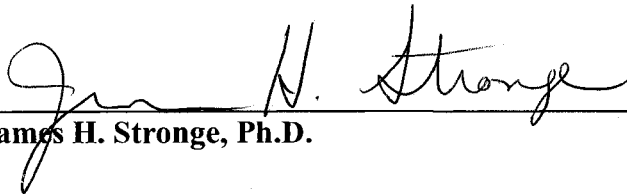
Approved December 2007



**Christopher R. Gareis, Ed. D.
Chairperson of Doctoral Committee**



Michael F. DiPaola, Ed. D.



James H. Stronge, Ph.D.

TABLE OF CONTENTS

	Page
Acknowledgments	vi
List of Tables	vii
List of Figures	ix
Abstract	x
Half-Title Page	
Chapter 1: The Problem	2
Introduction	2
Statement of the Problem	7
Purpose of the Study	8
Conceptual Framework	8
Research Questions	9
Significance of the Study	11
Conceptual Definitions	13
Limitations of the Study	14
Delimitations	14
Assumptions of the Study	14
Chapter 2: Review of Related Literature	16
Introduction	16
Professional Development	16
Purpose of Professional Development	16
Definitions of Professional Development	17
Characteristics of Professional Development	20
Professional Development Model	30
Evaluation of Professional Development	32
Purpose of Evaluation Professional Development.....	32
Historical Examples of Evaluation	35
Models of Professional Development Evaluation	41
Tyler	41
Kirkpatrick	43
Metfessel and Michael	43
Stufflebeam	44
Scriven	45
Hammond	46
Guskey	47
Demand for Evaluations	49
Problems with Evaluation	51

Planning for Evaluations	52
Evaluation Questions	56
Data Collection Process	59
Standards of Evaluation of Professional Development	62
The Joint Committee on Standards for Educational Evaluation	62
The NSDC	62
Summary	63
Chapter 3: Methodology	64
Research Questions	64
Instrument Design and Development	67
Survey Construction	67
Survey Validation	67
Survey Pilot	68
Final Instrument Development	70
Survey Validation	71
Population	71
Generalizability	71
Data Collection	72
Timeline	73
Data Analysis	73
Protection of Human Subjects	75
Chapter 4: Analysis of Results	77
Methodology	78
Rate of Return	78
Response Rate by Virginia Superintendent Advisory Region	81
Response Rate by Free Lunch Membership	82
Response Rate by Minority Membership	82
Survey Question Responses	83
Type of Professional Development Offered by Responding Districts.....	84
Initial Evaluation	86
Collection Methods of Initial Evaluations	89
Evaluation of Participant Reaction (Research Question 3a)	90
Initial Evaluation of Teachers' Acquisition of Knowledge or Skills (Research Questions 3b)	91
Completion of Follow-up Evaluation (Research Question 2 & 3).....	92
Evaluation of Acquisition of New Knowledge or Skills	95
Evaluation of Acquisition of Impact on Instruction	95
Evaluation of Impact on Student Achievement	97
Evaluation of Impact on Climate	99
Summary of Findings	100
Chapter 5: Summary, Discussions, Recommendations	103
Discussions of Findings	103
Type of Professional Development Provided by Virginia Districts	103

Evaluation Programs	107
Initial Evaluations	108
Follow-up Evaluations	110
Incorporation of Program Content with Classroom Instruction	111
Impact of Training on Student Achievement	112
Impact of Program on Climate	115
Conclusion	115
Implications for Professional Development	118
Recommendations for Future Research	120
References	122
Appendix A	
Survey of Evaluation of Professional Development	128
Appendix B	
September 2006 Virginia School District Enrollment	135
Appendix C	
Pilot e-mail	139
Appendix D	
Correspondence to School Districts Explaining the Purpose of the Survey and Requesting their Participation	140
Appendix E	
Study Description for E-mail Attachment	141
Appendix F	
Survey Questions – Attachment for E-mails	142
Appendix G	
First Reminder	146
Appendix H	
Final Study Reminder	147
Appendix I	
Consortium Member E-mail	148
Appendix J	
EDIRC Authorization	149
Vita	150

ACKNOWLEDGMENTS

- **My husband, son, daughter, and parents who provided moral support and repeatedly assured me that I could do this.**
- **Dr. Dale Kalkofen, Donna Dalton, Lynne Bland, and numerous other colleagues that provided encouragement as I worked through this process.**
- **The administrative team at Meadowbrook High for their patience and moral support.**
- **Dr. Carl Chafin, Gordon Trump, Greg Jastrzemski and James Reilly for their advice through the final process.**
- **Dr. James Stronge and Dr. Michael DiPaola, members of my dissertation committee, and especially Dr. Christopher Gareis, my committee chairman for his patience throughout the process.**
- **Professional development specialists throughout the Virginia Commonwealth that completed the study survey. Their cooperation was essential in the completion of this project.**
- **Karen Newcomb for her grammar review.**
- **Dr. Kevin Hughes, Dr. Glen Miller, Mike Rose, Donna Dalton, and Dr. Judy Flythe who served on the committee to validate the survey instrument.**

LIST OF TABLES

Table	Page
1. Definitions of Professional Development	19
2. Characteristics/Standards of Professional Development	23
3. History of Professional Development Evaluations	37
4. Professional Development Models	42
5. Table of Specifications	72
6. Data Analysis	76
7. Response Rate of Virginia Public School District by Sub-group	80
8. Number of Programs Reported by District Size	80
9. Response Rate by Superintendent Advisory Region	81
10. Response Rate by Free Lunch Membership	82
11. District Response by Minority Status	83
12. Professional Development Program Descriptions	85
13. Training Programs Described by Responding Districts	87
14. Analysis of Data on the Use of Initial Survey	89
15. Method of Data Collection for Initial Survey	90
16. Evaluation of Participant Reaction by District	91
17. Initial Evaluation of Teacher Acquisition of Knowledge and Skills	92
18. Report of Follow-up Evaluations Completed Per Program.....	93
19. Frequency of Follow-up Evaluations by Reported Program	94
20. Follow-up Evaluations Conducted Within 1 to 2 Months Following the Program.....	95

21.	Follow-up Evaluations Conducted Within 5 to 6 Months Following the Program	95
22.	Evaluation of Teachers' Acquisition of New Skills or Content.....	96
23.	Method of Data Collection for Teachers' Acquisition of New Knowledge and Skills	96
24.	Evaluation of Impact on Classroom Instruction	97
25.	Method of Data Collection for Evaluation of Impact on Classroom Instruction .	97
26.	Evaluation of the Impact on Student Achievement	98
27.	Method of Data Collection for Evaluation of Impact on Student Achievement ..	98
28.	Follow-up Evaluation Assessed the Impact of Training on Climate	99
29.	Method of Data Collection for Impact on Climate	99

LIST OF FIGURES

Figure	Page
1. Professional Development Planning Conceptual Model	10
2. Guskey's and Spark's Model of the Relationship Between Professional Development and Improvements in Student Learning	31
3. A Program Logic Model	54
4. Timeline of Research	74

A STUDY OF THE EVALUATION PROCEDURES FOR PROFESSIONAL
DEVELOPMENT AMONG PUBLIC SCHOOL DISTRICTS IN VIRGINIA

ABSTRACT

The purpose of this study was to identify how closely evaluations of professional development programs provided at the district level in public school districts in Virginia are congruent with the National Staff Development Council Standards for Evaluation. The author also sought to identify the types of professional development programs offered at the district level in Virginia public schools.

Professional Development directors or supervisors in all Virginia public schools were asked to complete an online survey that would describe the types of professional development programs offered and how they evaluated those programs.

Fifty-three districts responded to the survey. Most of the responding districts described professional development programs that were content and strategy based and lasted up to one full day. In addition, most districts reported completing an initial survey evaluating initial reaction to the program. However, less than 20% of the responding districts reported completing follow-up evaluations that assessed whether teachers had acquired new knowledge or content, whether teachers were applying new knowledge or content in their instruction, what impact the training had on student achievement or district climate. Further study is needed to determine how districts are using evaluations, and how evaluations are determining impact of training on student achievement.

COLLEEN CANNINGTON BRYANT

DEPARTMENT OF EDUCATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

**A STUDY OF THE EVALUATION PROCEDURES FOR PROFESSIONAL
DEVELOPMENT AMONG PUBLIC SCHOOL DISTRICTS IN VIRGINIA**

CHAPTER 1

THE PROBLEM

Introduction

In his book *The World is Flat*, Thomas Friedman (2005) maintained that, with the rapid growth in technology, globalization has led to a fading of international and intellectual boundaries, thereby, creating a flat world. The paradigm that has been created by the flattening world requires a constant renewal of skills as future workers strive to stay current with ever changing employment demands. Friedman's (2005) message is: "You have to constantly upgrade your skills. There will be plenty of good jobs out there in the flat world for people with the knowledge and ideas to seize them" (p. 237). Friedman explained that every aspect of the business world, including education, will be impacted by the flattening world. It will affect educators as the skills their students require upon entering the workforce are changing.

The changing world Friedman referred to requires educators to continually update their skills to keep pace with the abilities their students must possess upon graduation. As educators move into the twenty-first century they must remain current with technological changes as well as new research on the way students learn and what methods most affectively meet the learning process. This need to continually update places a burden on school districts to provide quality professional development to help teachers provide instruction that will improve student achievement. When teachers do not have the necessary knowledge and skills to provide high quality instruction, little improvement in student learning will be realized (Guskey & Sparks, 1996; North Central Regional Educational Laboratory [NCREL], 1997). Tracy Koon, Intel's director of corporate

affairs, said that America's education problem is that "You have teachers turning off kids because they are not trained" (cited in Friedman, 2005, p. 273). The goal of professional development programs should be to help educators develop skills and increase their knowledge base to improve their classroom instruction and ultimately improve student achievement (Guskey, 2000; Shaha, Lewis, O'Donnell, & Brown, 2004).

Substantial funding is required to provide high quality professional development programs designed to promote improved student achievement. For example, the 2004-05 federal budget for education exceeded \$537 million dollars, a significant portion of which was devoted to providing professional development opportunities for teachers (United States Department of Education [USDOE], 2004). In addition, State Education Agencies (SEAs) and Local Education Agencies (LEAs) spend considerable state and local dollars to provide professional development opportunities for teachers, administrators, and support staff in an effort to improve instruction and raise student achievement.

Federal funding may require compliance with specific guidelines in order to receive the desired funds. The Elementary and Secondary Education Act (ESEA), initially passed in 1965 and reauthorized in 2001 as No Child Left Behind (NCLB) specifies that all professional development funded by the USDOE be grounded in scientifically-based research. In addition, the legislation requires that evaluations be conducted of professional development programs to determine whether training has been successful in achieving its intended goals (USDOE, 2004). For example, in 2001, Congress established a grant program, Teaching American History, which provides professional development for teachers of American history. The programs funded through these grants are required to "be evaluated in regard to the degree to which they

improve teacher effectiveness and student achievement” (Humphrey, Chang-Ross, Donnelly, Hersh, Skolnik, SRI, 2005, p. 3). In fact, the USDOE requirement for evaluation was the topic of a keynote address as well as four breakout sessions at a two-day conference for project directors of Teaching American History Grants (USDOE, 2006). Such focus on evaluation of professional development programs emphasizes the need for quality evaluations to measure the overall effect professional development is having on classroom instruction as well as student achievement. Also, such evaluations may provide information to guide the design of future professional development programs to ensure a more consistent, effective program (National Staff Development Council [NSDC], 2006).

The National Staff Development Council also recognizes the need to evaluate the impact of professional development. This organization has established evaluation standards to guide professional development planners through an assessment process designed to improve the quality of professional development by assessing the planning, implementation, and follow-up of programs as well as determining the ultimate impact on teacher behavior and student learning (NSDC, 2001).

Unfortunately, conducting comprehensive evaluations of professional development presents a challenge that often school districts, lacking the necessary knowledge of the process, do not attempt. In fact, at a 1999 forum conducted by the Professional Development Laboratory, a collaborative project with New York University, Marcus (cited in Moller, 1999, p. 8) stated that “[evaluating professional development] is one of the most elusive subjects in education today and one of the most important”. At the same meeting, Fredrica Jarcho of The Greenwall Foundation stated that few groups

receiving grants from their organization “have really managed to do the kind of evaluation we’re talking about today which deals primarily with student outcomes. Everybody is looking for this information” (cited in Moller, 1999, p. 8).

The need to conduct evaluations of professional development also is reflected in federal legislation. In 1994, *The Goals 2000: Educate America Act* was passed, which states that professional development should provide educators with the knowledge and skills to improve student achievement. The legislation also reflects the need for a thorough evaluation of the efficacy of professional development programs funded with federal dollars stating that “professional development is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning; and this assessment guides subsequent professional development efforts” (*Goals 2000*, 2001, p. 2).

Additional requirements for evaluation at the federal level are reflected in H.R. 3801, passed in 2002, which defines a scientifically valid education evaluation as one that:

- A. Adheres to the highest possible standards of quality with respect to research design and statistical analysis;
- B. Provides an adequate description of the programs evaluated and, to the extent possible, examines the relationship between program implementation and program impacts;
- C. Provides an analysis of the results achieved by the program with respect to its projected effects. (US Congress, 2002, p. 4)

The federal government is not the only unit of government or organization requiring proof of the effectiveness of professional development (Marks & Maniates,

2003). In the current climate of accountability, tangible proof that programs are making a positive difference in classrooms is required by many funding agencies (Shaha et al., 2004). However, at least three studies identified problems with professional development programs that failed to provide adequate evidence of the effect of the programs on student achievement. The first, published in 1994 by the General Accounting Office (GAO), criticized the Department of Energy's PreCollege Math and Science Education professional development program for providing insufficient evidence demonstrating that the program had a positive effect on student achievement. A second report, published by the National Science Foundation (NSF), reported that evaluations conducted on professional development programs sponsored by the Foundation failed to provide information of program impact on student learning (Guskey, 2000).

A third study, completed in 2000 and conducted by the National Center for Educational Statistics (NCES), sought to determine if professional development was making a difference in classroom instruction. The survey also examined the extent to which teachers felt adequate follow-up was provided following professional development activities. Of the teachers surveyed, 24% reported that the administration did not provide adequate follow-up to assist teachers in applying the skills, while 35% reported no follow-up sessions or additional training was available. In addition, 35% indicated that no opportunities were provided to share with other teachers (NCES, 2001).

The North Central Regional Educational Laboratory (NCREL) (1997) stresses evaluations stating that professional development opportunities should incorporate an evaluation plan to determine the effectiveness of the program. Unfortunately, the planners of professional development have often not focused much attention on

evaluations, citing expense and time as barriers. In addition, planners often do not feel they have the training to conduct proper evaluations (Gordon, 1991; Guskey, 1999).

Statement of the Problem

School districts spend significant resources to provide professional development for their teachers in order to improve classroom instruction. The hope is that teachers will acquire new knowledge and skills that will be transferred to the classroom, ultimately having a positive affect on student achievement. For example, the federal government has awarded over \$27 million in grants to 33 Virginia school districts since 2001 through the Teacher American History Program. The sole purpose of these grants is to provide professional development to history teachers with the intended goal of improving student knowledge of United States history (USDOE, 2007).

According to Guskey (1999), educators have not adequately evaluated the effectiveness of professional development programs. Professional development planners often ask participants to complete a summative evaluation at the completion of a program but do not follow-up to determine if intended knowledge acquisition occurred or whether it was applied in the classroom. Therefore, little documentation is available of the degree of change in classroom behavior as a result of participation in professional development programs (Choy, Chen, Burgarin, & Broughman, 2006; Frechtling, 2001; Guskey, 1994, 1999, 2000; Moller, 1999; Porter, Garet, Desimone, Yoon, & Birman, 2000; Shaha et al., 2004). School districts need to adequately evaluate professional development programs in order to determine the impact of the program and what, if any, changes need to occur in the planning of future professional development.

Purpose of Study

The purpose of this study is to determine the type of professional development Virginia school districts offer and the degree to which they conduct evaluations of professional development in compliance with standards established by the NSDC. These process standards specifically address the evaluation process, stating that evaluations should improve the quality of current staff development efforts and determine the effects of staff development in terms of its intended outcomes by examining:

- (1) initial collection of data on participants' reactions, (2) teachers' acquisition of new knowledge and skills, (3) how that learning affects teaching, and in turn (4) how those changes in practice affect student learning, and (5) how staff development has affected school culture and other organizational structures. (NSDC, 2001, p. 18)

Conceptual Framework

Professional development programs are expensive and time consuming. Educators charged with designing professional development must consider multiple factors as they plan, execute, and evaluate programs. The first step in planning is to insure the purpose of a proposed professional development program is aligned with the district's vision. A needs assessment should then be conducted to drive program content. This needs assessment should examine teacher behavior and student achievement in order to identify areas of growth. Once the needs assessment is complete, planners can establish outcomes for the program. During the planning process, planners should also develop an evaluation program to assess the degree to which teachers and students benefit from the program. Program planning and evaluation planning should occur simultaneously and should

examine teacher behavior and student achievement over a period of time following the program to determine if the intended program outcomes have been realized. Information obtained through the evaluation process should be used to guide future professional development programs. Figure 1 reflects the process professional development planning should follow.

Research Questions

This study will ask the following questions in order to determine the type of professional development programs Virginia school districts offer at the district level and the degree to which those programs are evaluated in compliance with the NSDC standards for evaluation of professional development programs. To that end, the study proposes to address these questions:

1. What types of professional development do school districts in Virginia provide their teachers?
2. To what degree do Virginia school districts evaluate the impact of professional development activities on teacher performance and student achievement?
3. To what degree are Virginia school district evaluations of professional development programs congruent with the National Staff Development Council standards for evaluation which state that evaluations should assess:
 - a. initial collection of data on participants' reactions
 - b. teachers' acquisition of new knowledge and skills
 - c. how that learning affects teaching, and in turn
 - d. how those changes in practice affect student learning

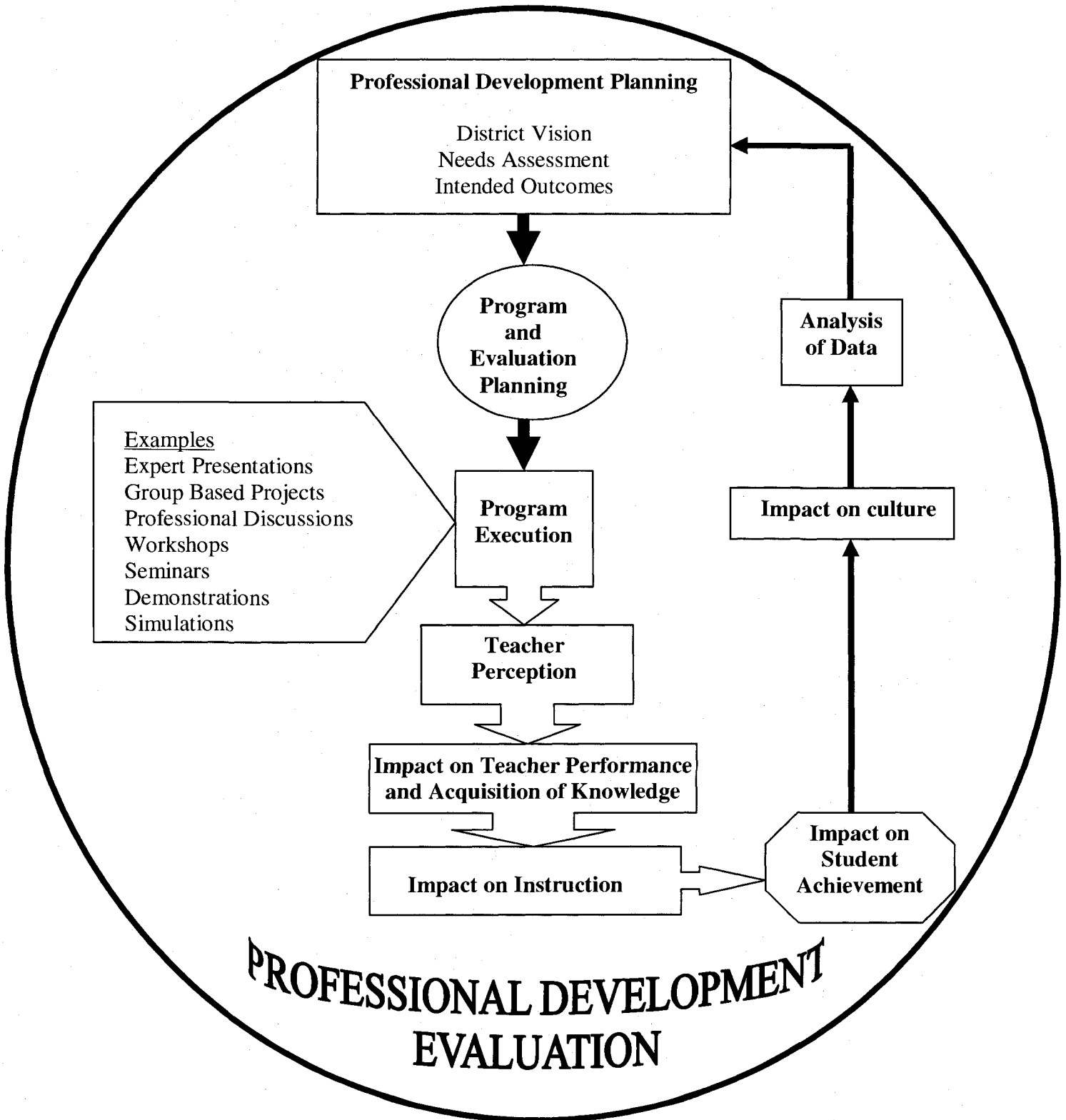


Figure 1. Professional Development Planning Conceptual Model

- e. how staff development has affected school culture and other organizational structures.

Significance of the Study

As pressure is placed on educators to improve the academic achievement of all children, school districts are spending significant resources to provide professional development for their teachers with the belief that improving the knowledge of their teachers will improve the achievement of their students. According to Guskey (2000), improvements in education can be linked to strong professional development programs; however, little attention has been given to determining the actual impact of programs (Guskey, 2000). As the demand for improving teachers' knowledge and skills grows, a more focused examination on what works and under what conditions is needed.

This study focuses on the definition and history of professional development in the United States, the need to adequately evaluate its effectiveness, the background of professional development evaluation, and characteristics of an effective evaluation program. The study seeks to determine what the research says regarding multi-phase evaluations designed to determine the long-term impact of professional development programs on classroom instruction and student achievement. A comprehensive evaluation will provide professional development planners with information on the effectiveness of the program, as well as guide them in the development of future programs (Arter, 2001; Frechtling, 2001; Gordon, 1991; Guskey, 1994, 1999, 2000; Guskey & Sparks, 1996; Killion, 2002; Marks & Maniates, 2003; Moller, 1999; Murphy, 2000; NCES, 2001; NCREL, 1997; National Center on Secondary Education and Transition [NCSET], 2005; Porter et al., 2000; Shaha et al., 2004).

According to the NSDC, the purpose of evaluation is to improve something or judge its worth (Gordon, 1991; Guskey, 2000; NSDC, 2006). An effective evaluation program should consist of more than a satisfaction survey completed at the conclusion of the program (Guskey, 1994; Sparks & Hirsch, 2000). Sufficient information is needed to guide future programs or determine the worth of a previous program. To obtain the necessary information, an evaluation plan should be multi-phase and aligned with established standards and assessments around which the professional development program was planned (Killion, 2002). In addition, the evaluation should seek to identify what changes occur in participant's classroom behavior (Lamb & Tschillard, 2005).

The study will seek to determine what type of professional development programs are provided at the district level in Virginia public school districts. In addition, the study will seek to determine how school districts evaluate professional development programs and the degree to which evaluations are congruent with the evaluation standards established by the NSDC. The literature review will provide a summary of current literature on the evaluation of professional development thus raising an awareness of the importance of conducting comprehensive evaluations.

The actual survey may serve as a checklist to assist in focusing the development of an effective evaluation program. The results of the study may heighten awareness of how evaluations should be designed and executed juxtaposed against a description of how evaluations are currently being completed in reporting Virginia school districts. Professional developers may find this information and the data beneficial during the evaluation and program development phases.

Conceptual Definitions

Classes – “A group of students who meet at a regularly scheduled time to study the same subject” (Merriam-Webster, 2006, p. 1).

Conference – “A meeting for the exchange of views such as a colloquium or seminar, an assembly of people...” (Houghton, 1995, p. 1).

Evaluation – An ongoing, systematic, purposeful process, developed in the planning stages, of investigating merit or quality of a program by studying, reviewing, and analyzing data gathered from multiple sources beyond the completion of the program in order to make informed decisions and recommend improvement. (Guskey, 1999; Killion, 2002; NCREL, 1997; Sanders and Sullins, 2006).

Goal -- “A statement of a desired state toward which a program is directed” (Killion, 2002, p. 51).

High quality professional development -- an event that provides rigorous and relevant content, strategies, and organizational supports that ensure preparation and career-long development of teachers. (Goals 2000)

Professional (staff) development -- “...the planned, coherent actions and support systems designed and implemented to develop knowledge, skills, attitudes, aspiration, and behaviors to improve student achievement” (Killion, 2002, p. 11). Examples of professional development include conferences, institutes, mentoring, seminars, and classes.

Training – This may involve a variety of characteristics with the intent to present skills designed to improve job performance. It is the most common form of a professional development model, as well as the most efficient and cost effective. Training is often

used to describe professional development opportunities involving a presenter, group-based projects, discussions, workshops, seminars, colloquia, demonstrations, role-playing, simulations, and microteaching (Gordon, 1991; Guskey, 2000 p. 23).

Limitations of the Study

The following limitations apply to the interpretation of the results of this study:

1. The results of the study are generalizable only to school districts in Virginia that respond to the survey.
2. The study reflects information from school districts that returned the surveys; therefore, not all school districts in the state will be represented.
3. The data represents a self-report by the school districts submitting the survey and is limited to the information the districts select to provide.

Delimitations

The following delimitations apply to the information participants are asked to provide:

1. While many districts permit individual schools to plan and conduct school based professional development, the study limits the collection of data to programs offered only at the district level in order to facilitate data comparisons.
2. Districts will be instructed to provide information on no more than three professional development programs in order to restrict the burden of reporting on the part of the districts.

Assumptions of the Study

The following major assumptions underlie the design of this study:

1. Responding school districts will accurately reflect the evaluation methods used for professional development programs.
2. The evaluation instrument developed by the researcher will accurately assess the evaluation process of professional development.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

There exists in the field of education an expectation that teachers will participate in professional growth activities. In fact, the Virginia Department of Education requires all teachers to earn professional development points in order to maintain their professional license. To assist teacher's professional growth, school districts provide training opportunities to their teachers on a regular basis and many organizations, including the federal government, provide grant opportunities to provide professional development. The significant human and capital investments in professional development should be evaluated to determine if the training is having the intended effect and what methods and circumstances provide the best outcome.

This chapter reviews the literature on the importance of professional development as well as the necessity to conduct quality evaluations of professional development programs. A description of the purpose of professional development is followed by a historical review of the application of professional development in the United States. Additionally, the review identifies standards for the evaluation of professional development established by key researchers in the field, particularly the NSDC.

Professional Development

Purpose of Professional Development

The pressure to improve schools coupled with innovations in technology, the identification of new content in some subject areas, and improved knowledge of how students learn has increased the need for teachers to expand their content knowledge and

pedagogical skills in an effort to improve student achievement (Guskey, 1994, 2000). However, *A Nation at Risk*, published in 1983, reported that schools in the United States were not meeting the academic needs of students. In addition, a 1998 study conducted by the NCES found that only 56% of teachers surveyed indicated they were implementing instructional strategies presented through professional development that was aligned with high standards.

One method implemented by school districts to address the problem identified through these two reports has been to require teachers to participate in professional development throughout their career. The belief is that professional development will improve the quality of teaching and, therefore, have a positive impact on student achievement. In fact, the purpose of professional development, according to *The Goals 2000 Educate America Act*, passed in 1994, should be to prepare educators to help students achieve high academic standards (USDOE, 1998). If professional development programs do not succeed in changing teacher behavior, students probably will not benefit from the programs (Guskey, 2000).

An evaluation of professional development activities is necessary to determine if a program achieved the goal of improving instruction and student achievement. Program evaluation may provide the information to determine the effectiveness of a program, but many program evaluations do not go far enough to properly assess program impact.

Definitions of Professional Development

In addition to the identification of the characteristics and standards of professional development it is necessary to know the definition of professional development. Many definitions exist, including those by Guskey (2000), Killion (2002), the NCSET (2005),

the NSDC (2001), Rice (2001), and the VDOE (2004). These definitions, provided in Table 1, identify what professional development should accomplish as well as describing the various formats professional development may take. Guskey (2000) and Killion (2002) define professional development as a program whose key purpose is the improvement of student learning. The NCSET's (2005) definition echoes the NSDC's goal that professional development should develop life-long learners, while Rice's (2001) definition provides some insight into what activities are considered professional development.

The VDOE's (2004) definition states that professional development should:

1. Improve and increase teachers' knowledge of the academic subjects the teachers teach, and enable teachers to become highly qualified if they are teaching in a federal core content area;
2. Be sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and teachers' performance in the classroom;
3. Be based on, aligned with, and directly related to the Virginia's Standards of Learning;
4. Be structured on scientifically-based research demonstrated to improve student academic achievement or substantially increase the knowledge and teaching skills of teachers;
5. Be sponsored by school districts, colleges, universities, organizations, associations, or other entities experienced in providing professional development activities to teachers and instructors;

Table 1
Definitions of Professional Development

Guskey	<p>“... those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students” (Guskey, 2000, p. 16).</p>
Killion	<p>“... planned, coherent actions and support systems designed and implemented to develop knowledge skills, attitudes, aspirations, and behaviors to improve student achievement” (Killion, 2002, p. 11).</p>
National Center on Secondary Education and Transition	<p>“...process that increases life-long learning capacity of community members.” (National Center on Secondary Education and Transition, 2005, p. 1)</p>
Rice	<p>Includes preservice (teachers prep programs), inservice, district sponsored workshops or inservice programs, school-sponsored workshops or inservice programs, university extension or adult education programs, subject specific college courses, conferences (Rice, 2001)</p>
NSDC	<p>Staff development not only includes high-quality, ongoing training programs with intensive follow-up and support but also other growth-promoting processes such as study groups, action research, and peer coaching. (NSDC, 2006, p. 1)</p>

6. Be delivered by individuals who have demonstrated qualifications and credentials in the focus area of the professional development;
7. Support the success of all learners including children with special needs and limited English proficiency;
8. Provide training for teachers in the use of technology so that technology and technology applications are effectively used in the classroom to improve teaching and learning in the curricula and federal core academic subjects in which the teachers teach;
9. Promote the use of data and assessments to improve instruction and;
10. Be reviewed for high quality and evaluated after completion to determine if the intended results were achieved. (p. 1)

Characteristics of Professional Development

Recognizing the purpose of professional development is just the beginning. Professional development planners must also be familiar with the components that make up a quality professional development program. A successful program should be aligned with goals and expected outcomes established at the beginning of the program planning process. The goals should identify the knowledge participants are expected to gain as well as the intended impact on classroom behavior and student achievement. The goals and outcomes should be focused and the anticipated change should be narrow enough to allow participants to feel capable of implementing the new skills or introducing new knowledge into their instruction. In other words, professional development should not overwhelm participants with major change (Guskey & Sparks, 1996).

Goals 2000 (2001) provides some program planning guidelines for planners, indicating that a professional development program should:

- focus on teachers as central to student learning, yet includes all other members of the school community.
- focus on individual, collegial, and organizational improvement.
- respect and nurture the intellectual and leadership capacity of teachers, principals, and others in the school community.
- reflect best available research and practice in teaching, learning, and leadership.
- enable teachers to develop further expertise in subject content, teaching strategies, uses of technologies, and other essential elements in teaching to high standards.
- promote continuous inquiry and improvement embedded in the daily life of schools.
- is planned collaboratively by those who will participate in and facilitate that development.
- require substantial time and other resources.
- is driven by a coherent long-term plan.
- is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning; and this assessment guides subsequent professional development efforts. (p. 2)

In addition to the *Goals 2000* characteristics, at least 12 lists of characteristics have been developed since 1995. These lists, developed by a variety of individuals and

organizations, are provided in Table 2 (Guskey, 2003). Several lists share some common themes. For example, Corcoran (1995), Kent and Lingman (2000), Loucks-Horsley, Stiles, and Hewson (1996), Maurer (1996), and the USDOE (1997) focus on the teacher as a life-long learner while Corcoran (1995), the Educational Research Service (1998), Kennedy (1998), Loucks-Horsley, Stiles, and Hewson (1996), and Maurer (2000) recommend follow-up to support the teacher through implementation. Another example of shared themes among the list is that Corcoran (1995), the Educational Research Service (1998), Hawley and Valli (cited in Maurer, 1996), and The National Partnership for Excellence and Accountability in Teaching (cited in Rice, 2001) all recommend that professional development programs be school based.

Improving student achievement was identified as a desired outcome in the lists of the American Federation of Teachers (2002), the Educational Research Service (1998), NSDC (2001), and the USDOE (1997). The need to evaluate the professional development program was included in the following lists: Educational Research Service (1998), Hawley and Valli (cited in Maurer 1996), Loucks-Horsley, Stiles, and Hewson (1996), the National Partnership for Excellence and Accountability in Teaching (cited in Rice, 2001) and the USDOE (1997). Wenglinsky's (2002) list stands alone when mentioning the need to provide strategies for teaching special needs students and students with limited-English-proficiency; however, the Educational Research Service (1998) does specify that professional development should help teachers meet the needs of a diverse student population.

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
1. Corcoran (1995)	1. Stimulate and support site-based initiatives. 2. Support teacher initiatives as well as school or district initiatives. 3. Are grounded in knowledge about teaching. 4. Model constructivist teaching. 5. Offer intellectual, social and emotional engagement with ideas, materials and colleagues. 6. Demonstrate respect for teachers as professionals and as adult learners. 7. Provide for sufficient time and follow-up support for teachers to master new content and strategies and to integrate them into their practice. 8. Are accessible and inclusive.
2. American Federation of Teachers (2002)	Professional development should provide a foundation in the pedagogy of disciplines, knowledge about the teaching and learning processes, be rooted in and reflect the best available research, align content with the standards and curriculum teachers use, contribute to measurable improvement in student achievement, and be intellectually engaging and address the complexity of teaching.
3. Loucks-Horsley, Stiles, & Hewson (1996)	Professional development principles should: <ol style="list-style-type: none"> 1. be driven by a clear, well-defined image of effective classroom learning and teaching; 2. provide teachers with opportunities to develop knowledge and skills and broaden their teaching approaches, so they can create better learning opportunities for students; 3. use instructional methods to promote learning for adults which mirror the methods to be used with students; 4. build or strengthen the learning community of science and mathematics teachers; 5. prepare and support teachers to serve in leadership roles if they are inclined to do so; 6. consciously provide links to other parts of the educational system; 7. include continuous assessment (p. 1 – 3)

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
4. Hawley & Valli (1996)	<p>Professional development should:</p> <ol style="list-style-type: none"> a. focus on what students are to learn and how to address the different problems students may have b. be driven by analyses of the differences between goals and standards for student learning and performance; c. involve teachers in the identification of what they must learn and the development of the learning process; d. be primarily school based and integral to school operations; e. provide learning opportunities related to individual needs organized around collaborative problem solving; f. be continuous and ongoing, involving follow-up support for further learning, including support from sources external to the school; g. incorporate evaluation on outcomes and processes that are involved in the lessons learned through professional development; h. provide opportunities to engage in developing an understanding of the knowledge and skills to be learned; i. be integrated with a comprehensive change process that addresses impediments to, and facilitators of, learning (cited in Maurer, 2000, p. 7).
5. Kennedy (1998)	<p>Factors that contribute to effective professional development include:</p> <ul style="list-style-type: none"> • A focus on content knowledge and how students learn that content • In-class visitations to provide feedback, thereby enhancing the likelihood that the teacher will make connections

(Continued on the next page.)

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
6. United States Department of Education (1997)	<ol style="list-style-type: none"> 1. Focus on teachers as central to student learning, yet includes all other members of the school community. 2. Focus on individual, collegial, and organizational improvement. 3. Respect and nurture the intellectual and leadership capacity of teachers, principals, and others in the school community. 4. Reflect best available research and practice in teaching, learning, and leadership. 5. Enable teachers to develop further expertise in subject content, teaching strategies, uses of technologies, and other essential elements in teaching to high standards. 6. Promote continuous inquiry and improvement embedded in the daily life of schools. 7. Is planned collaboratively by those who will participate in and facilitate that development. 8. Require substantial time and other resources. 9. Is driven by a coherent long-term plan. 10. Is evaluated ultimately on the basis of its impact on teacher effectiveness and student learning; and this assessment guides subsequent professional development efforts. (p. 2)
7. Desimone, Porter, Garet, Yoon, Birman (2000)	<ul style="list-style-type: none"> • Structural features <ul style="list-style-type: none"> ○ Form or organization of the activity ○ Duration of the activity ○ The collective participation of groups of teachers is emphasized • Core features <ul style="list-style-type: none"> ○ The activity offers opportunities for active learning ○ The activity promotes coherence in teachers' professional development ○ The activity has a content focus

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
8. Educational Research Service (1998)	<ul style="list-style-type: none"> • Has as its central goal the improvement of student learning • Is embedded in the daily life of all teachers • Fosters a norm of continuous individual, collegial, and organization improvement • Respects and nurtures the intellectual and leadership capacity of teachers, principals, and others • Reflects the best available research and practice in teaching, learning, and leadership • Foster a deepening of subject-matter knowledge, a greater understanding of learning, and a greater appreciation of students' needs • Provides for three phases of the change process: initiation, implementation, and institutionalization • Provides a framework for integrating innovations and relating those innovations to the mission • Helps teachers and other school staff met the needs of students who learn in different ways and who come from diverse cultural, linguistic, and socioeconomic backgrounds • Provides adequate time during the work day for inquiry, reflection, and mentoring • Is driven by a coherent long-term plan, and sustains long-term change in practice • Is site-based • Supports a clearly articulated vision for students • Uses systematic evaluation to assess its impact on teacher effectiveness and students learning, and uses information from this evaluation to guide subsequent professional development efforts (p. 3)
9. Kent & Lingman (2000)	<p>Themes</p> <ul style="list-style-type: none"> • Applicable to every level in the system, i.e. classroom, administration, policy maker • Establishes a continuum of learning throughout teachers' professional lives • Includes practical strategies • Addresses strategies for various groups • Stimulates creative thinking regarding current education issues

(Continued on the next page.)

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
10. National Partnership for Excellence and Accountability in Teaching (2000).	<ol style="list-style-type: none"> 1. Be based on analyses of differences between student performance and student learning goals. 2. Involve teachers in identification of what they need to learn and in the development of the learning experiences in which they will be involved 3. Be primarily school-based and built into the day-to-day work of teaching 4. Be organized around collaborative problem solving 5. Be on-going and involve follow-up and support for further learning – including support from sources external to the school that can provide necessary resources and new perspectives 6. Incorporate evaluation of multiple sources of information on student outcomes and instruction 7. Provide opportunities to gain an understanding of the theory underlying the knowledge and skills being learned 8. Be connected to a comprehensive change process focused on improving student learning (cited in Rice, 2001).
11. Wenglinsky (2002)	<p>Key measures examine the amount of professional development provided in the following areas:</p> <ol style="list-style-type: none"> 1. Cooperative learning 2. Interdisciplinary instruction 3. Higher-order thinking skills 4. Classroom management 5. Portfolio assessment 6. Performance-based assessment 7. Cultural diversity 8. Teaching special-needs students 9. Teaching limited-English –proficient students

(Continued on the next page.)

Table 2
 Characteristics/Standards of Professional Development

Author	Characteristics
12. National Staff Development Council (2001)	<p>Staff development that improves the learning of all students includes programs that comply with the following standards:</p> <p>Context Standards</p> <ul style="list-style-type: none"> • Organizes adults into learning communities whose goals are aligned with those of the school and district • Requires skillful school and district leaders who guide continuous instructional improvement • Requires resources to support adult learning and collaboration <p>Process Standards</p> <ul style="list-style-type: none"> • Uses disaggregated student data to determine adult learning priorities, monitor progress, and help sustain continuous improvement • Uses multiple sources of information to guide improvement and demonstrate its impact • Prepares educators to apply research to decision making • Uses learning strategies appropriate to the intended goal • Applies knowledge about human learning and change • Provides educators with the knowledge and skill to collaborate <p>Content Standards</p> <ul style="list-style-type: none"> • Prepares educators to understand and appreciate all students, create safe, orderly and supportive learning environment, and hold high expectations for their academic achievement • Deepens educators' content knowledge, provides them with research-based instructional strategies to assist students in meeting rigorous academic standards, and prepares them to use various types of classroom assessments appropriately • Provides educators with knowledge and skills to involve families and other stakeholders appropriately (p. 5)

(Continued on the next page.)

With so many lists available, it can be overwhelming to identify the characteristics on which to focus. Selecting one single comprehensive set of characteristics may help professional development planners in the planning process. The NSDC (2001) list of characteristics, *Standards for Professional Development* (included in Table 2), provides planners with a clear focus around which to build a professional development program. The NSDC, formed in 1976 and devoted to raising the performance level of students, believes that quality professional development is an integral part of developing teachers that perform at high levels and students that are able to maximize their learning.

The NSDC *Standards for Professional Development* are divided into the following levels: context, process, and content. The NSDC (2001) context standards state that student learning is improved by providing staff development that accomplishes the following:

1. organizes adults into learning communities whose goals are aligned with those of the school and district;
2. requires skillful school and district leaders who guide continuous instructional improvement;
3. requires resources to support adult learning and collaboration (p. 1).

The NSDC (2006) process standards guide planners in the development stage and suggest that student learning may improve if planners include a disaggregation of student data during the planning process. An analysis of the data should identify specific learning needs and allow for the design of a professional development program to target those needs. In addition, the NSDC recommends that multiple sources of information and

research-based strategies be applied to guide in the selection of appropriate programs designed to match intended goals. An opportunity for teachers to collaborate should also be included in the program design.

The NSDC content standards recommend that planners develop programs to increase teacher's content knowledge. The professional development planners should also consider involving family members and other stakeholders in the learning process. The content standards also recommend that a professional development program promote teacher appreciation and understanding of all students in order to provide a supportive learning environment.

Professional Development Model

Beginning the program planning process can be difficult. A professional development model may assist planners through the various phases of program planning. Focusing on the fact that professional development should ultimately improve student learning, Guskey and Sparks developed a model that illustrates the relationship between professional development and student achievement (Guskey, 2000). This model, found in Figure 2, reflects the NSDC factors of content and context characteristics and process variables that influence the quality of professional development. Guskey and Sparks included administrators, school culture, teachers, conferences, and parents in their model as they believe each of these impacts the effect professional development will have on student learning. The model also indicates that a contributing factor toward improved student achievement is the education of the parents. According to the model, district policies in areas such as curriculum, textbooks, attendance, and grading also contribute to student learning outcomes. The arrows in the model reflect the direction of impact each

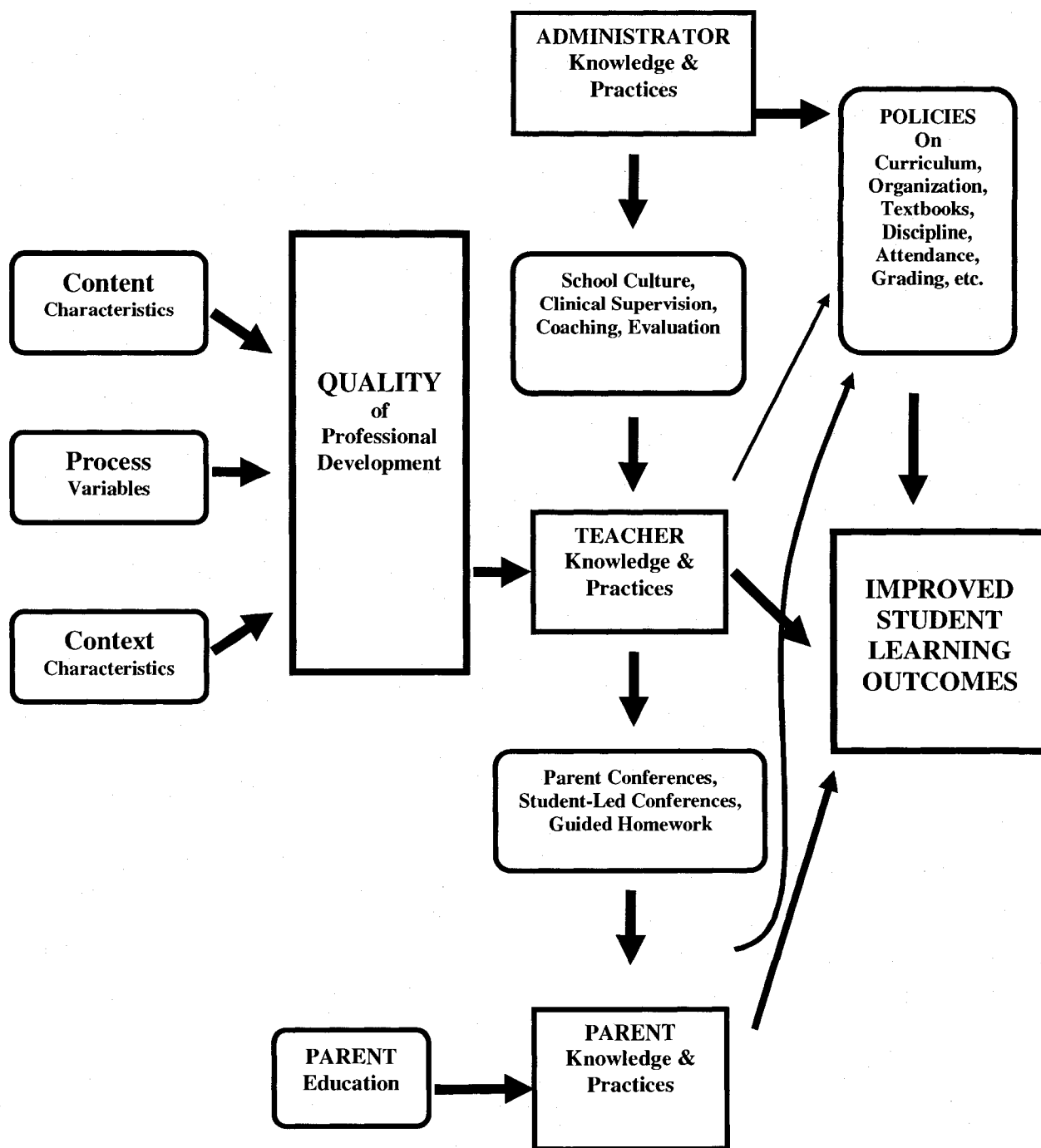


Figure 2. Guskey and Sparks's Model of the Relationship Between Professional Development and Improvements in Student Learning (Guskey, 2000)

component has on the ultimate goal of improved student learning (Guskey, 2000).

The content characteristics reflected in Guskey's and Spark's model represent the knowledge or skills participants are expected to gain and may include content, pedagogy, or the understanding of new roles and responsibilities. The process variables examine how the professional development plan was implemented and includes all activities including research, coaching, and focus groups, as well as any follow-up activities provided. Context characteristics examine the environment of the professional development opportunity and include: who is being trained, when the training is to occur, where it will take place, and why it is being done (Guskey, 2000).

Guskey's model was selected as an example of this study as it provides a visual explanation of the many components that impact student learning. The model indicates that a quality professional development program impacts all facets of the district operations, including culture, teachers and administrators, parents, students, and policies. The model also emphasizes the fact that the ultimate goal of professional development programs is to improve student learning. An awareness of these components guides professional developers in the design of programs focused on the anticipated impact of on student achievement.

Evaluation of Professional Development

Purpose of Evaluation of Professional Development

Once planners know the purpose, characteristics, and definition of professional development, it is necessary to be aware of pitfalls that may hinder the success of a program. One pitfall is that often a single program is presented to teachers, and they are then released with the expectation that they will implement the content or skills in their

classroom. However, many teachers are unable to move from a single professional development experience into implementation without additional information or education. Too often, evaluations are not conducted to determine if teachers feel capable of implementing the content or strategy. Follow-up programs should evaluate teachers' implementation of program knowledge and skills and provide additional assistance, when appropriate, for teachers as they move through implementation phases (Guskey 1994, 2000).

Evaluations are intended to provide information to ascertain whether a program is successful in achieving its goals. Taxpayers and those providing funding for professional development are demanding this information to determine if the money they are investing in the programs are producing the desired results (Guskey, 1994; Killion, 2002). In addition, comprehensive evaluation programs may provide information to help design professional development programs that have a better chance of improving teacher quality and student achievement (Corcoran, 1995; Guskey, 1994; Killion, 2002; Marks & Maniates, 2003; NCREL, 1997; Rice, 2001). However, professional development planners have often failed to adequately evaluate programs to determine if they achieved the intended goals (Guskey, 2000, NCES, 2001).

If professional development programs are followed by effective and appropriate evaluations, information may be available to assess the degree to which the program achieved those goals (Corcoran, 1995, Guskey, 2000; Shaha et al., 2004), as well as how to improve future programs (Killion, 2002, Marks & Marniates, 2003, Sanders & Sullins, 2006). Tyler (cited in Guskey, 2000 and Moller, 1999) supports a strong evaluation that includes establishing the desired program outcome at the beginning of the planning

process and then identifying the evidence that is acceptable to determine if the program was successful.

A well-planned, well-implemented evaluation can also provide disaggregated information on how a professional development program impacted different groups of participants. For example, information on whether elementary teachers experienced a more positive impact than secondary teachers or principals may be collected (Marks & Maniates, 2003). Evaluations may also offer supportive evidence about the benefits of a professional development program by using pre-tests and post-tests, plus other evaluation tools to compare groups of participants with groups of non-participants. This can be very beneficial if the information collected is relevant to the stakeholders, including district administrators, school board members, legislators, and parents (Guskey, 2000). Each of these stakeholders may find a different application for the evaluations. For example, district administrators may be able to determine if the program achieved an intended goal of improving content knowledge. Legislators and school board members may be more interested in whether the expenditure was worthwhile. Parents may find the evaluation beneficial in determining whether or not their child's educational experience is advancing as the result of teacher participation in professional development.

Another benefit of a quality evaluation may be the identification of the effectiveness of programs, thus gaining support for future professional development (Mizell, 2003; Sanders & Sullins, 2006). In 1999, the Professional Development Laboratory at New York University conducted an evaluation forum to address questions related to the effectiveness of professional development programs. The forum concluded that information collected during evaluations should provide evidence to justify the funds

expended on the program (Shaha et al., 2004). The following statement from the forum's report supports the argument for evaluation's role in gaining support for future programs:

We all know that we have limited resources to deal with. We need to make sure that professional development is focused, targeted, and gets the results that we need to see in our school systems. And we need to do it in such a way that we can convince the general public that professional development for educators is a worthwhile investment – an investment that pays off. (Moller, 1999, p. 11)

Professional development planners expect evaluations to confirm that their program was well received and effective in causing positive change in classroom instruction or student achievement. An evaluation may actually indicate that the program was not successful. This type of negative feedback, however, can be constructive as it provides information to guide the development of future programs (Killion, 2002). For example, participants may report that the program content had been presented in previous professional development. Planners then know they must revisit previous program content to prevent duplication of information. Another example may be that the participants felt they did not receive enough information to allow them to implement the content or strategies presented. This information is useful in preparing future programs. Planners then know they must provide more programs on the same content or strategies.

Historical Examples of Evaluations

In the 1940s, Ralph Tyler recognized that professional development should be evaluated and developed a model to guide the evaluation process (Moller, 1999; Guskey, 1999, 2000). Since his model was introduced in the 1940s, several evaluation models have been developed building on Tyler's model; however, there continues to be little

evidence that follow-up evaluations are occurring regularly. Lack of time and knowledge of how to conduct a proper evaluation are two reasons given for not conducting the proper evaluations (Guskey, 2000; Killion, 2002). This, coupled with the fact that some educators are not familiar with the characteristics of high-quality professional development, makes it difficult to develop an effective evaluation (Guskey, 2003). A historical review of evaluations reveals problems spanning more than a half-century. Table 3 provides an outline of the following program evaluations.

Following World War II, interest in providing professional development for teachers grew as the competition between the United States and the Soviet Union increased. In 1954, following the Soviet launch of Sputnik, the NSF initiated large-scale teacher in-service programs. The goal of these programs was to increase teachers' scientific knowledge. By 1965 the NSF programs had trained over half of all high school science and math teachers in the United States. By the 1970s, Congress began to demand some evidence that the expensive professional development programs were producing the desired outcome; however, the NSF was unable to provide sufficient evidence that the programs were having any impact on classroom instruction or student achievement. One reason for the lack of information was that the NSF staff was not focused on determining if the training was being implemented in schools (Frechtling, 2001).

Another example of a poor evaluation was one conducted of the University of California-Irvine's Summer Science Institute in 1985. The study found that 88 of the 100 teachers attending the institute reported that their comprehension of science concepts had improved as a result of their participation in the institute. However, no follow-up

Table 3
History of Professional Development Evaluations

Year	Study	Components of the study
1970	National Science Foundation	Unable to provide evidence of implementation
1985	University of California-Irvine Summer Science Institute	No follow-up conducted of impact on students
1993	Expert Panel for Review of Federal Education Programs in Science, Mathematics, Engineering, and Technology (SMET)	Little to no evidence of efficacy despite \$2.2 billion education program. Funding provided without requiring evaluation
1994	Department of Energy - Precollege Math and Science Education Program	No adequate evaluation connecting professional development and student achievement.
1995-2000	Washington Assessment Professional Development Program	Evaluation program used data collected from surveys, interviews, and site visits to redesign the program
Late 1990s	Eisenhower Longitudinal Study of teacher change (LSTC)	Study found that professional development focused on higher-order thinking had a positive transfer to the classroom
1997	Multi-Agency Study of Teacher Enhancement Program	Study used interviews, surveys, site visits, and data disaggregation to determine if school or district environment affected implementation
1998-2002	Local Systemic Change	Found a positive impact on teachers' attitudes toward teaching.
2006	Scientific Work Experience Programs for teachers	Formative and summative evaluations included discussion, interviews, surveys, observations

assessment was conducted to determine if an increase in comprehension was realized (Frechtling, 2001).

Another case of the lack of adequate evaluation of a program was the Expert Panel for the Review of Federal Education Programs in Science, Mathematics,

Engineering, and Technology (SMET), which reported that approximately \$2.2 billion would be spent on SMET education programs in 1993 (Federal Coordinating Council for Science, Engineering and Technology, 1993). A significant amount of these funds were devoted to supporting professional development, but little or no evaluation information was available about the efficacy of the programs. According to the Committee on Education and Human Resources, the federal government provided funding without providing for planning and evaluation (Frechtling, 2001).

In 1994, the GAO reported that the Department of Energy failed to conduct adequate evaluations of their Precollege Math and Science Education Program. The data provided by the Department of Energy could not provide adequate evidence of any link between the professional development programs and student achievement. The GAO reported that those planning the Precollege Math and Science Education Program lacked adequate knowledge of how to conduct thorough evaluations of professional development (Frechtling, 2001).

While research on evaluation of professional development, including Frechtling (2001), Gordon (1991), Guskey (1999, 2000), Herman, Morris, & Fitz-Gibbon (1987), Killion (2002), and Porter et al., (2000), reported the absence of adequate evaluation of professional development, some evidence was available of strong evaluation programs. For example, Arter (2001) reported on an evaluation of the Washington Assessment Professional Development Program, a five-year program spanning 1995 to 2000 and focused on providing training on the use of high-quality state and classroom assessments.

Two process evaluations were conducted that included assessing the amount of professional development, as well as the format of the program to determine the impact

of the program. The impact was measured by observed changes in the quality of classroom assessments. The first study consisted of surveys mailed to participants assessing how the training was provided, as well as whether it was being passed along to other teachers. The following year, telephone interviews were conducted to determine whether cooperative teams established through the program were successful. Site visits were conducted to assess whether the district environment was supportive of program implementation. The site visits included interviews with principals, classroom observations, and examination of classroom assessments. By using a thorough evaluation, information was available on the satisfaction of stakeholders, the lack of success of any aspect of the program, the support necessary for changes to occur in the classroom, and the amount of learning that occurred with teachers. This information guided the recommendations of the aspects of the program to continue and which to discontinue (Arter, 2001).

According to Frechtling (2001), the late 1990s began to see strong efforts to evaluate the efficacy of professional development programs. For example, the Eisenhower longitudinal study of teacher change (LSTC) study mentioned earlier focused on the effects of professional development on teaching practice, teacher participation in professional development, trends in teaching practice, and implications for policy and practice. The study found that professional development focused on higher-order thinking strategies had a positive relationship to teachers using those strategies in their classroom. The study supports the belief that high-quality professional development has the opportunity to have a positive effect on teacher behavior (Porter et al., 2000).

Another example of a comprehensive evaluation program was conducted in 1997 during the Multi-Agency Study of Teacher Enhancement Programs. This evaluation of programs provided by five agencies included the use of multiple data collection techniques, including interviews, surveys, and site visits. The study disaggregated the data to determine if elementary and secondary teachers' experiences were different. The report found that the school or district environment was a factor in the overall implementation of practices presented during the program (Frechtling, 2001).

Another evaluation program, funded by the NSF, evaluated the application of a project known as Local Systemic Change (LSC), a program designed to improve the teaching of science, mathematics, and technology. The evaluation component of this teacher enhancement program focused on assessing individual projects, as well as the design, quality, and impact of the program. According to Boyd, Banilower, Pasley, and Weiss (2003), the evaluation sought to answer the following questions:

What is the overall quality of the LSC professional development activities?

What is the extent of school and teacher involvement in LSC activities?

What is the impact of the LSC professional development on teacher preparedness attitudes and beliefs about mathematics and science teaching and learning?

What is the impact of the LSC on classroom practices in mathematics and science?

To what extent are the district and school contexts becoming more supportive of the LSC vision for exemplary mathematics and science education?

What is the extent of institutionalization of high quality professional development systems in the LSC districts? (p. 2)

The program evaluation spanned the years from 1998 through 2002 and found a positive impact on teachers' attitudes toward teaching. However, the evaluation found a gap between teachers' perceptions of their ability to implement the content from the training and their demonstrated ability to do so.

The Scientific Work Experience Programs for Teachers (SWEPT) is a program that provides opportunities for elementary and secondary high school teachers to work during the summer in jobs related to their teaching assignment. The concept of the program was that participants would return to the classroom and integrate knowledge or skills obtained through their summer work into their instruction. SWEPT applied a comprehensive evaluation process to assess the effectiveness of the program. Both formative and summative evaluations were used to measure the success against the objectives and goals. Evaluation data collection methods included informal discussions and formal interviews, as well as surveys and observations (SWEPT, 2006).

Models of Professional Development Evaluation

Various evaluation models have been developed to guide planners through the evaluation process. Table 4 provides a brief description of each of these models.

Tyler. Tyler's influence in the field of education spans decades and includes contributions in the field of testing, evaluation, and curriculum. He advised United States presidents and school leaders on educational policy. Tyler was involved in the development of the Elementary and Secondary Education Act of 1965. Following that, Tyler was a key designer for the assessment measures for the National Assessment of Education Progress (NAEP) (Education Encyclopedia, 2007).

Table 4
Professional Development Models

Developer	Year	Components
Tyler	1942	7- step model includes establishing, classifying, and defining goals; identifying objectives and measurement techniques; collecting and comparing data
Kirkpatrick	1959	Developed for business to measure impact of training at 4 levels – reaction, learning, behavior, and results
Metfessel & Michael	1967	8 – step model recommending multiple collection methods that involve the total school community, form goals and objectives, translate objectives, identify measurement instruments, conduct observations, analyze and interpret data, develop recommendations
Stufflebeam	1971	Context Input Process Product (CIPP) Assesses program merit on agreement on what to evaluate; evaluations of context, input, process, impact, effectiveness, sustainability, and transportability, metaevaluation, and final report
Scriven	1972 (updated 2007)	Goal-free model that evaluates: preliminaries, foundations, subevaluations, conclusions, and implications
Hammond	1973	A complex tool examining if goals were attained
Guskey	1999	Five-level evaluation focused on participant reaction and learning, organization support and change, participants' use of new knowledge or skills, and impact on student learning.

Tyler introduced the following seven-step model in 1942:

1. Establish broad goals and objectives.
2. Classify, order the goals or objectives.
3. Define the goals or objectives in observable terms.
4. Find situations in which achievement of the objectives is demonstrated.
5. Develop or select measurement techniques.
6. Collect performance data.

7. Compare the performance data with the stated objectives. (Guskey, 2000, p. 49)

Tyler's model provides the necessary guidelines for present day professional developers as each component of the model should be incorporated into the development of a comprehensive professional development program.

Kirkpatrick. Kirkpatrick's evaluation model, developed in 1959, was not designed specifically for education, but it is relevant to the field of education. This model built upon the development of other evaluation models and contributed to the knowledge of what occurred during the program. It was criticized for failing to provide a component that explained why certain changes, if any, were occurring. Kirkpatrick's model measured the impact of training programs at the following four levels

1. Reaction evaluation – This level assessed participant reaction to the program.
2. Learning evaluation – This level measured the content participants were presented during the program.
3. Behavior evaluation – This level measured the degree of change as a result of the training program.
4. Results evaluation – This level, designed with the business world in mind, measured such components as productivity, meeting deadlines, morale, and turnover (Guskey, 1999, 2000).

Metfessel and Michael. In 1967, Metfessel and Michael built on Tyler's 1942 model by developing the following eight-step model that included the entire community and recommended the use of multiple collection instruments:

1. Involve the total school community as facilitators in the evaluation process.
2. Formulate a cohesive model of goals and specific objectives.

3. Translate objectives into a communicable form applicable to facilitating learning in the school environment.
4. Select or construct instruments to furnish measure-allowing inferences about program effectiveness.
5. Carry out periodic observations using content-valid tests, scales, and other behavioral measures.
6. Analyze data using appropriate statistical methods.
7. Interpret the data using standards of desired levels of performance over all measures.

Develop recommendations for the further implementation, modification, and revision of broad goals and specific objectives (Guskey, 2000, p. 50).

Stufflebeam. By 1971, Stufflebeam developed his Context Input Process Product (CIPP) Evaluation Model (Guskey, 2000) that recommends evaluators assess and report a program's merit, worth, and lessons learned by implementing an evaluation consisting of the following 10 recommendations or components:

1. Contractual agreements should be completed between the evaluator and the employing agency on what is to be evaluated and what information is to be collected.
2. The context evaluation component assesses the needs, assets, and problems of the environment in which the training will occur.
3. The input evaluation assesses the competing strategies, work plans, and budgets of the proposed program.

4. The process evaluation monitors, documents, and assesses the actual program activity.
5. The impact evaluation assesses the effect of the training on the target population.
6. The effectiveness evaluation examines the quality and significance of any identified outcomes.
7. The sustainability evaluation measures the extent to which the content is institutionalized and sustained over time.
8. The transportability evaluation determines whether the program can be implemented successfully in another setting.
9. The metaevaluation examines whether the evaluator adhered to established standards of evaluation.
10. The final synthesis report informs all audience of the lesson learned from the evaluation process (Stufflebeam, 2002, June).

Scriven. In 1972, Scriven presented his goal-free model that provided for the measurement of unintended outcomes. Scriven recommended that goals be evaluated to determine if they were appropriate for the content of the professional development provided (Guskey, 2000). In February 2007 Scriven published an updated evaluation checklist for use when designing and evaluating programs. This updated checklist consists of four parts: preliminaries, foundations, subevaluations, conclusions and implications. The preliminaries include the summary, preface, and methodology as well as detail the consumers, resources, and values. The background and context, descriptions and definitions are found in the foundations subpart. The subevaluations subpart contains

the process, outcomes, costs, comparison, and generalizability of the study while the conclusion and implications subpart includes the synthesis, recommendations, explanations, responsibility and justification, report and support, and the metaevaluation (Scriven, 2007).

Hammond. In 1973, Tyler's model was expanded by Hammond who developed a very complex tool examining why goals were or were not obtained. Hammond's complex three-dimensional model contained 90 cells measuring behavior, instruction, and the institution. The behavior component measured psychomotor, affective, and cognitive behavior. The instruction component measured the organization, content, method, facilities, and cost of the program, while the institution component measured students, teachers, administrators, educational specialist, and the community (Guskey, 2000).

Guskey's guidance on evaluation includes a caution to evaluators not to be too anxious to collect information following a professional development activity. A delay may provide an opportunity for participants to reflect on the training. The trade off, however, could be the inability to capture as much data as participants may be more difficult to access (Guskey, 2000). Guskey provides the following guidelines to consider when conducting an evaluation of professional development programs:

1. Clarify the intended goals.
2. Assess the value of the goals.
3. Analyze the context.
4. Estimate the program' potential to meet the goals.
5. Determine how the goals can be assessed.
6. Outline strategies for gathering evidence.

7. Gather and analyze evidence on participants' reactions.
8. Gather and analyze evidence on participants learning.
9. Gather and analyze evidence of organizational support and change.
10. Gather and analyze evidence on participants' use of new knowledge.
11. Gather and analyze evidence on student learning outcomes.
12. Prepare and present evaluation reports. (Guskey, 2000, p. 89; NCSET, 2005)

Guskey. Guskey (1999; 2000), building on previous evaluation models, developed a five-level evaluation model for professional development that focuses on participants' reaction, participants' learning, organizational support and change, participants' use of new knowledge or skills, and impact on student learning.

Level one of Guskey's model, participant's reaction, is the evaluation form most often utilized by professional development planners. This level collects information most typically through questionnaires and is easiest to collect. The questions at this level inquire into the participant's satisfaction level with the training event. It explores whether participants felt their time was spent wisely and whether the information presented made sense and applied to them. The information collected at this level can be helpful in shaping future professional development programs (Guskey, 1999, 2000).

Level two of Guskey's model focuses on measuring the knowledge and skills acquired by participants by collecting information through simulations, demonstrations, portfolios, or journals. The questions are developed using the established program goals. Level three assesses organizational change, focusing on the support provided by the organization for change, as well as possible inhibitors to change, such as mission misalignment or lack of opportunities for educators to fully implement new content. This

level also evaluates whether the organizational culture is conducive to desired change (Guskey, 2000).

Level four of Guskey's evaluation model looks at whether participants are applying the knowledge and skills acquired. This level seeks to determine if the professional development program made a difference in the participant's behavior. Information at this level is collected through interviews or reflective journals. Information may be collected at multiple periods at this level of evaluation. The data collected at level four must be appropriate to provide the desired information. One key issue to evaluate at this level is whether the participant has been provided adequate time to apply the information or skills presented during the professional development.

Another concern at level four of Guskey's model is determining whether practices being observed are actually different than what was occurring prior to the training program. In other words, participants may actually be applying the knowledge and/skills presented during the training; however, they may have been doing so before the training. In this case, the training did not result in the application of the desired knowledge and/or skills. Conducting a pre-test to identify participant's knowledge level before the event may provide the information necessary to determine if participants already possessed the knowledge or skills prior to the training.

The final, or fifth, level of Guskey's evaluation model examines the impact the professional development opportunity had on student achievement (Guskey, 2000). Unfortunately, according to Frechtling (2001), very few professional development evaluations have provided information on positive impacts on student achievement. This is due in part to the lack of adequate assessments of achievement. However, a 1992 report

by Thoton, Field and Prather (cited in Frechtling, 2001) did find a positive impact on student achievement when students' teachers participated in a NSF Science Education Leadership Institute (Frechtling, 2001). The implementation of more high-quality evaluations of professional development may provide a more positive outlook on the effect of professional development on student achievement.

Demand for Evaluations

Gilbert (cited in Gordon, 1991) states that it is not advisable to conduct professional development without including an evaluation to measure the extent to which the investment was worthwhile. Professional development is an expensive endeavor. In 1993, the federal government spent over \$615 million to train math, science, and technology teachers. A report, *Staff Development for Teachers: A Study of Configurations and Cost in Four Districts*, conducted by Miller, Lord, and Dorney in 1994, found that the cost of professional development in 1994 ranged nationally from \$1,755 to \$3,529 per teacher per year (Corcoran, 1995). The expense of professional development is always an issue as school districts have limited budgets and must justify expenses to school boards. Monetary costs alone, however, are not the only cost involved with professional development programs. The expense of participant's time must be calculated into the overall cost of the program. Other costs include speakers, materials, salary increases for those that achieve certain levels, food, substitutes, facilities, equipment, travel, transportation, and research.

Considering the high cost of professional development, it is understandable that government policy makers at the federal, state, and local levels are demanding evaluations to assess the effectiveness of programs funded by tax dollars (Guskey, 2000;

Marks & Maniates, 2003). For example, as reported earlier, the *Goals 2000 Mission and Principles of Professional Development* states that professional development should be evaluated for its impact on teacher behavior and student learning (USDOE, 2001). In addition, the USDOE's National Awards Program for Model Professional Development rewards professional development when evaluations indicate the training has been effective in making positive change in classroom instruction or student achievement (NCREL, 1997).

The Eisenhower Professional Development Program, the federal government's program for providing training to develop the knowledge and skills of teachers, implemented a three-strand evaluation program. The first strand is a National Profile report, the second a case study, and the third a longitudinal study of teacher change (LSTC). The National Profile report collected data from district Eisenhower coordinators, directors, and teachers participating in professional development funded with Eisenhower funds. The case studies examined how Eisenhower programs operated in 10 school districts, and the LSTC surveyed all mathematics and science teachers in selected schools. The LSTC data provided an opportunity to compare teachers' professional development with classroom practices over a period of three school years. Surveys were sent to approximately 450 mathematics and science teachers from identified schools over the course of three years from 1996 to 1999. (Porter et al., 2000).

Justification for funding is not the only reason for an increased demand for evaluation of professional development programs. Frechling states that:

Recently the demand for evaluation data has increased, changed in both focus and form. Instead of solely targeting questions related to perceptions and descriptions

of program characteristics, evaluators are being asked to address questions related to outcomes for schools, classrooms, and students. Instead of relying primarily on self-reports of program outcomes, evaluators are being asked to incorporate methodologies that provide harder data, preferably data from multiple data sources. (Frechtling, 2001, p. 15)

As Frechtling's comments indicate, a well conducted, unbiased evaluation can provide professional development planners information on whether the content presented was valued by the participants as well as identifying the need for follow-up activities. Information collected in early stages of the evaluation may guide evaluators in the development of subsequent evaluations (Guskey, 2000).

Problems with Evaluation

Professional developers agree that a well-designed professional development program is likely to have a positive impact on teacher behavior and student achievement; however, evaluations measuring the impact have not been regularly conducted. This is partly because it is difficult to attribute a single professional development program with an increase in student achievement (Guskey, 1994, 2000; Porter et al., 2000; Shaha et al., 2004).

In addition, evaluations often have provided little guidance on how to make substantive improvements to programs. Too often evaluations were merely documentations of an event and were summative in nature as planners appeared only concerned with whether participants enjoyed their experience. While enjoyment is important, customer satisfaction surveys do not assess whether the teachers acquired new knowledge or were able to apply the new knowledge or skill in the classroom. A

comprehensive evaluation may provide information to determine whether participants benefited from the experience by expanding their content knowledge or acquiring new pedagogical skills (Frechtling, 2001; Guskey, 2000; Killion, 2002). Compounding the problem of inadequate evaluations is the fact that significant information to delineate the difference between a quality evaluation and a poor evaluation has not been readily available (Guskey, 2000).

One reason for the lack of adequate evaluations may be that professional development planners are not adequately trained on how to properly evaluate a program's impact on student achievement. For example, in 1995 the GAO determined that sufficient information existed to inform planners about the efficacy of professional development programs, but the information has not been adequately assimilated into a comprehensive report (Killion, 2002).

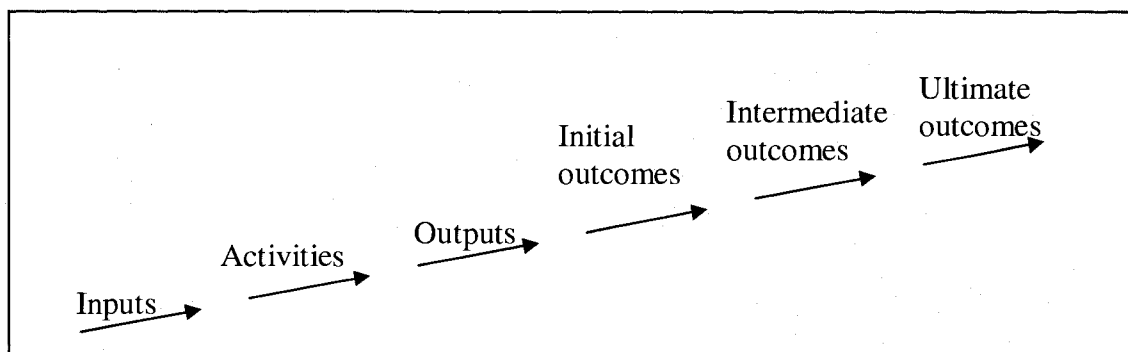
Planning for Evaluation

In order to develop an evaluation, planners must become familiar with the function and components of an effective evaluation program. Hirsch and Sparks (2000) recommended that a strong evaluation program that goes beyond a satisfaction survey be used to determine if the needs of the school are being met. An evaluation process should begin by asking why the evaluation is needed as well as who will use the results. In addition, the evaluator must identify, at the beginning, how much time and money will be available for the evaluation. The development of the evaluation questions should begin by identifying what information is needed (Sanders & Sullins, 2006) and should focus on whether the NSDC standards for evaluation have been met (Hirsch & Sparks, 2000).

As planners begin the process of developing an evaluation, it is useful to select and follow a logic model to guide the process (USDOE, 2006). One model often used by evaluators and developed by The United Way of America is the Program Logic Model found at Figure 3. The model identifies six components involved in program development: input, activities, outputs, initial outcomes, intermediate outcomes, and ultimate outcomes. The input component of the logic model includes all the resources, both fiscal and human, that will be used for the program to function (Sanders & Sullins, 2006). Samples of these resources include personnel, facilities, and equipment (Killion, 2003). The activities component refers to the agenda, as well as the assignment of program personnel. The outputs component identifies the information that will be needed to analyze data, such as demographics on students, instructional time, assessment information, and staffing. The initial outcomes component recognizes the expected changes as a result of the program (Sanders & Sullins, 2006). An example of these changes may include a change in participant's knowledge (Killion, 2002). The intermediate outcomes component in the logic model details the changes that may be expected as the result of the application of knowledge learned in some period of time (ranging from a few weeks to a year or more) following the program. The ultimate outcomes component identifies the long-term vision of change and examines whether the teachers or students have developed as the program intended (Sanders & Sullins, 2006).

A comprehensive evaluation provides information on the knowledge gained, skills acquired, and behaviors changed as a result of the professional development program. This information may be provided in three different categories of program development: planning, formative, and summative.

Figure 3. A program logic model. (Sanders & Sullins, 2006, p. 12)



An evaluation focused on the planning of the professional development program examines the program goals, activities, theoretical application, and the evaluation. This evaluation helps guide program developers through the planning process. Planning evaluations also identify needs and collect necessary data that will be needed to complete the evaluation process. The formative evaluation takes place during the actual implementation of the program and provides feedback on the progress of the program. The formative evaluation may seek to determine what conditions are required for the program to be successful. A summative evaluation is conducted at the completion of the program and helps developers measure the overall merit of the program. Summative evaluations may also provide the information necessary to determine the overall effectiveness of the program and assess changes in the classroom and student achievement (Guskey, 1999, 2000; NCREL, 1997). The summative evaluation is often conducted as a requirement by funding agencies to provide information on whether the program justified the costs. It often does not provide guidance on how to design future programs (Killion, 2002).

When developing an evaluation, the following six steps should be followed:

1. Identify what planners really want from an evaluation.

2. Identify the information planners and stakeholders will accept as credible.
3. Identify the format for the final report.
4. Identify the technical approach.
5. Identify what measure or information will be gathered.
6. Identify the realistic information that can be collected within the constraints of the budget and political situation (Herman et al., 1987).

Also, evaluators should identify early in the planning process what they expect to see if the goals of the professional development activity are being properly implemented. In other words, evaluators need to understand how to determine if the information and content presented is actually transferring to classroom practice (Guskey, 2000; Killion, 2002).

While evaluating the impact of a program on participants, it is important to consider the possible impact on other stakeholders associated with the training event. This would include students, as well as other staff and community members (NCREL, 1997). Proper evaluation may require the administration of pre- and post- tests to establish an entry point and to evaluate what, if any, change occurred.

Effort must be made to maintain integrity and objectivity during the evaluation process (Herman et al., 1987). A multi-phase evaluation must be developed, and each level of the evaluation must be carried out for the best information to be acquired (Gordon, 1991; Shaha et al., 2004). The evaluation must be aligned with the curriculum, assessments, and district resources, as well as the content of the professional development program (Killion, 2002). Completing a strong evaluation at one point on the logic model continuum and then a weak evaluation at another point will result in an incomplete report

of the impact of the program. The goal of the evaluation should be to establish a causal link between the professional development activity and the stated goals (Gordon, 1991, Shaha et al., 2004). While the evaluation may provide a comprehensive set of data, only one purpose should be identified as the primary purpose (Killion, 2002).

Evaluation Questions. Evaluations that have the best chance of collecting useful information must ask the right questions to begin with to lay the foundation for understanding the data acquired through the evaluation. An understanding of the district's established policies, programs, and procedures will be essential when analyzing data collected through the evaluation. Corcoran (1995) suggests the following questions to examine professional development policies and practices:

- What is known about the effects of existing policies and programs?
- Are evaluations conducted?
- Are there data on participation rates by categories of activity and teachers?
- Are there data linking specific experiences with changes in practice and/or improvements in student performance? (p. 7)

Killion (2002) has identified questions to assess program design, program process, and program impact. For each of these categories, she suggests the following questions:

Program Design

- What resources have been allocated to this program? Are they sufficient to implement the program?
- Will staff members essential to the program receive the necessary preparation for their new roles?

- Does the sequence of the program's activities seem reasonable?
- What assumptions did program developers make in the development of this program?
- What research supports these design decisions?

Program Process

- Is the program being implemented as intended?
- What problems are occurring with implementation?
- Which clients are being served by the program?
- What modifications are necessary to improve the program?

Program impact

- What results did the program produce?
- What changes occur in the program participants?
- What impact did the program have on student achievement? (p. 67-68)

Guskey (2000) recommends that a comprehensive evaluation plan include three types of questions: content, process, and context. Content questions assess the relevant topics presented during the training. Content questions also evaluate whether adequate time was provided to assess whether a need was addressed and whether what was learned will be useful. Process questions focus on the knowledge level of the presenter and the significance, or value, of the material presented. Process questions also evaluate whether intended goals were stated clearly and whether adequate time was provided to achieve the objective. In other words, they answer the question of whether the program was implemented as intended and to what degree implementation met established goals (Guskey, 2000; Killion; 2002). Context questions, according to Guskey, measure the

comfort level of the training environment. These may include common satisfaction surveys (Guskey, 2000).

Evaluations should be designed to allow the participants to complete the survey or questionnaire in a limited amount of time. Questions should be designed to allow for brief answers and be administered during convenient times. In addition, confidentiality should be protected (Sanders & Sullins, 2006). If a Likert scale is used, questions should be designed to assess the same issue, thus providing data that will allow for a summarization of group scores (Sanders & Sullins, 2006).

The use of standardized assessment, however, is not the best method unless the instrument is aligned to the professional development program (Guskey, 2000; Marks & Maniates, 2003). Often standardized tests are designed to assess a broader body of information than was presented in the professional development program being evaluated (Killion, 2002).

As evaluators develop the evaluation program, they must remain cognizant of the factors that may impact the program. For example, the political culture of an organization may support or hinder the evaluation process. For the evaluation to be successful, it will be necessary to have the support of individuals that control access to key data. Also, the district leaders must be willing to process the information provided in the evaluation report. If the leaders are resistant to the information or misinterpret the impact, the evaluation will not be successful. The evaluator should become familiar with the politics that will influence the evaluation at the beginning in order to neutralize negative impact. However, it is important to ensure that cooperation to gain political support does not compromise ethics involved with the evaluation process (Herman et al., 1987).

A budget should be included for evaluations as part of the program budget; however, a thorough evaluation does not have to be expensive (Guskey, 2000). Budget costs include the time involved in planning, conducting, and disseminating evaluation results. Staff costs, as well as the cost of pulling teachers from the classroom, must be considered in the budget process. The cost of supplies and technology should also be included in the budget (Killion, 2002).

Data Collection Process. The development of a strong evaluation tool that has the best chance of providing the necessary data to guide decisions on future programs, as well as follow-ups from the current program, must include the development of questions as well as knowledge of how to obtain answers (Guskey, 1999; 2000; Killion, 2002). Well-developed questions are key to the development of an evaluation program that can assess the overall effectiveness of a training program.

Evaluators must identify whether qualitative or quantitative data collection will be employed during the evaluation. A qualitative program may be appropriate when individual concerns are paramount. Also, qualitative evaluations provide more detailed information, particularly when the program goals are vague or nonspecific. Qualitative methods may be more appropriate when depth and detail of the information is essential. Recent research suggests a combination of quantitative and qualitative research strategies. When determining the design of the evaluation tool, consider the setting, participants, program processes, outcomes, and cost (Herman et al., 1987).

Once developed, the evaluation instrument can be implemented to collect data necessary to provide the required information for program assessment. Surveys or questionnaires are the easiest and least expensive method for collecting information;

however, it is essential to identify the information needed to provide the best information and then develop questions that clearly assess that information. When assessing whether or not teachers plan to implement practices presented during the training, surveys provide an easy, accurate method (Marks & Maniates, 2003). Collecting information on actual application of knowledge and skills can be accomplished through direct observations and a study of various records maintained by the school. Interviews and reflective journals may also provide rich information on behavior changes (Guskey, 2000). Portfolios, evaluations, and school records are other means of data collection.

There are many forms of data collection and focusing on the intended goals for the professional development activity will lay the framework for the appropriate methods to use (Guskey, 1999). While pre- and post-tests are useful in measuring the level of participant change following a professional development program, Frechtling warns that an inappropriate pre- or post-test could provide inadequate data. For example, a report from a study of science teachers may indicate no change in teacher knowledge resulted from a professional development program, but the pre-test used may have been so easy that many teachers scored very well. These high scores would make it difficult to determine if any growth in knowledge occurred (Frechtling, 2001). Guskey cautions that the pre-test could create problems as some participants may feel embarrassed if they do not possess knowledge of the content assessed. The challenge for the evaluator is to balance the necessity to collect sufficient information for adequate analysis, while at the same time protecting the participant's privacy and sense of well being (Guskey, 2000).

Interviews are the most expensive method of collecting data, both in time and money. One key benefit of the interview is that the evaluator has better control of the

information collected and can use follow-up questions to seek a better understanding of participant's responses. If interviews are to be used, effort must be made to ensure the interviewers are not part of the professional development planning team; otherwise, bias may infect the evaluation (Guskey, 2000).

Learning logs and journals are artifacts that should be examined during the data collection phase of the evaluation due to the large amount of information they may contain. Observations and simulations provide information on whether or not the content provided during the training can be used in the classroom. Interviews, learning logs, journals, observations, and simulations are best conducted after sufficient time has passed for participants to apply the desired knowledge or skills (Guskey, 2000). Case studies may also be used to collect evidence to measure the effectiveness of a professional development program. This method involves conducting multiple interviews, as well as observations. A draw back to case studies is that they are very time consuming (Moller, 1999).

The use of any of the listed data collection instruments will possibly not provide irrefutable proof that the professional development program resulted in a change in student achievement, as it is difficult when dealing with students to control for other possible contributing factors (Guskey, 2000; Marks & Maniates, 2003). A change in teacher behavior may be easier to identify.

When developing the collection instruments, it is recommended that "Yes/No" responses be avoided as participants usually judge their reaction in degrees. In addition, evaluation forms that provide an opportunity for open-ended responses create a challenge, as participants may not respond in a manner aligned with the intended goals of

the program. A Likert scale designed to measure degrees of response is recommended for collection of quantitative data (Guskey, 2000).

Standards of Evaluation of Professional Development

In addition to the models of evaluation, the Joint Committee on Standards for Educational Evaluation and the NSDC have developed standards for evaluation of professional development.

The Joint Committee on Standards for Educational Evaluation. In 1975, The Joint Committee on Standards for Educational Evaluation, made up of members from 15 educational organizations, published a list of 30 program standards focusing on utility, feasibility, propriety, and accuracy. The utility standards are the attributes that determine whether the evaluation will provide the information needed by the desired audience. Feasibility standards establish the criteria to ensure the evaluation is realistic; while propriety standards establish guidelines to ensure the evaluation is legal, ethical, and protects the welfare of participants in the evaluation. The final attributes, accuracy standards, require that the evaluation utilizes technically accurate information in the process (Guskey, 2000; Herman et al., 1987; Killion, 2002).

The NSDC. The NSDC (2001) evaluation standards for professional development state that staff development evaluations should improve the quality of current staff development efforts and determine the effects of staff development in terms of its intended outcomes by examining:

- (1) initial collection of data on participants' reactions,
- (2) teachers' acquisition of new knowledge and skills,
- (3) how that learning affects teaching, and in turn
- (4) how those changes in practice affect student learning, and
- (5) how staff

development has affected school culture and other organizational structures. (p. 18)

Summary

Teachers are on the front lines in the effort to raise student achievement and it is essential that they be well trained in both pedagogy and content. Professional development is viewed as an important component to improve classroom instruction and, therefore, student performance. School districts are providing professional development activities but, based on the literature, little evidence is available to validate whether teacher knowledge or skills improved as a result of participation in the programs. A strong evaluation program is recommended as a method to determine whether professional development programs achieve intended goals.

The literature on the evaluation of professional development recommends a multi-phase approach to assess the effectiveness of programs. Evaluations of professional development should seek to determine the degree to which teachers acquire new knowledge or skills and are able to integrate the knowledge and skills into classroom instruction. Also, evaluations should seek to determine the impact on student achievement, although the literature indicates that it is very difficult to directly relate participation in a professional development program to a change in student outcomes because of the multiple factors that impact student learning. This study will seek to determine whether evaluations of professional development programs in Virginia school districts are aligned with evaluation standards.

CHAPTER 3

METHODOLOGY

The study sought to determine, via an online survey, the degree to which Virginia school districts conduct evaluations of professional development programs in compliance with the NSDC process standards, which state that staff development evaluations should improve the quality of current staff development efforts and determine the effects of staff development in terms of its intended outcomes by examining:

- (1) initial collection of data on participants' reactions, (2) teachers' acquisition of new knowledge and skills, (3) how that learning affects teaching, and in turn (4) how those changes in practice affect student learning, and (5) how staff development has affected school culture and other organizational structures. (NSDC, 2001, p. 18)

Research Questions

This study asked the following questions in order to determine the type of professional development programs Virginia school districts offer at the district level and the degree to which those programs are evaluated in compliance with the NSDC standards for evaluation of professional development programs. The research questions for this study were as follows:

1. What types of professional development do school districts in Virginia provide their teachers?
2. How did school districts in Virginia evaluate professional development programs provided to their teachers at the district level during school year 2006-07?

To what degree are Virginia school district evaluations of professional development programs congruent with the National Staff Development Council standards for evaluation which state that evaluations should assess:

- a. initial collection of data on participants' reactions
- b. teachers' acquisition of new knowledge and skills
- c. how that learning affects teaching, and in turn
- d. how those changes in practice affect student learning
- e. how staff development has affected school culture and other organizational structures. (NSDC, 2001, p. 18)

The study was descriptive survey research and the sample included all Virginia public school districts. The construct studied was the evaluation of professional development, specifically how school districts in Virginia are currently evaluating the effectiveness of professional development opportunities provided at the district level.

The study sought to collect information from all school districts in Virginia via an online survey instrument (see Appendix A), developed by the researcher, based on recommendations identified in literature related to evaluations of professional development. The survey instrument collected identification of responding school districts in order to facilitate follow-up with non-responsive districts.

The survey instrument collected a random stratified sample of professional development events provided by school districts. School districts were requested to select up to three professional development programs provided at the district level that could be described by any one of the following three categories:

Category I: Professional development that last up to one full day and fits one of the following formats.

- Content specific training – designed to improve teachers’ content knowledge in their assigned area.
- Strategy based training – designed to improve teacher’s knowledge and ability to implement research based instructional strategies.
- A combination of content and strategy based training
- Technology – orientation on a particular piece of software or equipment.

Category II: Professional development that lasts more than one full day and fits one of the following formats

- Content specific training – designed to improve teachers’ content knowledge in their assigned area. May include conferences, academies, seminars, group based projects, or institutes.
- Strategy based training – designed to improve teacher’s knowledge and ability to implement research based instructional strategies. May include conferences, academies, seminars, group based projects, or institutes.
- A combination of content and strategy based training
- Technology – orientation on a particular piece of software or equipment.
- Whole faculty study group or professional learning group.

Category III: College credit

- College credit through direct course offering or tuition reimbursement.
- Industry certification, i.e. electrician, plumber, auto mechanic

Instrument Design and Validation

Survey Construction

The researcher constructed an online survey instrument, using a commercial survey collection service, to assess how Virginia school districts evaluate professional development programs provided at the district level. The National Staff Development Council's Standards for Evaluation of Professional Development were used as the guide for survey item development.

Survey Validation

A panel of five educators was selected to review the survey questions prior to launching a pilot survey in order to ensure validity of the questions. The panel included individuals from the field of education whose regular duties include building level administration, data collection, professional development planning, or data analysis.

One committee member was asked to access and complete the online survey to provide the researcher feedback on the operation of the survey. This committee member was also asked to respond to the same questions the rest of the committee answered after completing the online survey. The panel was provided with a copy of the research questions and the proposed survey. Panel members were asked to answer the following questions:

- Are the instructions clear? If not, what revisions are needed to ensure clarity?
- What, if any, professional development activities have been omitted from the proposed categories?
- Which research question(s), if any, is(are) not adequately addressed in the proposed survey instrument?

- What revisions, if any, do you recommend be made to the proposed survey to ensure they adequately address each of the research questions?
- What revisions, if any, do you recommend be made to the proposed survey questions to ensure that a wide audience of professional developers can accurately interpret the intent of the questions?
- What additional questions, if any, are recommended to collect the data necessary to answer the research questions?

The feedback provided by the panel of educators was used to make the following revisions to the survey instrument:

- The logic was adjusted to allow a respondent to skip over Categories 2 and 3 in the event of affirmative responses to Categories I or II.
- The sample provided for program description was modified for clarity.
- An additional category was added for technical certification and whole faculty study groups.
- The term “pedagogical” was revised to read “knowledge in the area of content or instructional strategies”.
- A review of the instrument was made to ensure consistency in language. For example, “knowledge and skills” and “content and skills” was used for the same program description. The survey reads “content and skills” throughout.
- A category was added to the data collection methods for examining student work.

Survey Pilot

Following completion of the recommended modifications to the survey, three school districts in Virginia were selected, based on size and convenience, to participate in a pilot

of the survey instrument. The purpose of the pilot was to collect feedback needed to further refine the survey instrument. The districts participating in the pilot were chosen to insure one district was included from each of three size subgroups. The small subgroup included those districts with fewer than 2,000 students. Medium subgroups were those with at least 2,000 students but fewer than 10,000 students. Large subgroups were those with 10,000 or more students. A breakdown of the subgroups can be found at Appendix B.

Individuals responsible for providing professional development in the selected pilot divisions were contacted via e-mail (Appendix C). The e-mail briefly described the proposed study and purpose of the pilot. The district respondent was requested to participate in the survey pilot by completing an online survey accessed through a Universal Resource Locator (URL) link in the body of the e-mail. The researcher then conducted a phone interview with each pilot participant. The researcher read each question to the pilot participant and asked to if they had any difficulty interpreting the questions. In addition, the researcher asked the following questions during the interview:

- How long did it take you to complete the survey?
- How available to you were the data needed to complete the survey?

The individual completing the pilot from the small and medium sized districts indicated that it took approximately five minutes to complete the survey. The individual from the large school district reported that it took approximately 10 minutes. In addition, all pilot participants reported that all data needed to complete the survey was readily available. Although the participant from the small district indicated that question number six of the survey was initially confusing, all participants indicated the remaining

questions were clear and easy to understand. Question number six asks, “Did your school district conduct an evaluation of the program?” The confusion with this question, according to the small district respondent, was that there was no indication in the question identifying the definition of evaluation. This participant indicated that, even though question number nine defined types of evaluations, it would be helpful if a little more explanation was provided in question six. In response to this comment question six was modified as follows:

- Did your school division conduct an evaluation of the program (i.e. survey, questionnaires, observation, or interviews)?
- One respondent to the pilot identified a spelling error in one question, which was corrected.

Final Instrument Development

Once the pilot was completed and permission was received from The College of William and Mary Protection of Human Subjects Committee to launch the survey, a list was compiled of the e-mails of individuals responsible for professional development for each of the school districts in Virginia. These e-mails were collected from the Virginia Department of Education Website which provides access to staff listings of individual school districts. Those districts for which the necessary information was not available were contacted by phone to obtain the required e-mail addresses.

The survey questions consisted of questions related to the following information:

Part I: The type of professional development

Part II: The evaluation Program

Survey Validation

A table of specifications was developed for the instrument based on the elements specified by the NSDC (2001) (see Table 5). The five elements of a strong evaluation program are listed in the first column of the table. The second column reflects the specific data source for information to answer the specific question. Respondents were asked to indicate whether that particular element was addressed in their evaluations through a “Yes or No” response. While yes and no responses are not advisable for surveys, in the case where the survey question sought a yes or no response the survey was identifying whether an event occurred, not a qualifying response. If the participant responded in the affirmative, additional questions were presented to collect information needed to obtain a better description of the type and method of professional development or evaluation. Data collected will be disaggregated based on the size of school districts, as defined by Appendix B.

Population

The population of interest for this study was all public school districts in Virginia, of which there are 135, including the two Virginia Schools for the Deaf and Blind as well as the Virginia Department of Correctional Education. The public school districts range in size from 61 students in the smallest district to over 163,000 in the largest district.

Generalizability

The results of this survey may be generalized to school districts in Virginia that respond to the survey.

Table 5
Table of Specifications

NSDC element	Question #
1. Initial collection of data on participants' reactions	#7, 9, 26, 45
2. Teachers' acquisition of new knowledge and skills	#8, 9, 12, 13, 27, 28, 31, 32, 46, 47, 50,51
3. How that learning affects teaching	#14, 15, 33, 34, 52, 53
4. How those changes in practice affect student learning	#16, 17, 35, 36, 54, 55
5. How staff development has affected school culture and other organizational structures	#18, 19, 37, 38, 56, 57

Data Collection

The study was launched by sending an e-mail (Appendix D) briefly explaining the study. A statement within the e-mail explained that a more detailed description of the study was attached (Appendix E) as well as a word version of the survey questions (Appendix F) in the event participants wished to review the questions prior to accessing the survey.

As soon as the survey was launched, the researcher received error notices on several district e-mail addresses. Those districts were contacted by phone to obtain an accurate address to resend the survey. In addition, one division notified the researcher that a survey authorization would need to be completed for their district before the district

representative could complete the survey. The authorization was applied for and granted, however, the permission was received after the closing date of the survey.

One week after the survey was launched, those districts that had not responded were contacted via e-mail (Appendix G) with a reminder to complete the survey. After two weeks, non-respondents were again contacted via e-mail (Appendix H) as a final reminder. A select group of districts were contacted through members of a consortium in which the researcher served as an officer. An e-mail was sent to members of this organization whose districts had not yet responded (Appendix I) requesting that they forward the e-mail to the appropriate individual within their district.

Timeline

The research process followed the schedule at Figure 4.

Data Analysis

Descriptive statistics were used to analyze the data gathered through the survey instrument. A comparison of district responses was conducted based on responding districts' size. In addition, free lunch percentages as well as minority representation as reported to the Virginia Department of Education was compared to determine if response information is correlated to these data elements.

Items # 2 through 5, 21 through 24, and 40 through 43 of the survey collected information on the professional development programs provided at the district level during school year 2006-07, while items 6 through 19, 25 through 38, and 44 through 57 will request information on the process school districts used to evaluate professional

Timeline

April - May	June - July	August 1 - 15	August 16 - 30	September 15	September - October 1	October 5	October - November	December
Address proposal committee concerns	Committee validation	Pilot	Protection of Human Subjects Committee	Launch survey	Contact none responding districts	Close Survey	Analyze data/write chapter 4 - 5	Defense

Figure 4. Timeline of Data Collection and Study Completion

development programs. Table 6 outlines how the responses to each question on the survey were analyzed.

Protection of Human Subjects

The research proposal was submitted to the College of William and Mary's Education Internal Review Committee (EDIRC) for approval to conduct the research. Review was waived as the study was found to not require board review (Appendix J). An executive summary of the final report will be provided to all participating school districts upon request. School districts will not be identified at any point in the report.

Table 6
Data Analysis

Research question	Data Source	Statistical Analysis
1. What types of professional development do school districts in Virginia provide their teachers?	Survey #2 – 5, 21-24 40-43	Descriptive
2. To what degree do Virginia school districts evaluate the impact of professional development activities on teacher performance and student achievement?	Survey # 2 through 57 except 20 & 39	Descriptive
3. To what degree are Virginia school district evaluations of professional development programs congruent with the National Staff Development Council standards for evaluation which state that evaluations should assess:	Survey	Descriptive
a. initial collection of data on participants' reactions	Survey # 7, 26, 45	Descriptive Chi Square for district size
b. teachers' acquisition of new knowledge and skills	Survey # 8, 9, 12, 13, 27, 28, 31, 32, 46, 47, 50 ,51	Descriptive Chi Square for district size
c. how that learning affects teaching, and in turn	Survey # 14, 15, 33, 34, 52, 53	Descriptive Chi Square for district size
d. how those changes in practice affect student learning	Survey # 16, 17, 35, 36, 54, 55	Descriptive Chi Square for district size
e. how staff development has affected school culture and other organizational structures.	Survey # 18, 19, 37, 38, 56, 57	Descriptive Chi Square for district size

CHAPTER 4 Analysis of Results

This chapter contains a brief description of the process and results of the study which was designed to identify the types of professional development programs Virginia public school districts offer. The study also sought to determine how closely district evaluations of the programs offered were aligned to The National Staff Development Standards for Evaluation of Professional Development. The research questions for this study were:

1. What types of professional development do school districts in Virginia provide their teachers?
2. To what degree do Virginia school districts evaluate the impact of professional development activities on teacher performance and student achievement?
3. To what degree are Virginia school districts' evaluations of professional development programs congruent with the National Staff Development Council standards for evaluation which state that evaluations should assess:
 - a. initial collection of data on participants' reactions
 - b. teachers' acquisition of new knowledge and skills
 - c. how that learning affects teaching, and in turn
 - d. how those changes in practice affect student learning
 - e. how staff development has affected school culture and other organizational structures.

Information to answer the questions was collected via an online survey.

Methodology

To facilitate launch of the online survey, e-mail addresses of individuals responsible for planning and conducting professional development programs at the district level were identified through the Virginia Department of Education's website. An e-mail was sent to each of these individuals explaining the purpose of the study and requesting that they complete the survey available at a URL identified in the e-mail (Appendix D). In the absence of an identified director of professional development, the e-mail was sent to the district assistant superintendent. At one-week intervals, follow-up e-mails were sent to non-responding divisions requesting their assistance in completing the survey. Despite repeated efforts to obtain valid contact information for all districts, e-mails to six district contacts were returned as undeliverable.

The survey remained active for three weeks, from September 15, 2007 through October 5, 2007, during which time responding districts' representatives could complete the survey at their convenience.

Rate of Return

The Virginia Department of Education identifies 135 public school districts which includes the Virginia School for the Deaf and Blind in Staunton, Virginia, the Virginia School for the Deaf and Blind (VSDB) in Hampton, Virginia, and the Department of Correctional Education. While 64 districts responded to the survey, representing 47% of the districts in Virginia, an evaluation of the data indicated that 11 of the responding districts failed to complete the survey. Fifty-three Virginia districts successfully completed the survey, representing a 39% return rate.

The data collected via the online survey was disaggregated by three sub-groups into which Virginia school districts were divided. The sub-groups were based on size of student population as reported to the Virginia Department of Education in September of 2006. The small sub-group represented those districts with fewer than 2000 students. The medium sub-group contained those districts with at least 2000 but fewer than 10,000 students. The large sub-group included those districts with at least 10,000 students. Initial data analysis on response rate included the VSDB in Staunton and Hampton as well as the Department of Correctional Education. However, due to specialization of these districts, they were not included in further data analysis.

The rate of response by sub-group was similar to the representation of that sub-group within the state. For example, 25% of the districts in Virginia have fewer than 2000 students and 26% of these small districts responded to the survey. A chi-square analysis of the response rate indicated, with high probability ($p = .88$), that the size of the district did not impact the response rate (Table 7).

Two districts reported technical problems accessing the survey. Six district representatives indicated they recently became the individual in charge of professional development in their district and, therefore, did not have sufficient information to complete the survey.

(Table 7 can be located on the following page.)

Table 7
Response Rate of Virginia Public School Districts by Sub-groups

Size of sub-groups	Number of districts in the sub-group	Percentage of districts in the sub-group	Number of districts completing the survey	Percentage of districts completing the survey
Small - fewer than 2000 students	34	25%	14	26%
Medium - at least 2000 but fewer than 10,000 students	73	54%	29	55%
Large - 10,000 or more students	28	21%	10	19%
Total	135	-	53	39%

Note. Data is based on district enrollment as reported to the Virginia Department of Education in September, 2006. Chi-square results $\chi^2(2, n=53)$, $p = .88$

Districts were requested to report on up to three professional development programs. Nine of the responding districts reported on two programs and four reported on three programs for a total of 70 programs reported (Table 8). The data on each program were evaluated separately.

Table 8
Number of Programs Reported by District Size

Sub-group	Number of responding districts reporting two programs	Percentage of responding districts reporting two programs	Number of responding districts reporting three programs	Percentage of responding districts reporting three programs	Total programs reported (includes initial response rate)
Small (n=14)	4	10%	1	7%	20
Medium (n=29)	4	14%	3	6%	39
Large (n=10)	1	10%	0	0%	11
Total	9	17%	4	8%	70

The survey response rate was also analyzed by Virginia Superintendent Advisory Region, free lunch membership, and minority membership. Data were not disaggregated further for these categories due to the small sample size.

Response Rate by Virginia Superintendent Advisory Region

The survey response rate by Virginia Superintendent Advisory Regions varied with the largest response rate from Region 3 which consists of counties immediately north of Richmond, Virginia. The Region 3 response rate was 58%. The region with the lowest response rate was Region 5 which is the area northwest of Richmond near Charlottesville. Region 5 had a 25% response rate (See Table 9). The number of responding districts per region was too small to measure whether or not geographic region impacted survey responses.

Table 9
Response Rate by Superintendent Advisory Region

Region	Largest district in region	Geographic location in Virginia	Number of districts in region	Percent of Virginia districts	Districts responding by region	District response rate by region
1	Chesterfield	Central Virginia	15	11%	7	47%
2	Virginia Beach	Southeast – Bay area	15	11%	4	27%
3	Spotsylvania	North Central	17	13%	10	58%
4	Fairfax	D.C. area	19	14%	9	47%
5	Albemarle	Northwest of Central Virginia	20	15%	5	25%
6	Roanoke County	Western border	15	11%	6	40%
7	Washington County	Far Southwest	19	14%	7	37%
8	Halifax	South Central	12	9%	5	42%

Response Rate by Free Lunch Membership

Fifteen public school districts in Virginia reported, in September 2006, that more than 50% of their students qualified for free lunch status. This figure represents 11% of the public school districts in Virginia. Three of the districts reporting 50% or more of their students on free lunch status responded to the survey. Therefore, the response rate for districts reporting 50% or more of their students on free lunch was 5% of the responding districts while the response rate for the remaining districts was 94% of the responding districts (Table 10). While this difference in response rate raises some question about whether the economic status of a district impacted survey submissions, the number of districts in Virginia with 50% or more of their students on free lunch is very small compared to those with less than 50% on free lunch. With only three districts responding in the high free lunch category, it would not be appropriate to suggest that their responses are characteristics of all districts with high free lunch membership therefore, survey data will not be disaggregated by free lunch membership.

Table 10
Response Rate by Free Lunch Membership

	Number of districts statewide	Percentage of Virginia districts	Number of districts responding	Percentage of districts responding
50% or more students receive free lunch	15	11%	3	20%
Less than 50% of students receive free lunch	117	88%	50	43%

Response Rate by Minority Membership

Eighteen of the 36 school districts in Virginia reporting a 50% or higher minority enrollment in September 2006 completed the survey (Table 11). This represents a 33%

Table 11
District Response by Minority Status

	Number of districts statewide	Percentage of Virginia Districts	Number of districts responding	Percentage of districts responding
Below 50% minority enrollment	96	72%	35	66%
Above 50% enrollment	36	27%	18	33%

response rate among districts with high minority enrollment compared to a 66% response rate for those districts with less than 50% minority enrollment. Therefore, the response rate of districts based on minority status was similar to the overall percentage represented in Virginia. The distribution of these districts by size sub-group was even with six high minority districts in each of the three reporting sub-groups.

Survey Question Responses

An analysis of the data collected via the survey indicates a chance that the size of a school district may impact the degree to which evaluations of professional development are congruent with the NSDC standards. However, low sampling numbers make it difficult to conduct a test for significance on much of the data. A chi-square test was conducted on the following data to determine if there was a chance the survey responses were dependent on district size:

- Initial evaluation of participant reaction
- Initial evaluation of acquisition of new knowledge
- Completion of follow-up evaluations
- Follow-up evaluations for acquisition of new knowledge
- Follow-up evaluations disaggregated by frequency and sub-group

The chi-square test results suggest a chance that district size may impact survey response for the following questions and will be discussed later in this chapter:

- Initial evaluation of participant reaction
- Initial evaluation of acquisition of new knowledge
- Follow-up evaluations conducted at 1 – 2 and 5 – 6 month intervals

Types of Professional Development Offered by Responding Districts

After responding to a question identifying their district, survey respondents were asked to identify a category to describe the professional development program on which they were reporting (Table 12). Three categories were identified for selection. Category I reflected programs completed in one day or less. Sixty-two (88%) of the programs reported in the survey fit Category I descriptions. A disaggregation of the data revealed the following program topics were provided in Category I: 11 content specific, 14 strategy based, 22 combining content and strategies, and 15 focused on technology training.

Reporting districts identified seven programs (10%) that fit Category II which are programs lasting more than one full day. One of the Category II programs was identified as content specific, one was a combination of content and strategy training, three were whole faculty study groups, and two were mentoring. The whole faculty study groups and mentoring are forms of professional development that meet the NSDC recommendation that programs provide an opportunity for participants to meet several times over a period of time to allow opportunity for open discussion of effective strategies (2001). Only two districts (2%) identified programs fitting the description for college credit which was Category III.

Table 12
Professional Development Program Descriptions

Type of professional development reported	Category I – Professional development lasting up to one full day				Category II – Professional development that last more than one full day				Category III – College Credit or Industry Certification			
	SM n=20	MED n=39	LG n=11	Total n=70	SM n=20	MED n=39	LG n=11	Total n=70	SM n=20	MED n=39	LG n=11	Total n=70
Content Specific	2	8	1	11	-	1	-	1				
	10%	20%	9%	16%	-	2%	-	1%				
Strategy Based	6	8	0	14	-	-	-	-				
	30%	21%	0%	20%	-	-	-	-				
Combination of Content and Strategy	6	15	1	22	-	-	1	1				
	30%	38%	9%	31%	-	-	9%	1%				
Technology Training	4	7	3	14	-	-	-	-				
	20%	17%	27%	20%	-	-	-	-				
Whole Faculty Study Group					-	-	3	3				
					-	-	27%	4%				
Mentoring					-	-	2	2				
					-	-	18%	3%				
College Credit									2	-	-	2
									10%	-	-	3%
Industry Certification									-	-	-	-
									-	-	-	-

Note. Districts were able to identify only one category and one description per professional development activity reported. A dash reflects no items reported in that category. Shading indicates that format was not available as an option within that category.

Although most districts described programs fitting Category I, the program descriptions were diverse, as reflected in Table 13. The types of training reported for Category I were divided into the following subcategories: training on technology integration or specific software, strategies to target a specific sub-group of students, a specific strategy, building content knowledge, faculty processes, curriculum alignment processes, a nationally marketed program or presenter. Responding districts in the large sub-group did not identify training for content knowledge, curriculum alignment, or a nationally marketed program or recognized presenter. Medium districts offered a wider range of professional development topics; however, no data were available to explain the reason.

Initial Evaluations

Forty-six (89%) of the responding districts indicated they completed an initial evaluation of the programs on which they were reporting. Nine of the 10 large reporting districts (90%) indicated completing an initial evaluation while 26 medium (90%) and 11 small (79%) reporting districts indicated completing an initial evaluation. The responding districts reported on 70 programs in the survey. Sixty-one of those programs were subjected to an initial evaluation reflecting an 87% rate for completion of an initial survey per program (Table 14).

(Table 13 can be found on the following page. Table 14 is on the page following Table 13.)

Table 13
 Training Programs Described by Responding Districts

Program Description	Large Districts	Medium Districts	Small Districts
Training on technology integration or specific software	<ul style="list-style-type: none"> • Strategic planning software • Blackboard • Specific software 	<ul style="list-style-type: none"> • Effective use of technology • Smart board integration • GPS for science teachers 	<ul style="list-style-type: none"> • Specific software • Technology to increase student achievement • Problem based learning with technology integration
Training to target a specific subgroup of students	<ul style="list-style-type: none"> • Strengthen expectations for all students 	<ul style="list-style-type: none"> • Teaching students of poverty • Motivating students • Student directed learning 	<ul style="list-style-type: none"> • Strengthen instruction skills for low achievers • Differentiate instruction
Strategy based training	<ul style="list-style-type: none"> • Core area instructional strategies • Promote teacher content knowledge to implement high yield strategies 	<ul style="list-style-type: none"> • Subject specific strategies • Understanding strategies and content for middle school math • Bloom's Taxonomy and Word Study 	<ul style="list-style-type: none"> • Effective teaching and learning strategies • Strategies for content alignment • Guided reading strategies
Training to improve faculty processes	<ul style="list-style-type: none"> • Building reflective cultures • Mentors 	<ul style="list-style-type: none"> • Develop a better understanding of IDEA (2002) and NCLB for school teams • Training for principals to provide focused and sustained professional development • Higher order thinking skills to help teachers plan and develop lesson plans for improvement of creative thinking and logical reasoning 	<ul style="list-style-type: none"> • Unit planning

(Continued on the next page.)

Program Description	Large Districts	Medium Districts	Small Districts
Training to build content knowledge		<ul style="list-style-type: none"> • Build content knowledge • Strengthen English writing content knowledge 	<ul style="list-style-type: none"> • Improve content knowledge
Curriculum alignment processes		<ul style="list-style-type: none"> • Build a deeper understanding of standards and their alignment with assessment • K-12 Health and PE vertical alignment 	
Training on a specific program		<ul style="list-style-type: none"> • Thinking Maps Programs for math 4 – 7 • Ruby Paine strategies • Open Court Reading • Modern Red Schoolhouse to help middle school teachers to strengthen reading. (Sustained year round training on implementation strategies.) 	

Table 14
Analysis of Data on the Use of Initial Survey

Size of Virginia public school districts	Number of responding districts completing initial survey	Percentage of responding districts completing initial survey	Number of programs for which an initial survey was completed	Percentage of programs for which an initial survey was completed
Small	11	78%	16	80%
Medium	26	90%	35	88%
Large	9	100%	10	100%
Total	46	89%	61	87%

Note. Percentage of programs for which an initial survey was completed is based on the total number of programs reported by each sub-group.

Collection Methods for Initial Evaluations

The data collection methods per program for initial evaluations included the following: pre or post assessment, Likert scale survey, open-ended survey, interview (See Table 15). Districts were permitted to report more than one method of data collection per program. The data indicates that surveys, both Likert and open-ended, were the most frequently used methods for collecting data for the initial survey. This is possibly because surveys are quick, easy, and inexpensive to administer. Forms of evaluations reported that were not identified as a choice on the survey were unit and lesson plan development and administrative observation during in-service discussion.

(Table 15 can be located on the following page.)

Table 15
Method of Data Collection for Initial Survey

Method of Data Collection for Initial Evaluation	Number of districts reporting this method	Percentage of use of this method on 61 initial evaluations completed
Pre/Post Assessment	4	6%
Likert Scale Survey	32	52%
Open-ended Survey	30	49%
Interview	12	20%
Other	2	3%

Evaluation of Participant Reaction (Research Question 3a)

Of the 53 responding districts, 44 (83%) indicated assessing for participant reaction as recommended by the NSDC. One hundred percent of the large districts responding indicated assessing participant reaction while 79% of small and 79% of medium districts assessed the same component. The results of a chi-square analysis reflects a difference ($p = .283$) among small, medium, and large sized districts' assessment of participant reaction. Larger districts responding to the study completed an initial evaluation of professional development more closely aligned with the NSDC standards than did small and medium-sized districts. However, the chi square analysis indicated that evaluation of participant reaction was not statistically correlated to the size of the district. In other words, any data suggesting a relationship between the size of the district and the evaluation of participant reaction is more than likely due to chance (Table 16).

(Table 16 can be located on the following page.)

Table 16
Evaluation of Participant Reaction by District

Data description	District size	Did not assess	Assessed	Totals
Number of districts conducting an initial evaluation measuring participant reaction	small	3	11	14
Percent of small districts responding		21.4%	78.6%	
Percent of all districts completing an initial evaluation measuring participant reaction		33.3%	25.0%	
Number of districts conducting an initial evaluation measuring participant reaction	medium	6	23	29
Percent of medium districts responding		20.7%	79.3%	
Percent of all districts completing an initial evaluation measuring participant reaction		66.7%	52.3%	
Number of districts conducting an initial evaluation measuring participant reaction	large	0	10	10
Percent of large districts responding		0.0%	100.0%	
Percent of all districts completing an initial evaluation measuring participant reaction		0.0%	22.7%	
	Totals	9	44	53
	Total Percentage		83%	

Chi-square analysis: $\chi^2(2, n = 53), p = .283$

Initial Evaluation of Teachers' Acquisition of Knowledge or Skills (Research Question 3b)

The results of a chi-square test on the responses to the question regarding assessment of teachers' acquisition of knowledge or skills reflect a difference in responses of small, medium, and large sized districts ($p = .544$). The chi square analysis indicated that evaluation of teachers' acquisition of knowledge is not statistically correlated with the size of the district. In other words, any data suggesting a relationship

between the size of the district and the evaluation of teachers' acquisition of knowledge is more than likely due to chance (Table 17).

Table 17

Initial Evaluation of Teacher Acquisition of Knowledge and Skills

Data description	District size	Did not assess	Assessed	Totals
Number of districts conducting an initial evaluation measuring acquisition of knowledge	small	4	10	14
Percent of small districts responding		28.6%	71.4%	
Number of districts conducting an initial evaluation measuring acquisition of knowledge		21.1%	29.4%	26.4%
Number of districts conducting an initial evaluation measuring acquisition of knowledge	medium	10	19	29
Percent of medium districts responding		34.5%	65.5%	
Number of districts conducting an initial evaluation measuring acquisition of knowledge		52.6%	55.9%	54.7%
Number of districts conducting an initial evaluation measuring acquisition of knowledge	large	5	5	10
Percent of large districts responding		50.0%	50.0%	
Number of districts conducting an initial evaluation measuring acquisition of knowledge		26.3%	14.7%	18.9%
	Totals	19	34	53
	Total Percentage		64%	

Chi-square analysis: $\chi^2(2, n = 53)$, $p = .544$

Completion of Follow-up Evaluations (Research Questions 2 & 3)

The responding districts reported completing 32 follow-up evaluations. These data indicate that a follow-up evaluation was completed on 46% of the reported programs (Table 18). Some districts reported completion of more than one follow-up per reported program. The percentages of follow-up evaluations conducted by all of the responding

districts are as follows: 57% for small districts, 66% for medium districts, 50% for large districts.

Table 18
Report on Follow-up Evaluations Completed Per Program

Small districts conducting follow-up evaluations	Percentage of small districts conducting follow-up evaluations	Medium districts conducting follow-up evaluations	Percentage of medium districts conducting follow-up evaluations	Large districts conducting follow-up evaluations	Percentage of large districts conducting follow-up evaluations
8	57%	19	66%	5	50%
Total districts completing follow-up		32	Total percentage of follow-up evaluation conducted on reported programs		46%

Note: Based on 70 reported programs

Table 19 reflects the frequency with which follow-up evaluations were conducted on the reported programs. The literature recommends that follow-up evaluations occur after participants have had sufficient time to incorporate the training into their instruction (Gordon, 1991; Shaha et al., 2004). This time increases the possibility that evaluations may provide information on whether additional training is required or if the content or concepts introduced in the training are not properly aligned with the needs of the district. In addition, it is difficult to evaluate for impact on student achievement until sufficient time has passed for the training to be fully integrated into the classroom. Despite this need for follow-up evaluations at multiple points following the reported programs, the most frequent time period for follow-up evaluations (31.5%) was only 1 to 2 months following the reported programs. Only 20% of the reported programs were evaluated beyond six months following the program.

Table 19
Frequency of Follow-up Evaluations by Reported Program

Frequency	Number of follow-up evaluations conducted			
	Small (n=20)	Medium (n=39)	Large (n=11)	Total (n=70)
1 - 2 months	5 25%	9 27%	4 36%	18 31.5%
3 - 4 months	3 15%	6 15%	0	9 15.7%
5 - 6 months	3 15%	5 13%	0	8 14%
7 - 8 months	1 5%	6 15%	1 9%	8 14%
9 - 10 months	2 10%	1 3%	0	3 5%
11 - 12 months	1 5%	1 3%	0	2 3.5%
more than 12 months	1 5%	- 0%	1 9%	2 3.5%
Total follow-up evaluations conducted				50

Note: The percentages indicated are based on the total number of programs reported. Districts could report on multiple follow-up evaluations per program. A total of 50 follow-up evaluations were reported by responding districts.

The data on frequency of follow-up evaluations was analyzed with a chi-square test to determine if district size impacted the timing of follow-up evaluations (Table 20 and Table 21). The chi square analysis indicated that the frequency with which follow-up evaluations were conducted was most likely due to chance rather than the size of the district.

(Table 20 and 21 can be located on the following page.)

Table 20
 Follow-up Evaluations Conducted Within 1 to 2 Months Following the Program

Data details	District size	Number completing follow-up
Small districts conducting a 1 – 2 month follow-up	small	5
Percent of all districts completing 1–2 month follow-up		27.8%
Medium districts conducting a 1-2 month follow-up	medium	9
Percent of all districts completing 1-2 month follow-up		50.0%
Large districts conducting a 1-2 month follow-up	large	4
Percent of all districts completing 1-2 month follow-up		22.2%
	Totals	18
Percentage of 50 follow-up evaluations conducted		36%

Note: Chi-square analysis: $\chi^2(2, n = 18), p = .311$

Table 21
 Follow-up Evaluations Conducted Within 5 to 6 Months Following the Program

Data details	District size	Number completing follow-up
Small districts conducting a 5-6 month follow-up	small	3
Percent of all districts completing 5-6 month follow-up		33.3%
Medium districts conducting a 5-6 month follow-up	medium	5
Percent of all districts completing 5-6 month follow-up		55.6%
Large districts conducting a 5-6 month follow-up	large	1
Percent of all districts completing 5-6 month follow-up		11.1%
	Totals	9
Percentage of 50 follow-up evaluations conducted		18%

Note: Chi-square result: $\chi^2(2, n = 9), p = .264$

Evaluation of Acquisition of New Knowledge or Skills (Question 3b)

Four large, 14 medium, and 8 small districts reported completing follow-up evaluations that assessed teacher acquisition of new knowledge. Therefore, 37% of the reported programs were evaluated to determine if teacher's acquired new skills or

knowledge of new content as a result of the program (Table 22). The most prevalent method of data collection for this information was observation. Pre and/or post assessments were not used. Additional methods of data collection reported but not offered as options on the survey included discussion, school improvement plans, and ongoing assessments (Table 23).

Table 22
Evaluation of Teachers' Acquisition of New Knowledge or Skills

Small districts	Percentage of 20 reported programs	Medium districts	Percentage of 39 reported programs	Large districts	Percentage of 11 reported programs	Overall Percentage of 70 reported programs
8	49%	14	36%	4	36%	37%

Table 23
Method of Data Collection for Teachers' Acquisition of New Knowledge and Skills

Method of data collection	Frequency
Likert Survey	3
Open-ended Survey	6
Observation	23
Interview	8
Pre/Post Assessment	0
Student Achievement Data Analysis	8
Student Achievement Data Disaggregation	8
<u>Other</u>	
Discussion	1
School Specific Professional Development Plans for School Improvement	1
Ongoing Assessment (Otherwise unidentified)	1

Evaluation of Impact on Instruction (Research Questions 2 & 3c)

Four large, 17 medium, and 7 small districts reported completing follow-up evaluations that assessed the degree to which teachers were incorporating the program content into their instruction (Table 24). Therefore, 40% of the reported programs were evaluated for this component. The most prevalent method of data collection for this

information was observation (Table 25). Student achievement data analysis and data disaggregation were the next most utilized methods of data collection for this component.

Table 24
Evaluation of Impact on Classroom Instruction

Small districts	Percentage of 20 reported programs	Medium districts	Percentage of 39 reported programs	Large districts	Percentage of 11 reported programs	Percentage of 70 reported programs
7	35%	17	44%	4	36%	40%

Table 25
Method of Data Collection for Evaluation of Impact on Classroom Instruction

Method of data collection	Frequency
Likert Survey	6
Open-ended Survey	7
Observation	23
Interview	7
Pre/Post Assessment	1
Student Achievement Data Analysis	13
Student Achievement Data Disaggregation	9
<u>Other</u>	
Self-Assessment	1

Evaluation of Impact on Student Achievement (Research Questions 2 & 3d)

Three large, 11 medium, and 6 small districts reported completing follow-up evaluations that assessed the impact of the program on student achievement (Table 26). Therefore, 30% of the reported programs were evaluated to determine if the program had any impact on student achievement. This finding is interesting as the literature on professional development reports that the ultimate goal of professional development programs should be to improve student achievement; therefore, it is essential to determine if the program achieved this goal. However, less than one third of reporting districts evaluated for this component.

Table 26
Evaluation of the Impact on Student Achievement

Small districts	Percentage of 20 reported programs	Medium districts	Percentage of 39 reported programs	Large districts	Percentage of 11 reported programs	Percentage of 70 reported programs
6	30%	11	28%	4	36%	30%

The most prevalent method of data collection for measuring program impact on student achievement was student achievement data analysis (Table 27). Observation and student achievement data disaggregation were the next two most utilized method of data collection to measure this component. Standardized test scores and teacher assigned grades are possible sources of student data. Graduation rates, attendance records, and acceptance rates at colleges and trades school are other sources of student data that may be used to determine program impact on student achievement. The survey did not ask respondents to identify the sources of student data used for the analysis or disaggregation; therefore, it is not known if reporting districts used similar data sources to evaluate this component.

Table 27
Method of Data Collection for Evaluation of Impact on Student Achievement

Method of data collection	Frequency
Likert Survey	0
Open-ended Survey	0
Observation	11
Interview	5
Pre/Post Assessment	3
Student Achievement Data Analysis	18
Student Achievement Data Disaggregation	11
<u>Other</u>	
Student Work	4

Evaluation of Impact on Climate (Research Question 3e)

One large, five medium, and six small districts reported evaluating the impact of the program on district climate during a follow-up evaluation (Table 28). Therefore, 17% of the reported programs were evaluated to determine if the program had an impact on district climate. This was the most infrequently assessed NSDC evaluation component reported by responding districts; however, no information is available to determine the reason districts fail to examine this component. The most prevalent method of data collection to measure impact on climate was observation (Table 29). Interviews were the next most prevalent method used to assess impact on climate. One district reported measuring the impact on climate through continued requests for continuation of training.

Table 28
Evaluation of Impact of Training on Climate

	Percentage of 20 reported programs	Medium districts	Percentage of 39 reported programs	Large districts	Percentage of 11 reported programs	Percentage of 70 reported programs
Small districts	6	5	13%	1	9%	17%

Table 29
Method of Data Collection for Impact on Climate

Method of data collection	Frequency
Likert Survey	2
Open-ended Survey	1
Observation	9
Interview	7
Pre/Post Assessment	3
Student Achievement Data Analysis	5
Student Achievement Data Disaggregation	2
<u>Other</u>	
Continued Requests for Continuation of the Training	1

Summary of Findings

The purpose of this study was to identify the types of professional development programs being offered by Virginia public school districts and how districts evaluated those programs in alignment with the NSDC standards for evaluation. An online survey was developed to collect the data necessary to answer the research questions (Appendix A). The survey was sent to professional development supervisors in each public school district in Virginia via an e-mail. The survey stayed live for three weeks and non-responding districts were sent follow-up e-mails reminding them to complete the survey (Appendix G and H). In addition to the collection of information on the type of professional development offered, data was collected on the type of evaluations completed as well as the data collection methods used by districts. The findings as they relate to each of the research questions are provided below:

Research Question Number 1: What types of professional development do school districts in Virginia provide their teachers?

The results of the study revealed a variety of professional development topics including training on technology, strategies for targeted sub-groups, faculty processes, curriculum alignment, and training to build content knowledge. Eighty-eight percent of the programs reported were programs completed within a period of up to one full day and were a combination of content and strategy or technology based training. Only 5 (9%) districts reported on programs lasting more than one full day that included whole faculty study groups or mentoring. Two (2%) districts reported on programs that provided funding for college credit.

Research Question Number 2: To what degree do Virginia school districts evaluate the impact of professional development activities on teacher performance and student achievement?

Forty percent of the responding districts reported assessing the degree to which teachers were incorporating the program content into their instruction. The most frequent method of data collection for this component was observation.

The literature on professional development indicates that improving student achievement should be the ultimate goal of all professional development programs. Despite this, only 21 (30%) of the reported programs were evaluated for this component. The most frequent methods of data collection for this component were student achievement data analysis and disaggregation.

Research Question Number 3: To what degree are Virginia school districts evaluations of professional development programs congruent with the National Staff Development Council standards for evaluation which state that evaluations should assess:

a. initial collection of data on participants' reactions

Eighty-three percent of the districts reported an evaluation to measure participant reaction. All 10 (100%) of the large districts responding to the survey assessed participant reaction compared to 23 (79%) of the 29 medium districts and 11 (79%) of the 14 small districts responding.

b. teachers' acquisition of new knowledge and skills

Thirty-four (64%) of the districts reported conducting evaluations to determine if teachers' acquired new knowledge or skills during an initial evaluation while 37% of the reported programs were evaluated for the same component during a follow-up evaluation.

The most frequently used data collection method during the follow-up evaluations was observation.

c. how that learning affects teaching

Forty percent of the reported programs were evaluated to determine if teachers were incorporating the training in their instruction through an evaluation. The most frequent method of data collection for this component was observation

d. how those changes in practice affect student learning

Thirty percent of the reported programs were evaluated to determine the impact of the training program on student achievement. The most frequent method of data collection for this component was student achievement data analysis and data disaggregation.

e. how staff development has affected school culture and other organizational structures

Seventeen percent of the programs were evaluated to determine whether or not the program led to any change in the district culture. The methods of data collection used most frequently for this component was observation and interview.

CHAPTER 5 SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter presents a summary of the study findings along with a discussion of how these findings relate to research in the area of professional development evaluation. Implications for the planning of professional development programs will be presented as well as recommendations for future research. The conclusions, interpretations, and recommendations should be considered in light of the limitations of this study, which indicate that the results of the study are generalizable only to school districts in Virginia that responded to the survey. However, the rate of response to the study by sub-groups was similar to the sub-group representation among Virginia public school districts. Small districts make up 25% of the total public school districts in Virginia and small districts represented 26% of the total survey responses. Medium districts make up 54% of the total public school districts in Virginia and medium districts represented 55% of the total survey responses. Finally, large districts make up 21% of the total public school districts in Virginia and large districts represented 19% of the total survey responses. Such a balanced representation indicates a chance that the findings may be generalized to most school districts in Virginia.

Discussion of Findings

Type of Professional Development Provided by Virginia Districts

Responding districts were asked to identify the types of professional development offered at the district level in an effort to determine what type of professional development districts were providing. Responding districts were provided the following three categories to describe their programs: Category I, training lasting up to one full day; Category II, training that lasts more than one full day; Category III, college credit. The

literature reviewed in this study recommends that professional development programs be sustained over a period of time to ensure teachers have the opportunity to obtain enough information, modeling opportunities, and practice on the content or skills to promote incorporation into classroom instruction. For example, the NSDC (2001) *Standards for Staff Development* state that “the most powerful forms of staff development occur in ongoing teams that meet on regular basis, preferably several times a week...” (p. 8). The Virginia Department of Education defines professional development as a program that is “sustained, intensive, and classroom-focused” (2004, p. 1). *Goals 2000* (2001) indicates that professional development programs should “require substantial time” (p. 2). Virginia’s High Objective Uniform State Standard of Evaluation (HOUSSE) recommends that a comprehensive professional development program consist of a minimum of 30 clock-hours of training that includes preparation, homework, and follow-up sessions (2004).

Despite these recommendations, the programs described by responding districts through the study indicate that most districts provide brief professional development programs that do not allow sufficient opportunity for teachers to master the content or skills presented. For example, the majority (88%) of the programs reported in the survey were described as category one, indicating programs lasting up to one full day. Only 9 of the 70 programs (13%) reported by districts lasted more than one full day. Therefore, the majority of the programs reported by responding districts are not consistent with the NSDC standards for professional development or with Virginia’s HOUSSE standards. The Educational Research Service (1998) describes this one-shot type of professional development as inadequate. The National Center for Education Statistics (2006) reports

that this type of training lacks the intensity and continuity needed to effect the type of change in classroom instruction that has the best chance of improving student achievement. Further, Killion (2002) reports that this type of professional development fails to provide the long-term follow-up that promotes significant changes. The study did not collect information on why districts may elect to provide the reported brief training instead of developing comprehensive professional development programs designed to provide adequate follow-up to promote full implementation.

Examples of the types of programs recommended by the NSDC, the VDOE, and *Goals 2000* include whole faculty study groups and mentoring. Both of these professional development formats were available for selection by districts to describe their programs but only five districts selected to report on these types of programs and each of these was a large district. Further research is needed to determine if small and medium districts offer these training formats. Additional research is also needed to determine if the type of programs reported are characteristic of the types offered by reporting districts. Funding agencies at the local, state, and federal level should require districts requesting funding for professional development programs to design and execute programs that incorporate the recommendations of the NSDC, the VDOE, or *Goals 2000* prior to approving funding.

Although the professional development topics reported by districts varied, the most frequently reported type of professional development was a combination of strategies and content lasting up to one full day. One reason for this may be that this training format is easier and less expensive to deliver than lengthy programs offered over a period of time or expensive college tuition. However, Guskey (2000) cautioned that this

format is limited if opportunity is not provided for follow-up activities that allow for feedback and coaching to facilitate implementation of the training content or concepts. Professional development planners should develop programs based on the district vision and identified needs that include opportunity for continual follow-up to ensure participants have the knowledge, resources, and support necessary to incorporate the training content and concepts into their instruction (Corcoran, 1995; the Educational Research Service, 1998; Hawley & Valli, 1996; Kennedy, 1998; Loucks-Horsley, Stiles, and Hewson, 1996); Maurer, 2000; National Partnership for Excellence and Accountability in Teaching, 2000).

Small, medium, and large districts alike offered training in the following: technology; strategies, specific sub-groups; and ways to improve school culture or processes. Medium and small districts offered training to strengthen content knowledge, and medium districts provided training on curriculum alignment as well as training on nationally recognized programs or presenters. However, most programs reported by districts combined content and strategy. This combination allows for the primary goal of improving student achievement to remain the focus of a professional development program. A disconnect occurs if teachers are presented with content but no guidance on how to incorporate the content into their instruction (Guskey, 2000; VADOE, 2004).

While the survey instructions of the study did not restrict respondents to identifying only training for teachers, most of the reported programs appeared to be specifically for teachers. Two districts did specify that their training included administrators. The data did not reflect any patterns in the type of professional development offered to sub-groups, although medium size districts did report a wider

range of professional development topics. Further research is needed to determine if this is characteristic of all Virginia public school districts.

Evaluation Programs

In addition to describing the types of professional development offered, responding districts were asked to describe the types of evaluation programs conducted for each program reported in order to determine how closely evaluations were congruent to the NSDC standards for evaluation of professional development. The findings from the study confirm that all but 7 of the 53 responding districts (87%) completed an evaluation of professional development programs although only 6 districts (11%) reported evaluation programs containing each of the components recommended by the National Staff Development Council standards for evaluation.

The literature on professional development evaluation indicates that comprehensive evaluation programs may provide important information to determine whether the training program was effective in achieving program goals. In addition, this information may provide justification for funding for future programs. Another benefit of a comprehensive evaluation program is that the information collected can provide guidance in the planning and design of future programs (Guskey, 1994; Killion, 2002; Corcoran, 1995; Marks & Maniates, 2003; Mizell, 2003; NCREL, 1997; Rice, 2001; Sanders & Sullins, 2006). Despite the preponderance of literature promoting the need for effective evaluation of professional development programs, the study results indicate that responding districts are not conducting program evaluations congruent with the National Staff Development Council standards. Time, money, and lack of knowledge of how to conduct thorough evaluations are possible reasons for the lack of adequate evaluations.

Funding agencies at the local, state, and federal level should require districts to include in their funding applications an evaluation program that is congruent with standards such as those established by the NSDC. Local school boards should also include in their policy manuals evaluation guidelines for professional development programs.

Initial Evaluation. The study responses indicate that 97% of responding districts completed an initial survey following professional development programs, as specified by the NSDC standards for evaluation. The evaluation of participant reaction is the most common form of professional development evaluation (Frechtling, 2001; Guskey, 1999) and the study findings support this as 87% of the responding districts reported completion of an initial evaluation that assessed participant reaction. However, the initial evaluation should dig deeper than merely determining if participants enjoyed themselves. It is imperative that planners determine what, if anything, teachers learned through participation in the program (Frechtling, 2001; Guskey, 2000; Killion, 2002; NSDC, 2001). Evaluating whether or not teachers gained new knowledge or skills as a result of a program is essential in determining whether or not the program was effective in changing classroom instruction. Unfortunately, only 64% of the responding districts assessed participant acquisition of new knowledge and skills as part of the initial evaluation.

The study results indicate that the initial evaluation is the most frequent evaluation method used by districts to determine if teachers learned anything from the training. Follow-up evaluations have the potential to provide an opportunity to determine if any new knowledge gained is sustained over a period of time. However, only 37% of responding districts evaluated this component through a follow-up evaluation. Therefore,

for most responding districts, the initial evaluation was the only method available to determine if teachers acquired the intended knowledge from the program. This apparent failure to assess for acquisition of knowledge through initial and follow-up evaluations means that reporting districts did not collect the necessary data to determine if the goal of improving teacher knowledge of content or skills was achieved.

The NSDC Standards for program evaluation recommend collecting data from multiple sources to acquire sufficient information to determine program impact as well as to guide the development of future programs (2001). Possible methods of data collection include, but are not limited to, open ended and Likert scale surveys, observations, pre and post assessments, interviews, data analysis, and data disaggregation. Data analysis and disaggregation may include student assessments, attendance records, graduation records, and retention records.

The method of data collection reported through the study for evaluations was varied, but most reporting districts utilized limited data sources. Surveys are the easiest and least expensive method of data collection and this type of evaluation instrument was the prevalent data collection method reported through the study for initial evaluations (Marks & Maniates, 2003). Only twelve of the 53 responding districts (23%) reported using an interview as the data collection method for initial reaction. Fewer than 10% of districts reported using other forms of data collection for the initial survey. This failure to utilize multiple methods of data collection may result in limited data to provide the necessary information to determine the effectiveness of the program, guide future program development, or justify funding. Districts should review the literature cited in this study for guidance on the various data collection methods. When feasible, the

employment of a full- or part-time professional evaluator may provide the best opportunity for ensuring the most effective collection of data. Smaller districts that lack adequate funding to employ their own evaluator may consider forming a consortium with regional districts for the purpose of employing a professional evaluator to collect and analyze data that will provide the necessary information to assess program effectiveness.

Follow-up Evaluation. The NSDC standards for evaluation indicate that evaluations should, “gather evidence throughout the change process to help make midcourse corrections to strengthen the work of leaders and providers” (2001, p. 16). Evaluations that gather information at only one checkpoint are typically not adequate for providing sufficient information to determine the effectiveness of a program or how to plan and implement subsequent programs. Evaluations are needed at multiple checkpoints following completion of a professional development program to determine if teachers are implementing the training program and, if not, to identify what is preventing full implementation of the program content (Guskey, 2000). Furthermore, follow-up evaluations provide insight into whether or not any identified change is sustained long enough to begin impacting the overall culture of a school or district. More information guides program planners to identify the need for additional training or district support, resources, or more one-on-one assistance.

Despite the benefits to be gained through the use of follow-up evaluation data, few districts are conducting comprehensive program evaluations that include follow-up data collection. For example, while follow-up evaluations were conducted at a one to two month period following the program for 18 of the 70 reported programs, the frequency of

words, it is not possible to determine if the program had a lasting impact on classroom instruction or student achievement. Since the response rate reflected a balanced representation of Virginia public school districts, by sub-groups, these data may suggest that the majority of Virginia public school districts fail to conduct evaluation programs congruent with recommended standards. Professional development planners should evaluate their own evaluation programs to determine if they are collecting sufficient information to determine the effectiveness of programs offered at the district level. In addition, if district level planners are not conducting adequate evaluation, it is possible that training provided at the school level also is not being adequately evaluated. Further research is needed to determine if the evaluation programs at the school level are similar to the evaluation programs at the district level.

Incorporation of Program Content into Classroom Instruction. NSDC (2000) standards recommend that evaluations assess incorporation of program content into classroom instruction. Frecthling (2001) reports that limited information has been collected to determine the degree to which programs impact classroom instruction. The study findings support Frecthling's report as responding districts indicated evaluating only 28 of the 70 reported programs (40%) for this component. The failure of reporting districts to evaluate the impact of a professional development program on classroom instruction suggests that districts are not implementing thorough evaluation programs containing all components reflected in the conceptual model found on page 10 of this study. As indicated previously, multiple reasons may exist for this apparent failure to carry out a comprehensive evaluation plan. Those reasons include a lack of funding, time, and knowledge or understanding of how to design and conduct evaluations.

Vital information to determine if training was effective in changing classroom instruction is missing when districts fail to collect data through an evaluation program. An analysis of data, when collected, may indicate that teachers are not incorporating the concepts or content presented through a professional development program. When this is the case, planners should seek to determine the reason. The reasons teachers are not implementing a program may include: lack of required resources, lack of implementation support, lack of understanding of the program process, lack of commitment to the program. Identifying which reason for failure to implement will assist planners as they develop future programs. Observation was the most frequent method of evaluating this component; however, no information was collecting to determine the type or content of the observation tools.

Impact of Training on Student Achievement. The ultimate goal of professional development programs should be to improve student achievement; however, many evaluation programs either fail to evaluate at all for this component or fail to conduct an evaluation designed to adequately determine the impact of programs on student achievement (Frechtling, 2001; *Goals 2000*, 2001). In fact responding districts reported evaluating for this component for only 21 of the 70 (30%) reported programs. This failure to evaluate for this component results in a lack of information to determine if program goals are achieved (Guskey, 1994, 2000; Porter et al., 2000; Shaha et al., 2004). Funding agencies should require districts to provide data indicating the degree to which funded programs impacted student achievement. In addition, school boards should request reports on the effectiveness of professional development programs prior to approving resources and teacher release time for more programs. However, a clear

understanding of what data can realistically be collected is necessary. For example, requiring districts to indicate the degree to which a program impacted standardized test scores is unrealistic when the training program content may only be aligned to a small portion of the indicated test. Furthermore, a portion of allotted budgets should be targeted for an evaluation program, otherwise districts may not have the resources necessary to conduct a comprehensive evaluation designed to collect the data needed to determine the degree of program impact on student achievement. Guidance on acceptable evaluations should be provided along with a list of resources where districts can get assistance in developing an effective evaluation program.

While it is recommended that funding agencies and school boards begin requesting evidence of the effectiveness of professional development programs, they should be mindful of the need to allow sufficient time for program implementation. Teachers require time to become comfortable with new content or concepts and embed them thoroughly into their instruction. Once teachers have mastered the new content or concepts, it will take time for improvement in student achievement to be realized. The evaluation program should include periodic reports that provide data over time to indicate impact.

The reasons districts have failed to assess the impact of a professional development program on student achievement is very complex (Frechtling, 2001; Guskey, 2000). Determining whether a change in student achievement was actually the result of a program is challenging as so many elements impact student performance. A well planned and executed evaluation program may provide enough data to indicate if a program had an affect on student achievement. However, this evaluation program must

follow-up evaluations was very sparse. For example, only 15 programs were evaluated be designed at the beginning of the planning process to ensure training is aligned with intended goals. It should include an identification of anticipated goals and a plan to determine any identified change (Guskey, 2000).

In order to properly measure impact on student achievement it is necessary to know students' beginning knowledge or performance. A pre and post assessment is one method of obtaining this information, yet only three of the reporting districts indicated using this form of data collection as part of their evaluation program. There are several reasons districts may choose not to use pre and post assessments. One is that it is expensive and time consuming to develop a pre and post assessment that has been validated. In addition, unless the content of the training program is specified prior to the development of the assessment, it is difficult to design an assessment aligned to a proposed training program. The use of readily available standardized assessments is often not feasible as the scope of the assessment may go beyond the content of the training, thus, making it difficult to determine that the program was the result of any noted change in results (USDOE, 2006).

If a valid and reliable assessment cannot be developed, districts need to identify other means of evaluating the impact of the training on student achievement. Eighteen districts reported examining student achievement data analysis and 11 reported using data disaggregation to assess program impact on student achievement although the nature of the data analyzed was not identified. Therefore, most of the districts that sought to determine impact on student achievement choose to do so through the application of data analysis and disaggregation. Student data for this type of evaluation may include

standardized tests, student work samples, and portfolios. Other data that may provide information on impact on student achievement include grade retention records and advanced placement enrollment (Guskey, 2000). The survey did not seek to determine what type of student data was examined in the reported evaluations.

Impact of Program on Climate. For those districts completing follow-up evaluations, the least measured component recommended by the NSDC standards was the impact on change in district climate. Only 17% of responding districts assessed this standard. Further study is needed to determine why districts are failing to evaluate this component of the standards but one possibility may be the difficulty in isolating one program to credit with any recognized organizational change when multiple programs are being offered by the district. Additionally, information collected on impact on participant knowledge, classroom instruction, and student achievement may provide enough information to suggest an institutional change without conducting a separate evaluation for this particular component.

Conclusion

The study sought to determine the types of professional development being offered by Virginia public school districts. The literature on professional development cautions against over use of training that is not sustained over a period of time, indicating that this format does not provide the best opportunity for mastery of the content or skill presented (Corcoran, 1995; *Goals* 2000, 2001; VDOE, 2004; Rice, 2001). However, the responding districts identified most of their programs as Category I, which reflects programs lasting up to one day. No information was collected to determine if the one day format is typical for responding districts. It would be interesting to conduct a study to

investigate if districts utilize training fitting this category more often than the other two categories and, if so, the reason for selecting this format.

The study also sought to determine how school districts were evaluating professional development programs. The NSDC recommends that programs be evaluated to determine participant reaction as well as change in participant knowledge, classroom instruction, student achievement, and organizational culture. Literature on the evaluation of professional development programs indicates that the most common form of evaluation is that of initial participant reaction (Guskey, 1999, 2000). The study data suggests support for this finding as 87% of the responding districts indicated completing an initial survey that assessed participant reaction. However, congruence with the NSDC standards begins to drop quickly following the assessment of participant reaction. Only 64% assessed acquisition of new knowledge as part of the initial survey and only 37% of the reported programs were evaluated for this same component through a follow-up evaluation. Further, the reported programs were evaluated for the remaining NSDC standards at the following rates:

- 40% were evaluated for how the learning affected teaching,
- 30% were evaluated for how changes in instruction affected student learning, and
- 17% were evaluated for how those changes impacted organizational culture.

Therefore, implementation of the design and execution of a comprehensive professional development evaluation program congruent with NSDC standards in reported districts is not evident from the study results. Based on the study data, it appears that responding districts do not have sufficient information to improve their professional development programs. In addition, little information is available to determine if the programs that

have been provided have been successful in changing classroom instructional practice or impacting student achievement. Funding agencies and school boards need this information to support the expenditures of funds and resources and to guide in the decision process for future funding of professional development programs. However, as stated earlier, obtaining the evidence to demonstrate the impact of a professional development program requires proper training for those responsible for collecting the information, appropriate resources to carry out the evaluation, and sufficient time to allow for full implementation of the program before making final conclusions regarding the program impact. School districts that do not have ready access to trained evaluators need guidance and assistance from funding agencies in the development and execution of comprehensive evaluation programs.

A comprehensive evaluation program should include a plan for how the data will be used and disseminated; however, the study did not seek to collect this information. The NSDC states that evaluation data can be used to determine necessary changes throughout the life of a program, assist in the planning of future programs, or justify the funding of programs to policy makers and funding agencies (2001). Evaluation data should be made available to applicable stakeholders, including funding agencies and community members. Further study is needed to determine how the results of the professional development evaluation reported are being used and disseminated in Virginia public school districts.

The NSDC standards recommend multiple evaluations over a period of time in order to determine if any recognized change is sustained (2001). One study finding was

the frequency with which districts reported completing follow-up evaluations. Five of the twenty-six (19%) districts reporting completion of follow-up evaluations indicated they conducted multiple evaluations. One reported conducting six follow-up evaluations on one program. While it is commendable that 49% of the responding districts attempted to assess program effectiveness, most responding districts failed to conduct evaluations at multiple checkpoints as recommended by the NSDC standards (2001). As stated earlier, it is important to know if the training had a lasting impact on teacher knowledge, classroom instruction, student achievement, and organizational culture. Conducting evaluations at multiple checkpoints allows planners to identify if teachers are having difficulty implementing the content or skills. Contingency plans should be in place to make identified adjustments to promote the possibility that the program will be sustained effectively.

While the results of the survey provided some insight into the types of professional development being offered in reporting districts as well as how evaluations were completed on identified programs, a review of the data raised other questions. For example, are the evaluation procedures reported in the survey indicative of the evaluation procedures used for all professional development programs in responding districts? While no data are available to answer this question, the responding district representatives were informed of the purpose of the study and, therefore, it was expected that they would select their best example of program evaluation on which to report.

Implications for Professional Developers

The purpose of this descriptive study was to identify the types of professional development programs Virginia public school districts provide and how they evaluate

such programs. Guskey (2000) stated that professional development should be embedded in the day-to-day operation of the organization; however, the study results indicate that that duration of the majority (88%) of the programs reported by the responding districts was less than one full day. Professional developers need to examine the literature presented in this study as well as the study survey and assess their own professional development program based on the recommendations introduced throughout the literature review. It is important that professional developers understand that program evaluation should be an integral part of the program design from the beginning of the planning process.

The results of the study indicate that responding districts understand the need to evaluate professional development programs. However, the NSDC standards recommend that evaluations go beyond the initial assessment of participants' immediate reactions to programs (2001). Despite that, only 17% of the responding districts reported conducting follow-up evaluations that assessed all of the components of the NSDC standards. Professional developers should refer to this study for guidance on how to develop a comprehensive evaluation program. The literature reviewed for this study provides instructions as well as references on how to design an evaluation program aligned with the NSDC standards that may provide information on the effectiveness of a program. The literature review also includes examples of poor evaluation programs as well as exemplary programs. Awareness of where districts are failing to meet the NSDC standards may assist planners in assessing their own evaluation programs.

Recommendations for Future Research

Literature on professional development recommends that improved student achievement should be the goal of all professional development programs (Goals, 2001). However, the literature also indicates that attributing a change in student achievement to a specific program is extremely difficult. Data collected indicate that of the 70 programs reported, only 21 (30%) of the follow-up evaluations examined the impact of professional development on student achievement. Data were not collected on whether change was noted in student achievement as a result of the programs reported. A future research project might examine how districts evaluated the impact of a professional development program on student achievement as well as the degree to which the evaluations verified change in student achievement as a result of the program.

One limitation of the current study is that responding districts were restricted to reporting on no more than three professional development programs. Only 25% of responding districts reported on more than one program. Eighty-eight percent of the reported programs were categorized as lasting no more than one full day. Data are not available on whether the reported programs are characteristic of the programs being offered in the responding districts. In addition, data are not available on whether the type of evaluation described in the survey is the same type of evaluation used for other professional development programs. Future study may seek to determine if the reported programs and evaluations are representative of all programs offered by Virginia public school districts.

While the study concluded that responding districts are not evaluating professional development programs in congruence with NSDC standards, information

was not collected on why. A future study may examine the reasons districts are not conducting comprehensive evaluations of professional development. Possible reasons for the absence of a comprehensive evaluation program may include: lack of resources, lack of knowledge of how to develop comprehensive evaluations, lack of time, fear the evaluation will reveal the program was not successful.

While the study found that responding districts are not conducting evaluations aligned with NSDC standards for professional development provided at the district level, no data were collected on the types of professional development programs offered at the school level or how those programs are evaluated. Future research may use a survey similar to the one used for this study to determine if school level programs and evaluations are similar to the district level programs and evaluations.

Another limitation of the study is that the responses do not reveal how districts are using the data collected through evaluations. Future researchers may explore how districts are applying the lessons learned from evaluations to the development of future professional development programs.

The literature on professional development evaluations provides specific guidelines on how to develop evaluation instruments. This study sought information on the type of evaluation methods used to evaluate programs but it did not examine actual survey instruments. Future research may examine evaluation surveys to determine if they are congruent with best practices for evaluation.

References

- American Federation of Teachers. (2002). *Principles for professional development*.
- Arter, J. A. (2001). Washington assessment professional development program evaluation results. Retrieved January 27, 2006, from ERIC database (ED456124).
- Boyd, S. E., Banilower, E. R., Pasley, J. D. & Weiss, I R. (2003, February). Progress and pitfalls: A cross-site look at local systemic change through teacher enhancement. *Horizon Research, Inc.* Chapel Hill, N.C.
- Choy, S., Chen, X., Bugarin, R., & Broughman, S. T. (2006, January). *Teacher Professional Development in 1999-2000: What Teachers, Principals, and District Staff Report*. National Center for Education Statistics. Retrieved January 27, 2006.
- Corcoran, T. B. (1995, June) Helping Teachers Teach Well: Transforming Professional development. Retrieved January 27, 2006 from ERIC data base (ED 388 619).
- Education Encyclopedia (2007) Ralph W. Tyler (1902-1994 – Contribution to testing and curriculum development, advisory role. Retrieved October 13, 2007, from <http://education.stateuniversity.com/pages/2517/Tyler-Ralph-W-1902-1994.html>
- Educational Research Service. (1998). *Professional development for teachers: Challenges and trends*.
- Federal Coordinating Council for Science, Engineering and Technology. (1993, August). *The Federal Investment in Science, Mathematics, Engineering, and Technology Education: Where Now? What Next?* Retrieved September 10, 2006, from ERIC database (ED 366 502).

- Frechtling, J. (2001). *What evaluation tells us about professional development programs in mathematics and science*. Retrieved January 27, 2006 from ERIC database (ED65587).
- Friedman, T.L. (2005) *The world is flat: a brief history of the twenty-first century*. Farrar, Straus and Giroux: New York.
- Goals 2000. (2001). *Building Bridges: The missions and principles of professional development*. Retrieved January 22, 2006, from <http://www.ed.gov/G2K/bridge.html>
- Gordon, J. (1991, August) Measuring the 'goodness' of training. *Training*, 28(8), 19-25.
- Guskey, T.R.(1994, April). *Professional development in education: In search of the Optimal Mix*. Retrieved January 27, 2006 from ERIC database (ED369181).
- Guskey, T. R., & Sparks, D. (1996, Fall). Exploring the relationship between staff development and improvements in student learning. *Journal of Staff Development*, 17(4).
- Guskey, T. R. (1999). *New perspectives on evaluating professional development*. Retrieved January 27, 2006, from ERIC database (ED430024).
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.
- Guskey, T.R. (2003). *The characteristics of effective professional development: A synthesis of lists*. Retrieved January 27, 2006, from ERIC database (ED478380).
- Herman, J. L. Morris, L. L., & Fitz-Gibbon, C. T. (1987) *Evaluator's Handbook*. Sage Publications, Newbury Park.

- Houghton Mifflin. (1995). *The New Thesaurus: Third Edition*. Retrieved August 23, 2006, from <http://www.nsd.org/library/publications/results/11-97hirsh.cfm>
- Humphrey, D. C., Chang-Ross, C., Donnelly, M. B., Hersh, L., Skolnik, H., & SRI International. (2005). *Evaluation of the Teaching American History Program*. United States Department of Education. Office of Planning, Evaluation and Policy Development.
- Kennedy, M. (1998). *Form and substance in inservice teacher education*. (National Institute for Science Education Research Monograph No. 13). Wisconsin: National Center for Improving Science Education.
- Kent, K. & Lingman, C. (2000, Summer). *California's course: Collaboration crafts a system for professional learning*. *Journal of Staff Development*, 21(3). Retrieved October 15, 2006, from <http://www.nsd.org/library/publications/jsd/kent213.cfm>
- Killion, J. (2002). *Assessing Impact: Evaluating staff development*. Oxford, OH: National Staff Development Council.
- Lamb, T. A. & Tschillard. (2005). *Evaluating learning in professional development workshops: using the retrospective pretest*. National Staff Development Council.
- Loucks-Horsley, S. Stiles, K., & Hewson, P. (1996, May). *Principal of effective professional development for mathematics and science education: A synthesis of standards*. National Institute for Science Education.
- Marks, S. U., & Maniates, H. (2003). *Formative evaluation of professional development: How will we know success?* Retrieved January 27, 2006, from ERIC database (ED479642).

- Maurer, M.J. (2000). *Professional development in career and technical education*. CTE National Dissemination Center.
- Merriam-Webster. (2006). Merriam-Webster Online Dictionary. Retrieved September 24, 2006, from <http://education.yahoo.com/reference/dictionary/entry/class>
- Mizell, H.(2003, fall) Facilitator: 10 Refreshments: 8, Evaluation, 0. *The Journal of the National Staff Development Council*.
- Moller, G. (1999). *The Evaluation Forum: Assessing Professional Development*. Retrieved January 27, 2006 from ERIC database (Ed439096).
- Murphy, M. (2000) Designing staff development with the system in mind. *National Staff Development Council*. Retrieved February 16, 2006, from <http://www.nsd.org/library/publications/results/res9-00murp.cfm>
- National Center for Education Statistics. (2001). *Teacher Preparation and Professional Development: 2000*. Washington, DC: U.S. Government Printing Office.
- National Center on Secondary Education and Transition. (2005). *Professional Development: Frequently asked questions*. Retrieved January 22, 2006 from <http://www.ncset.org/topics/profdevelopment/faqs.asp?topic=15>
- National Staff Development Council. (2001). *Standards for Staff Development*.. The National Staff Development Council.
- National Staff Development Council. *Evaluation*. Retrieved January 22, 2006 from <http://www.nsd.org/standards/evaluation.cfm?printPage=1&>
- National Staff Development Council. (2006) *NSDC Facts*. Retrieved September 9, 2006, from <http://www.nsd.org/connect/about/faqs.cfm?printPage-1&>

- North Central Regional Educational Laboratory. (1997). *Critical Issue: Evaluating professional growth and development*. Retrieved January 22, 2006 from <http://www.ncrel.org/sdrs/areas/issues/educatrs/profdevl/pdr500.htm>
- Porter, A. C., Garet, M. S., Desimone, L., Yoon, K. S., & Birman, B. F. (2000). *Does Professional Development Change Teaching Practice?* Retrieved January 27, 2006, from ERIC database (ED455227).
- Rice, J. K. (2001). *Cost framework for teacher preparation and professional development*. Retrieved January 22, 2006, from ERIC data base (ED 472 668).
- Sanders, J. R. & Sullins, C. D. (2006). *Evaluating school program's: an educator's guide*. Corwin Press, Thousand Oaks, CA.
- Scriven, M. (2007, February) *Key evaluation checklist*. Retrieved April 1, 2007, from http://www.wmich.edu/evalctr/checklists/kec_feb07.pdf
- Shaha, S. H., Lewis, V. K., O'Donnell, T. J., Brown, D. H. (2004). *Evaluating professional development: An approach to verifying program impact on teachers and students*. National Staff Development Council.
- Sparks, D. & Hirsch, S. (2000). *A national plan for improving professional development*. Retrieved January 27, 2006, from ERIC database (ED442779).
- Stufflebeam, D. L. (2002, June). *CIPP Evaluation Model Checklist*. Evaluation Checklists Project. Retrieved September 10, 2006, from <http://www.wmich.edu/evalctr/checklists/cippchecklist.pdf>
- SWEPT Evaluation. Triangle Coalition for Science and Technology Education. Retrieved February 27, 2006, from <http://www.triangle-coalition.org/swept/sweval.htm>
- United States Congress, (2002). H.R. 3801

United States Department of Education. (1997). *Achieving the goals. Goal 4: Teacher education and professional development*. United States Government Printing Office, Washington, D. C.

United States Department of Education. (1998). *Goals 2000: Reforming education to improve student achievement*.

United States Department of Education. (2001). *The No Child Left Behind Act of 2001*.

United States Department of Education, (2004). Retrieved August 23, 2006, from <http://www.ed.gov/policy/elsec/leg/esea02/index.html>

United States Department of Education, (2006). Eastern Regional Project Directors' Conference, Cleveland, OH.

United States Department of Education. Teaching American History. Retrieved December 2, 2007, from <http://www.ed.gov/programs/teachinghistory/2007tahabstracts/index.html>

Virginia Department of Education, (2004). *High-Quality Professional Development Criteria*.

Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy analysis Archives*, 10 (2). Retrieved October 15, 2006, from <http://epaa.asu.edu/epaa/v10n12/>

Appendix A – Survey of Evaluation of Professional Development

1. Part 1

Division Identification

1. Please identify your school district. (This information is collected only to follow-up with non-respondents. No district identification will be included in the report.)

2. Report on individual professional development programs

Please select up to three professional development activities offered during school year 2006-07 that fit one of the categories identified in the next screen and respond to the survey questions for each activity separately. Upon completing the information for one activity you will be prompted to enter information on another activity or, if that is the last activity on which you will report, you will be prompted to submit the survey.

3. Untitled Page

Select the category that best fits the professional development program on which you are reporting.

2. Category I: Professional development that lasts up to one full day and fits one of the following formats. (If this description is not appropriate, choose the last option for the next category.)

- Content specific training - designed to improve teacher's content knowledge in their assigned area.
- Strategy based training - designed to improve teacher's knowledge and ability to implement research based instructional strategies.
- A combination of content and strategy based training
- Technology - Orientation on a particular piece of software or equipment.
- None of these properly describes the program (selecting this option will take you to another category.)

4. OR

3. Category II: Professional development that lasts more than one full day and fits one of the following formats (If this description is not appropriate, choose the last option for the next category.)

- Content specific training - designed to improve teacher's content knowledge. May include conferences, academies, seminars, group-based projects, or institutes.
- Strategy based training - designed to improve teacher's knowledge and ability to implement research based instructional strategies. May include conferences, academies, seminars, group-based projects, or institutes.
- A combination of content and strategy based training.
- Technology - Orientation on a particular piece of software or equipment.
- Whole faculty study group or professional learning group.
- Mentoring program (or coaching) - A program designed to provide inexperienced teachers with an experienced partner to guide them through the course for a specified period of time.
- None of these properly describes the program (selecting this option will take you to another category.)

5. OR

4. Category III: College Credit (If this description is not appropriate, choose the last option to proceed with the survey.)

- College credit through direct course offering or tuition reimbursement.
- Industry certification, i.e. electrician, plumber, auto mechanic.
- None of these properly describes the program (selecting this option will take you to the remainder of the survey.)

6. Program Number 1 Description

Please enter the information for the first program on which you wish to report.

5. What was the purpose of the professional development (e.g. providing training designed to strengthen a specific strategy or content knowledge)?

7. Evaluation information

Please respond to the next questions regarding the program described in the previous questions.

6. Did your school division conduct an evaluation of the program (i.e. surveys, questionnaires, observations, or interviews)?

- yes
- no

8. Question 11 response

7. If the answer to question #6 was "yes", did the evaluation assess participant reaction?

- Yes
 No

8. If the answer to question #6 was "yes", did the evaluation assess teachers' acquisition of new knowledge in the area of content or instructional strategies?

- Yes
 No

9. Reflect the method of data collection for the evaluation. Check all that apply.

- Pre/post assessment
 Survey (Liberit scale)
 Survey (open-ended)
 Interview
 N/A
 Other (please specify)

9. Followup #1

10. Was a follow-up evaluation(s) completed after the initial evaluation (i.e. surveys, observations, interviews, assessments, or data analysis)?

- yes
 no

10. Follow-#1 response

11. If the answer to question #10 was "yes", please indicate when the evaluation was conducted. If more than one follow-up was completed, select all appropriate responses.

- 1 - 2 months following the program
- 3 - 4 months following the program
- 5 - 6 months following the program
- 7 - 8 months following the program
- 9 - 10 months following the program
- 11 - 12 months following the program
- more than 12 months following the program

12. Did the follow-up evaluation(s) assess the teachers' acquisition of skills/content presented during the program?

- Yes
- No

13. If the answer to #12 was "yes", please indicate the method(s) used to assess the teachers' acquisition of skills/content presented during the program.

- Survey (Likert scale)
- Survey (open-ended)
- Observation
- Interview
- Pre/post assessments
- Student achievement data analysis
- Student achievement data disaggregation
- Other (please specify)

11. question 14

14. Did the follow-up evaluation assess the degree to which participants were incorporating the skills/content learned during the program in their instruction?

Yes

No

15. If the answer to question #14 was "yes", please indicate the method(s) used to assess the degree to which the participants were incorporating the skills/content learned during the program in their instruction

Survey (Likert scale)

Survey (open-ended)

Observation

Interview

Pre/post assessments

Student achievement data analysis

Student achievement data disaggregation

Other (please specify)

12. question 16

16. Did the evaluation examine the impact of the training on student achievement?

- Yes
 No

17. If the answer to question #16 was "yes", please indicate the method(s) used to assess the impact of the training on student achievement. Please check all that apply.

- Survey (Likert scale)
 Survey (open-ended)
 Observation
 Interview
 Pre/post assessments
 Student achievement data analysis
 Student achievement data disaggregation
 Student work

Other (please specify)

13. question 18

18. Did the follow-up evaluation assess changes in school or district climate as a result of the training?

- Yes
 No

19. If the answer to question #18 was "yes", please indicate the method(s) used to assess changes in school or district climate as a result of the training

- Survey (Likert scale)
 Survey (open-ended)
 Observation
 Interview
 Pre/post assessments
 Student achievement data analysis
 Student achievement data disaggregation

Other (please specify)

14. New program

You may enter information on an additional program or you may submit your survey.

20. Do you wish to enter information on an additional professional development program?

Yes

No

Questions 2 – 20 were repeated for those districts selecting to report on more than one program.

Appendix B

September 2006 Virginia School District Enrollment

The Virginia public school districts were divided into three sub-groups based on size. Small districts have fewer than 2000 students. Medium districts have at least 2000 students but fewer than 10,000 students. Large districts are those with at least 10,000 students. This data represents the September 2006 enrollment reported to the Virginia Department of Education.

District	Student population
Small Districts	
VSDB-HAMPTON	61
VSDB-STAUNTON	119
HIGHLAND CO PBLC SCHS	310
LEXINGTON CITY PBLC SCHS	469
COLONIAL BEACH PBLC SCHS	576
CRAIG CO PBLC SCHS	722
NORTON CITY PBLC SCHS	730
BATH CO PBLC SCHS	783
DEPARTMENT OF CORRECTIONAL EDUCATION	790
WEST POINT PBLC SCHS	802
KING AND QUEEN CO PBLC SCHS	810
COVINGTON CITY PBLC SCHS	870
CHARLES CITY CO PBLC SCHS	874
BLAND CO PBLC SCHS	896
RAPPAHANNOCK CO PBLC SCHS	995
SURRY CO PBLC SCHS	1,113
BUENA VISTA CITY PBLC SCHS	1,125
RICHMOND CO PBLC SCHS	1,227
MATHEWS CO PBLC SCHS	1,255
FRANKLIN CITY PBLC SCHS	1,324
GALAX CITY PBLC SCHS	1,329
MIDDLESEX CO PBLC SCHS	1,337
SUSSEX CO PBLC SCHS	1,383
LANCASTER CO PBLC SCHS	1,440
NORTHUMBERLAND CO PBLC SCHS	1,493
CUMBERLAND CO PBLC SCHS	1,512
RADFORD CITY PBLC SCHS	1,539
ESSEX CO PBLC SCHS	1,616

AMELIA CO PBLC SCHS	1,768
LUNENBURG CO PBLC SCHS	1,789
MADISON CO PBLC SCHS	1,854
FALLS CHURCH CITY PBLC SCHS	1,865
WESTMORELAND CO PBLC SCHS	1,908
NORTHAMPTON CO PBLC SCHS	1,945
Medium Districts	
NELSON CO PBLC SCHS	2,004
KING WILLIAM CO PBLC SCHS	2,017
FLOYD CO PBLC SCHS	2,089
GRAYSON CO PBLC SCHS	2,170
CLARKE CO PBLC SCHS	2,174
BUCKINGHAM CO PBLC SCHS	2,218
GOOCHLAND CO PBLC SCHS	2,249
BRUNSWICK CO PBLC SCHS	2,260
CHARLOTTE CO PBLC SCHS	2,305
APPOMATTOX CO PBLC SCHS	2,319
MANASSAS PARK CITY PBLC SCHS	2,337
NOTTOWAY CO PBLC SCHS	2,391
BRISTOL CITY PBLC SCHS	2,397
DICKENSON CO PBLC SCHS	2,494
FREDERICKSBURG CITY PBLC SCHS	2,496
PATRICK CO PBLC SCHS	2,580
POQUOSON CITY PBLC SCHS	2,597
MARTINSVILLE CITY PBLC SCHS	2,603
GILES CO PBLC SCHS	2,606
NEW KENT CO PBLC SCHS	2,637
STAUNTON CITY PBLC SCHS	2,637
GREENSVILLE CO PBLC SCHS	2,654
PRINCE EDWARD CO PBLC SCHS	2,741
GREENE CO PBLC SCHS	2,787
SOUTHAMPTON CO PBLC SCHS	2,852
COLNL HEIGHTS CITY PBLC SCHS	2,883
ALLEGHANY CO PBLC SCHS	2,928
ROCKBRIDGE CO PBLC SCHS	2,932
WAYNESBORO CITY PBLC SCHS	3,095
BUCHANAN CO PBLC SCHS	3,500
KING GEO CO PBLC SCHS	3,571
FLUVANNA CO PBLC SCHS	3,590
LEE CO PBLC SCHS	3,637
PAGE CO PBLC SCHS	3,665
SCOTT CO PBLC SCHS	3,725
WINCHESTER CITY PBLC SCHS	3,743
SALEM CITY PBLC SCHS	3,893
HOPEWELL CITY PBLC SCHS	3,969
CARROLL CO PBLC SCHS	4,048

CAROLINE CO PBLC SCHS	4,085
WYTHE CO PBLC SCHS	4,209
RUSSELL CO PBLC SCHS	4,271
HARRISONBURG CITY PBLC SCHS	4,281
CHARLOTTESVILLE CTY PBLC SCHS	4,331
POWHATAN CO PBLC SCHS	4,381
LOUISA CO PBLC SCHS	4,437
DINWIDDIE CO PBLC SCHS	4,573
ORANGE CO PBLC SCHS	4,616
AMHERST CO PBLC SCHS	4,755
BOTETOURT CO PBLC SCHS	4,894
PETERSBURG CITY PBLC SCHS	4,902
PULASKI CO PBLC SCHS	4,981
MECKLENBURG CO PBLC SCHS	5,007
SMYTH CO PBLC SCHS	5,007
ISLE OF WIGHT CO PBLC SCHS	5,241
WARREN CO PBLC SCHS	5,268
ACCOMACK CO PBLC SCHS	5,414
HALIFAX CO PBLC SCHS	5,894
GLOUCESTER CO PBLC SCHS	6,125
PRINCE GEORGE CO PBLC SCHS	6,132
SHENANDOAH CO PBLC SCHS	6,153
MANASSAS CITY PBLC SCHS	6,554
WISE CO PBLC SCHS	6,629
TAZEWELL CO PBLC SCHS	6,846
CULPEPER CO PBLC SCHS	6,997
DANVILLE CITY PBLC SCHS	7,164
FRANKLIN CO PBLC SCHS	7,445
WASHINGTON CO PBLC SCHS	7,454
HENRY CO PBLC SCHS	7,895
LYNCHBURG CITY PBLC SCHS	8,808
CAMPBELL CO PBLC SCHS	8,940
PITTSYLVANIA CO PBLC SCHS	9,298
MONTGOMERY CO PBLC SCHS	9,634
WILLIAMSBURG-JAMES CITY PBLC SCHS	9,820
Large Districts	
ALEXANDRIA CITY PBLC SCHS	10,643
FAUQUIER CO PBLC SCHS	10,940
BEDFORD CO PBLC SCHS	11,039
AUGUSTA CO PBLC SCHS	11,045
ROCKINGHAM CO PBLC SCHS	11,613
FREDERICK CO PBLC SCHS	12,211
ALBEMARLE CO PBLC SCHS	12,766
YORK CO PBLC SCHS	12,838
ROANOKE CITY PBLC SCHS	13,286
SUFFOLK CITY PBLC SCHS	13,852

ROANOKE CO PBLC SCHS	14,830
PORTSMOUTH CITY PBLC SCHS	15,872
ARLINGTON CO PBLC SCHS	18,463
HANOVER CO PBLC SCHS	18,652
HAMPTON CITY PBLC SCHS	22,799
SPOTSYLVANIA CO PBLC SCHS	23,737
RICHMOND CITY PBLC SCHS	24,726
STAFFORD CO PBLC SCHS	26,178
NEWPORT NEWS CITY PBLC SCHS	33,139
NORFOLK CITY PBLC SCHS	36,054
CHESAPEAKE CITY PBLC SCHS	40,336
LOUDOUN CO PBLC SCHS	47,326
HENRICO CO PBLC SCHS	47,747
CHESTERFIELD CO PBLC SCHS	57,239
PRINCE WM CO PBLC SCHS	68,462
VA BEACH CITY PBLC SCHS	74,313
FAIRFAX CO PBLC SCHS	163,768

Appendix C – Pilot e-mail

Date: Thu 26 Jul 10:01:23 EDT 2007

From: <ccbrya@wm.edu> [Add To Address Book](#) | [This is Spam](#)

Subject: dissertation assistance

To:

For my doctoral program, I am studying how Virginia School divisions evaluate the effectiveness of professional development programs. I am seeking your assistance with a pilot of the survey instrument that will be used to collect data for my dissertation.

Would you please help me by accessing the survey at the following URL and completing the survey?

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naaINqyvvgCnUA_3d_3d

Upon completion please e-mail me that you have finished. I will then call you to ask you a few questions about the instrument.

A hard copy of the instrument is attached for you to review prior to accessing the survey, if you wish.

Thank you for your assistance with this pilot.

Colleen C. Bryant

Doctoral Candidate

The College of William and Mary

(Professionally, I am affiliated with Chesterfield County Public Schools where I am an assistant principal at Meadowbrook High School.)

Appendix D

Correspondence to School Districts Explaining the Purpose of the Survey and Requesting their Participation

Dear Educator

I am a doctoral candidate at The College of William and Mary and am conducting a study as part of my dissertation. I would appreciate your assistance in completing a brief 5 minute survey related to the procedures your district follows to evaluate the effectiveness of professional development programs. All district identification is confidential and will not be included in the study results.

A one page explanation of my study can be found attached to this e-mail as well as a word version of the questions should you wish to review them prior to completing the survey.

Should you wish to access the survey at this time you may click on the link below or cut and paste it into the URL address line on your internet browser:

I appreciate your assistance with this study. If you have questions, please contact me at ccbrya@wm.edu or via phone at (804) 743-3675, ext. 244.

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naaINqyvvgCnUA_3d_3d

Sincerely,

Colleen C. Bryant

Cc: Christopher Gareis, Ed.D.
Advisor

A Study of the Evaluation Procedures for Professional Development Among Public School Districts in Virginia
A Doctoral Dissertation Study
The College of William and Mary

September 15, 2007

Dear Director of Professional Development:

I am currently a doctoral candidate at The College of William and Mary studying how professional development programs are evaluated. My dissertation will focus on assessing how school districts in Virginia evaluate professional development programs provided at the district level. The study will determine how school districts currently evaluate professional development compared to the methods recommended by the National Staff Development Council. School districts may use the results of the survey to assist in the development of a comprehensive evaluation of professional development programs.

I am collecting information from school districts, via an online survey, during the fall of 2007 based on programs completed during the 2006-2007 school year. The survey is being conducted via the URL link at the bottom of this letter and should take about five minutes to complete; however, it will be necessary for you to have the information requested available before accessing the survey. Therefore, a copy of the survey questions are attached to this e-mail. The survey will be available until October 5, 2007. The survey does collect the identification of the school district for the purpose of follow-up. The report, however, will not include any reference to a school district. A copy of the survey results can be requested by contacting me at the e-mail address below.

I hope you will take the time to complete this survey. If you prefer a paper and pencil version of the survey, please e-mail me and I will send you a hard copy version of the survey along with a stamped envelope in which to return the survey.

If you have questions regarding the contents of the survey, please contact me via e-mail at ccbrya@wm.edu or at (804) 743-3675 ext. 244.

Yours truly,

Colleen C. Bryant
Doctoral Candidate

Cc: Christopher Gareis, Ed.D.
Advisor

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naaINqyvvgCnUA_3d_3d

Appendix F – Survey Questions – Attachment for E-mails

1. Please identify your school district. (This information is collected only to follow-up with non-respondents. No district identification will be included in the study report.)

Please select up to three professional development activities offered during school year 2006-07 that fit one of the categories identified in the next screen and respond to the survey questions for each activity separately. Upon completing the information for one activity you will be prompted to enter information on another activity or, if that is the last activity on which you will report, you will be prompted to submit the survey.

Select the category that best fits the professional development program on which you are reporting.

2. Category I: Professional development that last up to one full day and fits one of the following formats. (If this description is not appropriate, choose the last option for the next category.)
 - Content specific training – designed to improve teachers’ content knowledge in their assigned area.
 - Strategy based training – designed to improve teacher’s knowledge and ability to implement research based instructional strategies.
 - A combination of content and strategy based training
 - Technology – orientation on a particular piece of software or equipment.
 - None of these properly describes the program (selecting this option will take you to another category.)
3. Category II: Professional development that lasts more than one full day and fits one of the following formats. ((If this description is not appropriate, choose the last option for the next category)
 - Content specific training – designed to improve teachers’ content knowledge in their assigned area.
 - Strategy based training – designed to improve teacher’s knowledge and ability to implement research based instructional strategies.
 - A combination of content and strategy based training
 - Technology – orientation on a particular piece of software or equipment.
 - Whole faculty study group or professional learning group.
 - None of these properly describes the program (selecting this option will take you to another category.)
4. Category III: College credit (If this description is not appropriate, choose the last option to proceed with the survey.)
 - College credit through direct course offering or tuition reimbursement.
 - Industry certification, i.e. electrician, plumber, auto mechanic
 - None of these properly describes the program (selecting this option will take you to the remainder of the survey.

Please enter the information for the first program on which you wish to report.

5. What was the purpose of the professional development (e.g. providing training designed to strengthen a specific strategy or content knowledge)?

Please respond to the next questions regarding the program described in the previous questions.

6. Did your school division conduct an evaluation of the program (i.e. survey, questionnaires, observation, or interviews)?

- Yes
- No

7. If the answer to questions #6 was “yes”, did the evaluation assess participant reaction?

- Yes
- No

8. If the answer to questions #6 was “yes”, did the evaluation assess teachers’ acquisition of new knowledge in the area of content or instructional strategies?

- Yes
- No

9. Reflect the method of data collection for the evaluation. Check all that apply.

- Pre/post assessment
- Survey (Likert scale)
- Survey (open-ended)
- Interview
- Other (please specify

10. Was a follow-up evaluation completed after the initial evaluation (i.e. surveys, observations, interviews, assessments, or data analysis)?

- Yes
- No

11. If the answer to questions #10 was “yes”, please indicate when the evaluation was conducted. If more than one follow-up was completed, select all appropriate responses.

- 1 – 2 months following the program
- 3 – 4 months following the program

- 5 – 6 months following the program
 - 7 – 8 months following the program
 - 9 – 10 months following the program
 - 11 – 12 months following the program
 - more than 12 months following the program
12. Did the follow-up evaluation(s) assess the teachers' acquisition of skills/content presented during the program?
- Yes
 - No
13. If the answer to #12 was "yes", please indicate the method(s) used to assess the teachers' acquisition of skills/content presented during the program.
- Survey (Likert scale)
 - Survey (open-ended)
 - Observation
 - Interview
 - Pre/post assessments
 - Student achievement data analysis
 - Student achievement data disaggregation
 - Other (please specify)
14. Did the follow-up evaluation assess the degree to which participants were incorporating the skills/content learned during the program in their instruction?
- Yes
 - No
15. If the answer to question #14 was "yes", please indicate the method(s) used to assess the degree to which participants were incorporating the skills/content learned during the program in their instruction.
- Survey (Likert scale)
 - Survey (open-ended)
 - Observation
 - Interview
 - Pre/post assessments
 - Student achievement data analysis
 - Student achievement data disaggregation
 - Other (please specify)
16. Did the evaluation examine the impact of the training on student achievement?

- Yes
- No

17. If the answer to question #16 was “yes”, please indicate the method(s) used to assess the impact of the training on student achievement. Please check all that apply.

- Survey (Likert scale)
- Survey (open-ended)
- Observation
- Interview
- Pre/post assessments
- Student achievement data analysis
- Student achievement data disaggregation
- Other (please specify)

18. Did the follow-up evaluation assess changes in school or district climate as a result of the training?

- Yes
- No

19. If the answer to question #18 was “yes”, please indicate the method(s) used to assess changes in school or district climate as a result of the training.

- Survey (Likert scale)
- Survey (open-ended)
- Observation
- Interview
- Pre/post assessments
- Student achievement data analysis
- Student achievement data disaggregation
- Other (please specify)

20. Do you wish to enter information on an additional professional development program?

- Yes
- No

Appendix G – First Reminder

Prof. Dev. Study Reminder

A little over a week ago I sent you an e-mail regarding a survey related to my doctoral dissertation. I hope you will take a few minutes to complete the survey. The format is multiple choice and the questions focus on how your district evaluates the effectiveness of professional development programs.

You can click on the attachment below to complete the survey:

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naaINqyvGCnUA_3d_3d

I have attached a more detailed description of my program as well as a copy of the survey questions should you wish to review them. If you have questions, please contact me at ccbrya@wm.edu.

Thank you for your assistance.

Colleen C. Bryant
Doctoral Candidate
The College of William and Mary

Appendix H - Final Study Reminder

Date: Tue 2 Oct 20:21:42 EDT 2007

From: <ccbrya@wm.edu>

Subject: Final Study Reminder

Bcc:

I recently sent you an e-mail regarding my doctoral dissertation study related to the evaluation of professional development programs. My records indicate you have not yet responded to the survey.

Below is the link to this brief online survey should you wish to respond. The survey takes about 5 minutes to complete.

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naalNqyvvgCnUA_3d_3d

A detailed description of my study as well as a word version of the survey questions is attached should you desire this information. The survey will close at midnight October 5, 2007.

Thank you for assisting me with this study.

Colleen C. Bryant
Doctoral Candidate
The College of William and Mary

Appendix I- Consortium Member E-mail

Dear Consortium Members

I am requesting your assistance as I try to complete the data collection for my doctoral dissertation.

I sent an e-mail recently to the individual in charge of professional development in your division requesting that they complete the survey found at the attachment below. They have not yet responded. I have attached a description of my study as well as a word version of the questions.

http://www.surveymonkey.com/s.aspx?sm=SQdWJXXd0naalNqyvgCnUA_3d_3d

If possible, can you contact that individual and ask them if they can complete the survey by Friday, October 5, 2007.

I appreciate any assistance you can provide in this matter. I look forward to seeing you in a few weeks.

Colleen Bryant

Appendix J – EDIRC Authorization

Date: Tue 28 Aug 15:17:50 EDT 2007

From: <compli@wm.edu> Add To Address Book | This is Spam

Subject: Status of protocol EDIRC-2007-08-16-4870-ccbrya set to active

To: ccbrya@wm.edu, edirc-l@wm.edu

This is to notify you on behalf of the Education Internal Review Committee (EDIRC) that protocol EDIRC-2007-08-16-4870-ccbrya titled A Study of the Evaluation Procedures for Professional Development Among Public School Divisions in Virginia has been exempted from formal review because it falls under the following category(ies) defined by DHHS Federal Regulations: 45CFR46.101.b.2.

Work on this protocol may begin on 2007-09-15 and must be discontinued on 2008-09-15. Should there be any changes to this protocol, please submit these changes to the committee for determination of continuing exemption using the Protocol and Compliance Management channel on the Self Service tab within myWM (<http://my.wm.edu/>).

Please add the following statement to the footer of all consent forms, cover letters, etc.:

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2007-09-15 AND EXPIRES ON 2008-09-15.

You are required to notify Dr. Ward, chair of the EDIRC, at 757-221-2358 (EDIRC-L@wm.edu) and Dr. Deschenes, chair of the PHSC at 757-221-2778 (PHSC-L@wm.edu) if any issues arise during this study.

Good luck with your study.

Vita

Colleen Cannington Bryant

Birthdate: August 9, 1956

Birthplace: Alexandria, Virginia

Education: 1996-1999 The College of William and Mary
Williamsburg, Virginia
Ed.S. in Educational Administration

1983-1986 Western Carolina University
Cullowhee, North Carolina
M.Ed. in Secondary Education

1974-1978 North Georgia College
Dahlonega, Georgia
B.A. in History