ABSTRACT OF CAPSTONE

Karen R. Hammons

The Graduate School
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Abstract of capstone

A capstone submitted in partial fulfillment of the Requirements for the degree of Doctor of Education in the College of Education At Morehead State University

By

Karen R. Hammons
Mount Sterling, Kentucky

Committee Chair: Dr. Michael W. Kessinger, Assistant Professor
Morehead, Kentucky

April 13, 2017

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SNOW DAY LEARNING: FIRST YEARS OF KENTUCKY’S NON-TRADITIONAL INSTRUCTION DAYS

Non-traditional instruction days in Kentucky, as well as other states, are becoming increasingly popular as weather- and illness-related school closings compromise time in the classroom. This exploratory research study recounted the beginning of the use of non-traditional instruction days in the state of Kentucky as well as the current status after its progression over the past six years. In addition, data from participating and non-participating districts yielded rationales to substantiate both viewpoints.

KEYWORDS: e-learning, blended learning, academic learning time, distance learning
SNOW DAY LEARNING: FIRST YEARS OF KENTUCKY’S NON-TRADITIONAL INSTRUCTION DAYS

By

Karen R. Hammons

Approved by

Shane C. Shope, EdD
Committee Member Date

Virginia Karen Hatfield, EdD
Committee Member Date

Michael W. Kessinger, EdD
Committee Chair Date

Timothy L. Simpson, PhD
Interim Department Chair Date
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DEDICATION

To Robert and Martha, my loving father and mother, whose unconditional and sacrificial love enabled me to have the courage, discipline, and resiliency to finish this work;

To Madison, John Robert, and Makenna, my three beautiful children, whose presence is my world; this is for you.
ACKNOWLEDGEMENTS

Though impossible to recognize everyone who has contributed to this journey, I want to personally acknowledge those who served as a mentor, an inspiration, an encourager, a cheerleader, and who never gave up on me even when I was ready to give up on myself.

First and foremost, I would like to express my most sincere and heartfelt gratitude to my parents. Their entire lives have been examples of unconditional love, dedication, selflessness, and humility. I cannot adequately thank them enough for the opportunities they have afforded me, for without those, it would not be possible for me to have completed my doctorate. They have created a legacy of “making a better life” for their children, and I intend for this flame to continue to burn as I pass it to my own children.

I would like to thank my three wonderful children, Madison, John Robert, and Makenna, for making my life beautiful. They have inspired me to look at the world differently and find the goodness and splendor in everything, live life to the fullest, and make each day count. Throughout this long and tedious process, they have endured having to share their precious time with my research, given me hugs at just the right time, and made sacrifices in their own individual ways that have inspired me to continue so I could become “Dr. Mom.”

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I would like to offer my sincere gratitude to Michael Carr, my former principal at Lexington Traditional Magnet School. I credit him for recognizing a potential in me that I certainly didn’t recognize in myself at the time. His words, “You are meant for greater things,” have never left me.

I would be remiss not to recognize the doctoral faculty at Morehead State University, especially Dr. Carol Christian, Dr. David Barnett, and Dr. Michael Kessinger who provided unparalleled supports and guidance throughout my extended journey. The words of Dr. Christian and Dr. Barnett, “How’s your capstone going?” and “You can do this, Karen,” have helped me push through difficult times. Too, I am so grateful for Dr. Kessinger’s willingness to be my mentor throughout the final part of my doctoral program. His sense of humor and encouragement have been a blessing.
I certainly cannot go without recognizing my sister, Katherine, and my dear friend who is like a sister, Teresa. Their strength in times of adversity continues to amaze and inspire me.

Last, but certainly not least, I credit my Lord above with placing such wonderful people and opportunities in my life. Through His strength all things are possible.
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CHAPTER ONE

Introduction

Why does Mother Nature seem to bestow her wrath on some and not others? Some school districts in the state of Kentucky miss 20+ school days per year and are fraught with seemingly the worst of the weather. The Kentucky Department of Education has sought innovation to combat the recurring issue of weather and illness-related districtwide closings and their effects on student achievement. Hence, the evolution of a once-termed *Snowbound Pilot* to what is now known as the *Non-Traditional Instruction Day Program*.

According to Hughes (2011), the origin of the program began with a single county seeking to find a solution to missing 20+ days per school year after the weather contributed to the severing continuity of instruction during the winter months and assured the school year would run far into June. After devising their own plan of innovation to reduce the effects of the inclement weather in late 2009, work packets were given to the students to complete on days dismissed for weather. Participation was voluntary for students although 70% participated. The county continued their plan into the next school year and in the regular legislative session, then-Governor Steve Beshear signed House Bill 427 (2011) allowing the commissioner of education rights to approve up to 10 non-traditional instruction days for districts who had missed an average of 20+ days for the previous three years, and who used alternative methods of instruction while school was not in session. What would be called the *Snowbound Pilot* was born.
Because of the strict criteria for districts having to miss an average of 20+ days for the previous three years and because of the mild winters in 2011-2012 and 2012-2013, many districts did not miss enough days to deem them eligible to apply. As a result, in March House Bill 211 (2014) was signed by then-Governor Steve Beshear, lifting the legislative language regarding the number of snow days and deeming all 173 Kentucky school districts eligible to apply for up to 10 non-traditional instruction days per school year. The once named Snowbound Pilot was now officially the Non-Traditional Instruction Day Program.

Research does not exist for non-traditional instruction program or days, thus providing not only a gap in the research but rather a void. For days that can potentially impact students from year to year, research on this topic is imperative. How much of an impact can 10 days per year make? Hypothetically, if a student were to begin kindergarten in a district that used 10 non-traditional instruction days per year, by the end of the student’s senior year, he or she would have used this mode of learning for 130 total days. The average number of instructional days utilized in Kentucky schools is 173 days (“Kentucky Department of Education School Calendars,” 2017).

Putting this into perspective, then, for this scenario (and considering the non-traditional instruction days in aggregate), throughout the student’s educational career the equivalent of 75% of one school year would have been used with non-traditional instruction days. Certainly, this is a substantial amount. As well, KRS 158.070 (2016) states Kentucky school districts must have at least 170 instructional days and a
minimum of 1,062 hours. Therefore, the impact of non-traditional instruction days could vary from district to district, depending on the school calendar in place.

As indicated through the study, districts are opting to use technology platforms for non-traditional instruction day learning. Since 2008, the progression of K-12 online means of education has increased since becoming more consistently prevalent in literature, and as well, the implementation has surpassed any research on the theoretic framework (Drysdale, Graham, Halverson, & Spring, 2013). With this movement, schools have instituted a blended (or hybrid) model of learning that merged online and traditional learning, and according to Watson (2008), blended learning is apt to become the leading model which is used by schools and districts.

In all, there has been very little rigorous research on either online or blended learning in the K-12 realm (DiPietro, Ferdig, Black & Preston, 2010), as most research has been conducted on adult learners (Barbour, 2007). For the studies that have been published, each concur that teacher quality is imperative and professional development is necessary to build and sustain quality programs utilizing online or blended learning models (Cavanaugh, Barbour, & Clark, 2009; Culp, Honey, & Mandinach, 2005; Graham, Spring, Drysdale, & Henrie, 2014; Rice, 2009; Weiner, 2003).

As well, effective use of academic learning time is critical. Four models of academic learning time, Carroll (1963), Denham and Lieberman (1980), Berliner (1990), and Gettinger and Seibert (2002), were reviewed because of their impact on, and reference in, subsequent studies. Academic learning time, at the very core, is the
deeply engaged time students have with a learning task, and is the most impactful with regard to achievement when aligned with student readiness (Abadzi, 2001; Aronson, Zimmerman, & Carlos, 1999; Brown, Rocha, Sharkey & Hadley, 2005; Farbman, 2015; Gromada & Shewbridge, 2016; Hanushek, 2015; Jez & Wassmer, 2015; Joyner, Molina, Beckwith, & Williams, 2011; Lavy, 2010; Rivkin & Schiman, 2013). Although time is critical, by itself it has little impact on student performance; thus, quality is key. In fact, “it is the quality of education time that is the critical determinant of how much students will learn.” (Aronson et al., 1999, p.13)

Academic learning time is critical for student achievement and researchers found, as well, extending the school day or school year yielded positive outcomes (Brown et al., 2005; Farbman, 2015; Lavy, 2010; Rivkin & Shiman, 2013; Scheerens, Henriks, Luyten, Silva, 2007; Sleegers, & Glas, 2013). In all, though, and congruent with the finding with regard to blended learning, teacher quality is imperative.

A landmark study (Goodman, 2014) somewhat refuted previous studies as it entered a new variable into the research. Some of the articles written on the topic of e-learning days (which are used in place of weather-related school closings) have quoted this particular study, demonstrating its prominence in current literature. Goodman found that although districtwide weather-related closings affect student performance, individual student absences make more of an impact on achievement due to their effect on teachers having to accommodate learners at different learning levels.
Lost learning time through inclement weather days remains the crux of the dilemma facing many states, including Kentucky. Marcotte and Hemelt’s (2007) study is another quoted in some of the later articles written about e-learning days. When considering third-grade students, each day missed for weather-related closings resulted in 0.5% fewer students scoring proficient on the spring state assessment. However, Kentucky sought to alleviate such happenings when Senate Bill 1 (2009) was introduced, mandating the state testing window be within the last 14 days of school.

Kentucky is striving to find innovative ways to compensate for lost instructional time during weather and illness-related closings. The state has already gone through one iteration of the non-traditional instruction day program with the passing of House Bill 211, and future iterations remain to be seen. The focus of this exploratory study was to examine the current status of the non-traditional instruction program, as well as provide trends in rationales for both participants and non-participants.

**Problem Statement**

Since 2011, non-traditional instruction days have become increasingly more prevalent in the state of Kentucky. Non-traditional instruction days can be utilized when school is canceled for weather or wide-spread illness. After the restriction was lifted in 2014 regarding the average number of school days missed for previous years, all school districts in Kentucky became eligible to participate in the non-traditional instruction day program. Although there has been marked growth in the number of
districts choosing to participate, there are still others who are non-participants. With the non-traditional instruction day program as an available option for school closings, not all districts seem to agree on their usage.

**Purpose**

The purpose of this study was to describe the beginning of the non-traditional instruction day program in the state of Kentucky and present the status of its progress since the implementation six years ago. Those influencing the policy surrounding the non-traditional instruction days, as well as participating districts and non-participating districts, were surveyed or interviewed so as to begin to more comprehensively understand the reasoning behind the steady increase of growth of these days as well as the reasoning some districts have chosen not to participate.

**Significance of the Study**

The significance of this study was to follow the progression of the increasing prevalence of non-traditional instruction days in the state of Kentucky as well as investigate reasons for non-participation. Information gathered from this study will better inform district personnel and boards of education when considering this option for unexpected school closures during the academic year. In addition, this study serves to guide policymakers and those responsible for the oversight of the non-traditional instruction day program in understanding the implications and needs of the program structure and implementation. It is important to consider the impact these days can have on the education of K-12 students.
There are no studies specific to the implementation of non-traditional instruction days as implemented in the state of Kentucky, and there is a very limited body of research available on the impact of unscheduled school closings on students. Therefore, data from this study contributed to the ongoing professional knowledge regarding the status and progression of non-traditional instruction days.

**Context**

This capstone reported the progression of non-traditional instruction days in Kentucky from the inception to the current status. After the launch of the *Snow Bound Pilot* in 2011-2012 and the reauthorization of non-traditional instruction days as per House Bill 211 in 2014, a marked momentum of districts applying for and implementing non-traditional instruction days has steadily increased each year. One district participated in an unofficial pilot in 2009-2010 and 2010-2011. In 2011-2012, only those districts with an average of 20 or more canceled school days within an academic year for three prior years could apply to use non-traditional instruction days; thus, two districts participated consistently in the official non-traditional instruction day pilot beginning with the 2011-2012 school year. After then-Kentucky Governor Beshear signed House Bill 211 (2014) which lifted the restriction of the number of school cancellations to apply for the non-traditional instruction day program, the number of districts electing to participate substantially increased (see Table 1). Also noteworthy, and as a point of contrast, of the 27 districts missing an average of 14 or more days from 2009-2015, only 52% have
chosen to participate in the non-traditional instruction day program (Kentucky Department of Education Division of Innovation and Partner Engagement, 2017).

Table 1

*Growth of Participants in the Non-Traditional Instruction Day Program*

<table>
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<th>District</th>
<th>Previous Year</th>
<th>n</th>
<th>% Growth</th>
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<tr>
<td>2014-2015</td>
<td></td>
<td>13</td>
<td>N/A</td>
</tr>
<tr>
<td>2015-2016</td>
<td></td>
<td>44</td>
<td>238%</td>
</tr>
<tr>
<td>2016-2017</td>
<td></td>
<td>72</td>
<td>64%</td>
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This study detailed the status of non-traditional instruction days from its evolution beginning in 2011-2012 through 2016-2017. The goal of this research was to examine the perspectives of participating and non-participating districts, as well as policy makers and program overseers, in conjunction with the current status of the non-traditional instruction day program progression since the past six years of implementation.

**Research Questions**

This study sought to answer the following research questions surrounding this capstone project:

1. What is the status of non-traditional instruction day implementation in the state of Kentucky?
2. What are the rationales offered by both participating and non-participating districts, as well as those involved with the program at the state level?

Summary

In the past decade, a rising trend in using non-traditional days in lieu of unscheduled K-12 school cancellations has become increasingly prevalent. Being a relatively new topic to the research realm, there are very limited studies regarding the impact of weather-related or illness related absences on students. As a result, policymakers for K-12 schools have continued with the non-traditional instruction day implementation in the state of Kentucky.

This study examined the status of non-traditional instruction day implementation, as well as rationales for districts either participating or not participating, from a lens to help inform districts and policymakers as legislation for blended learning options continues.

Definition of Terms

There are critical terms surrounding this study in the areas of online and blended learning as well as terms specific to the state of Kentucky. Because of the breadth and depth of some of the definitions presented by various researchers in their studies, it is important to see how the researcher defined each.

**Blended learning** – the use of both online learning and another mode of learning (use synonymously with ‘hybrid learning’)

**Digital learning** – learning through the use of technology programs or applications
**Disruptive innovation** – an innovation that replaces a more complicated one with a simpler, more expansive solution to include new clientele (Christensen, Horn, & Staker, 2013)

**Distance education** – education opportunity occurring where the instructor and the students are in different locations, and the learning is either collaborative and synchronous or individualized and asynchronous

**E-learning** - learning occurring through Internet-based access (used synonymously with ‘web-based learning’ and ‘online learning’)

**Face-to-face learning** – learning occurring where the instructor and students are in the same physical location

**Hybrid learning** – the use of both online learning and another mode of learning (used synonymously with ‘blended learning’)

**Online learning** - learning occurring through Internet-based access (used synonymously with ‘web-based learning’ and ‘e-learning’)

**Learning Management System (LMS)** – a comprehensive structure that organizes an organization’s content, data, and access to online learning

**Non-Traditional Instruction Day (NTI)** – the term used by the Kentucky Department of Education as an option for districts to use and provide students with alternative instruction for days schools are not in session due to occurrences such as weather or illness

**Sustaining innovation** – sustaining strategies that offer better products and solutions for the same clientele (Christensen et al., 2013)
Web-based learning – learning occurring through the use of Internet-based access (used synonymously with ‘online learning’ and ‘e-learning’).
CHAPTER TWO

Review of Literature

A review of literature contributed to the conceptual framework of this capstone project, based on research interrelated to foundational structure of non-traditional instruction days. A newer model in the K-12 education realm, non-traditional instruction (NTI) days are becoming increasingly more pervasive in many states, including Kentucky. An integrative literature view, organized thematically, is quintessential in securing a foundation from which to formulate an understanding of the non-traditional instruction day concept.

Conceptual Framework
Introduction

The progression of K-12 online means of education has increased since becoming more consistently prevalent in literature in 2008 (Drysdale, Graham, Halverson, & Spring, 2013). Although not necessarily a new concept, bringing online learning from adult-based learners to the K-12 realm has propagated a metaphorical “pendulum swing” regarding its usage for primary and secondary educational purposes. The movement has progressed so quickly the implementation surpassed the research regarding the theoretic framework (Drysdale et al., 2013). Cavanaugh, Barbour, and Clark (2009) stated that K-12 online learning programs are evolving but research on virtual schooling practice and policy is limited, and McCombs and Vakili (2005) found that “researchers and practitioners are decrying the lack of a research-validated framework to guide their design” (p. 1582).

In fact, in 2008 K-12 online learning was growing rapidly at 30% annually for the past 10 years (Watson, 2008). With this movement, schools have trended toward using a blended, or hybrid, learning medium converging both brick-and-mortar and online learning. According to Watson (2008), “It is likely to emerge as the predominant model of the future and to become more common than either one alone.” (p.3) Further, Christensen, Horn, and Staker (2013) introduced their two innovation models, sustaining and disruptive. As Christensen et al.(2013) described blended learning:

In the long term, the disruptive models of blended learning are on a path to becoming good enough to entice mainstream students from the existing
system into the disruptive one in secondary schools. They introduce new benefits—or value propositions—that focus on providing individualization; universal access and equity; and productivity. Over time, as the disruptive models of blended learning improve, these new value propositions will be powerful enough to prevail over those of the traditional classroom. (p. 5)

To summarize, sustaining innovations are those which produce consistent, refined products to the same “clientele.” In contrast, disruptive innovations are those which begin to redefine and redesign products to make them more accessible and affordable for new “clientele.” Christiansen et al. (2013) maintained the blended learning model would serve as a disruptive innovation to propagate a new student learning paradigm.

Blended learning has seemingly afforded new opportunities to districts and schools when considering unscheduled closings due to weather, widespread illness, etc. Although there is limited rigorous research in this area, several related topics lend themselves as critical components when considering the blended learning movement (1) online learning; (2) academic learning time; and sub-components (3) length of school time; and (4) current views regarding e-learning or blended learning days.

**Online Learning**

According to DiPietro, Ferdig, Black, and Preston (2010), there is little known about best practices in teaching K-12 online learning. Similarly, Barbour (2007) states that traditionally, research has been conducted with adult learners and only
recently has included the K-12 realm. Literature related to online learning programs for K-12 began in the 1990s (Cavanaugh, Barbour, & Clark, 2009), however, few rigorous studies of the effects of online learning for these students have been published (Halverson, Graham, Spring, Drysdale, & Henrie, 2014; Patrick & Powell, 2009).

As a metamorphosis of online learning has proceeded, thus came a convergence of online and face-to-face learning, yielding the concept of blended learning, or hybrid learning. Drysdale, Graham, Halverson, and Spring (2013) conducted an analysis of research trends in dissertations and theses, studying blended learning, between 2011-2012. Of the 205 publications analyzed, only 8% addressed K-12 education, identifying a significant gap in the research.

As well, Halverson, Graham, Spring, Drysdale, and Henrie (2014) used a software which logged and calculated citations from Google Scholar to gather data on the most frequently cited books, journals, and articles on blended learning from 2010-2011. Only two publications (1.8%) focused on the K-12 realm. Similarly, the concept of blended learning only entered the proverbial education arena in more recent years.

As technological advances continue to evolve; however, the effects on K-12 education cannot go unchanged. Barber et al. (2011) found that in a study involving the trends of online and hybrid learning in 50 countries, blended learning is occurring with much greater frequency than online learning only, and the use of online learning is most prevalent by students with special circumstances.
**Definitions.** Perhaps one of the most pervasive themes throughout the research regarding the concept of blended learning is simply how it is defined. Multiple terms have been used synonymously for the combined usage of both traditional, face-to-face learning and online learning, such as blended learning and hybrid learning. With the inception of blended learning, a host of definitions made solidifying the understanding of this concept virtually impossible to accurately transfer meaning from one entity to the next. The definition was simply too broad (Barbour et al., 2011). The following represent a few of the many definitions of blended learning.

Watson (2008) used the definition “…blended learning combines online delivery of educational content with the best features of classroom interaction and live instruction to…differentiate instruction from student to student across a diverse group of learners.” (p. 4)

The University of Calgary Teaching and Learning Centre (as cited in Watson, 2008) defined blended learning as “the integration of face-to-face and online learning to help enhance the classroom experience and extend learning through the innovative use of information and communications technology.” (p. 5)

In a document by Allen, Seaman, and Garrett (as cited in Watson, 2008) blended learning was defined as “a course that blends online and face-to-face delivery [with] substantial proportion of the content is delivered online…with the remaining portion of the course content delivered by face-to-face instruction or other non-web-based methods, such as paper textbooks.” (p. 5)
Simonson (as cited in Schlosser & Simonson, 2002) stated the most comprehensive definition of blended learning is “institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors.” (p. 1) Further, Simonson identifies four main components that differentiate distance education from self-study: (1) institutionally based; (2) separation of teacher and student in geography, time, and knowledge; (3) interaction of telecommunications available for learners to interact with one another, with resources, and with the instructor; and (4) inclusion of instructional environments and resources that facilitate learning experiences.

Staker and Horn (2012) defined blended learnings as a “formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home.” (p. 3)

Still others view blended learning as a pedagogical approach instead of assigning a specific definition. Dziuban, Hartman, and Moskal developed a research brief for EDUCAUSE titled “Blended Learning” (as cited in Watson, 2008) and noted “blended learning should be viewed as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment, rather than a ratio of delivery modalities.” (p. 5) This instructional model further
included (1) a shift from lecture; (2) increased interactions; and (3) integrated formative and summative assessment mechanisms.

As a compilation of these various definitions of blended learning, the most rudimentary statement that can be made is this learning mode includes both a technology-based and a traditional method of teaching and learning. Synthesizing the plethora of the breadth and depth of the definitions offered for this type of learning is virtually impossible. As a result, teachers can view blended learning very differently, forging a gap in the cohesiveness of using a common language.

Complicating the issue of the definition being multi-faceted, the K-12 distance education continuum includes everything from text-based corresponding programs to fully inclusive technology-integrated program (Rice, 2006). Further, Watson (2008) states the K-12 continuum is so broad that it could include practically any learning experience involving the use of educational technology to a specific percentage of online curriculum and traditional face-to-face learning. As demonstrated by a surfeit of definitions woven into past research, individual interpretations fall within a sizable continuum.

**Effectiveness.** Just as the definition of blended, or hybrid, learning is multidimensional and is interpreted differently as per the researcher or practitioner, the research regarding the effectiveness of online and blended learning is conflicting. Multiple studies reveal different outcomes of effectiveness, which are often dependent on specific variables.
Cavanaugh and Clark (2007) analyzed 229 practitioner reports and experimental and quasi-experimental studies, both published and unpublished. Emerging themes included steady growth, benefits, challenges, and broad effectiveness. The results indicated in North America and other industrialized countries, distance education for K-12 students is viewed as a solution for several education problems including students who need to learn at a pace different than a school classroom.

As cited in Cavanaugh and Clark (2007), several of the studies showed that over the past decade, students who were typically successful in an online learning environment were those who were independent learners, intrinsically motivated, and who had excellent time management and technical skills (Ballas & Belyk; Barker & Wendel; Berge and Clark; Bigbie & McCarroll; Cavanaugh, Gillan, Bosnick, Hess, & Scott; Clark, Lewis, Oyer, & Schreiber; Espinoza, Dove, Zucker, & Kozma; Haughey & Muirhead; Kozma, Zucker, & Espinoza; McLeod, Hughes, Brown, Choi, & Maeda; Zucker & Kozma). However, Cavanaugh and Clark stated a need for more K-12 research in this area and found mixed reviews about the advantages of online learning, as there was seemingly no agreement in the education community that online learning provided high-quality learning experiences at any level.

Barbour et al. (2011) surveyed education researchers, from 50 countries around the world, regarding policies and practices of online and blended learning. Through their research, noteworthy issues included vague definition, lack of policies,
and a chronic need for training for teachers and administrators. Further, emerging trends in the status of blended and online learning, internationally, included:

1. blended and online choices are more readily available in urban areas in developed countries;
2. growth in digital learning stems from shared authority from local schools and the national government;
3. specialized teacher training is encouraged but not required;
4. blended learning is occurring with much greater frequency than online learning;
5. the use of online learning is the most prevalent by students exhibiting special circumstances.

Barbour et al. (2011) noted similarities when comparing to the issues and trends within the United States. To substantiate, Watson, Murin, Vashaw, Gemin, and Rapp (2013), in their work, *Keeping the Pace with K-12 Online Learning: An Annual Review of Policy and Practice*, used information from a combination of Internet research, emails, and phone interviews with personnel from state education agencies, state virtual schools, online programs, and other sources to offer a “status check” with regard to online and blended schools in the United States. Aside from detailing the standing of each state with online and blended learning, they found all 50 states had differing approaches to policies. Although similarities emerged, no two were the same. Compared to where the nation as a whole was from ten years prior, the implications for the future were:
1. “policy matters;

2. funding must be equitable;

3. quality through accountability is critical;

4. existing schools and teachers are critical.” (p. 42)

When considering both the international study and the study within the United States, effectiveness, then, seems interdependent on policies and funding from the national or state level and instructional quality and training from the local education agencies.

McCombs and Valiki (2005) in their work, *A Learner-Centered Framework for eLearning*, studied relevant literature to address the concerns from researchers and practitioners regarding the lack of a research-based framework to use as a guide for e-learning, and the supposition that methods that work in effective “traditional learning environments may or may not work in online environments” (p. 1582).

Beginning in 1990 and then revised in 1997, the American Psychological Association appointed a task force to compile research and theory from both psychology and education over time, resulting in the combined findings for over a century. The 14 Learner-Centered Psychological Principles served as a framework for school redesign and reform, and could be generalized to both traditional and online learning environments (Table 2). Because students engaged in online learning environments could feel isolated, generalizing and incorporating the learner-centered principles into an online environment would help to reduce student detachment and allow for a more non-linear way of learning.
Table 2

American Psychological Association 14 Learner-Centered Psychological Principles

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<thead>
<tr>
<th>Cognitive and Meta Cognitive Factors</th>
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<tr>
<td>1. Nature of Learning Process</td>
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<td>2. Goals of Learning Process</td>
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<td>3. Construction of Knowledge</td>
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<td>4. Strategic Thinking</td>
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<td>5. Thinking about Thinking</td>
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<td>6. Context of Learning</td>
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<th>Motivational and Affective Factors</th>
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<tr>
<td>7. Motivational and Emotional Influence on Learning</td>
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<td>8. Intrinsic Motivation to Learn</td>
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<td>9. Effects of Motivation on Effort</td>
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<th>Developmental and Social Factors</th>
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<td>10. Developmental Influences on Learning</td>
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<td>11. Social Influences on Learning</td>
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<tr>
<th>Individual-Differences Factors</th>
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<tr>
<td>12. Individual Differences in Learning</td>
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<tr>
<td>13. Learning and Diversity</td>
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<tr>
<td>14. Standards and Assessment</td>
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Note: Adapted from McCombs, B.L., & Vakili, D. (2005). A learner-centered framework for e-learning. Teachers College Record, 107(8), 1582-1600.

The learner-centered principles framework, no matter the research-base, are only as effective as the preparation of the teachers. This framework reconfirms the importance of the “human element [that] cannot be left out of even the most advanced technology-supported networking communities.” (p. 1597) As well, the effectiveness of the online learning experience involves quality content and process. Moving away
from the predominantly linear nature of online learning forges a path of inquiry and collaboration and an integral part of the learning process.

Similar to the findings of McCombs and Valiki (2005), Kvavik, Caruso, and Morgan (2004) conducted a study through the EDUCAUSE Center for Applied Research involving students and their use of Information Technology (IT). They gathered quantitative survey data from 4,374 freshmen and seniors from 13 universities. In addition, 132 students and 23 administrators who supported student IT on campus were interviewed in focus groups. The researchers sought data to answer the following questions:

1. What kinds of information technology do students use?
2. With what skills levels are they using this technology?
3. How does this use contribute to their undergraduate experience?
4. What value does the use of information technology add in terms of learning gains?

Their findings yielded the top reasons for student information technology usage as (1) writing documents; (2) e-mail; (3) surfing the Internet; (4) classroom activities. No significant differences in ethnic groups were noted across the students surveyed.

Those surveyed indicated students had the technology skills they needed; however, those who were interviewed suggested that students had skills in basic Microsoft Office applications but knew just enough operational technology to complete their work. In addition, subjects interviewed indicated students did not have “in-depth knowledge or problem-solving skills.” (p. 11) These data present a more
linear usage of technology students had experienced in taking classes. The Learner-Centered Principles, as part of the work of McCombs and Vakili (2005) presented findings that substantiate offering a more effective means of learning through a non-linear perspective, as students are not one-dimensional learners.

Noteworthy, the data Kvavik et al. (2004) gathered from the subjects suggest students felt that information technology yielded better communication with professors’ classmates. They also indicated technology improved the presentation of class work; however, data also revealed students felt technology had less effect on activities centering around the comprehension of class materials. Also of importance, students indicated the use of information technology did not increase engagement in the course activities; the professors interviewed provided a contradictory view. As stated by Bennett, Maton, and Kervin (2008), “it may be that there is as much variation within the digital native generation as between the generations.” (para. 14)

Another study considering the effectiveness of the online learning environment was conducted by Patrick and Powell (2009), which examined the outcomes and descriptions of existing studies in pursuit to answer the question, “Is online learning effective?” According to the researchers, there were no studies comparing students taking online courses with traditional students using control groups. In fact, “from 1989-2004, there were [only] 15 studies published that met strict criteria for internal experimental validity comparing online courses with conventional courses.” (p. 5) After that time, Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer (2004) published the first meta-analysis that focused solely on K-12 online
learning. Their most substantial finding was that “distance education did not outperform or underperform classroom instruction” (p.19-20).

The most in-depth and large-scale study after Cavanaugh et al. (2004) was a meta-analysis review of online learning studies conducted by Means, Toyama, Murphy, Bakia, and Jones for the U.S. Department of Education in 2009 (revised in 2010). This study involved 176 studies that were narrowed down from an initial pool of research due to meeting the criteria of having either an experimental or quasi-experimental design and measuring student outcomes. The 176 studies were refined to 99 after considering only those that had a contrast between either online, or blended learning, and face-to-face learning. Only nine of the 99 studies involved K-12 learning, and then only five of those met the criteria for meta-analysis.

In other studies, the meta-analysis conducted by Means et al. (2010) has been quoted out of context in support of online (especially blended) learning models being more effective than face-to-face learning. In the correct context, decision makers of online learning “need rigorous research examining the effectiveness of online learning for different types of students and subject matter as well as studies of the relative effectiveness of different online learning practices.” (p. 54) Further, the researchers caution others in generalizing their findings to K-12 settings.

Professional development and teacher quality. Though seemingly many different views regarding online and blended learning, one consensus throughout the research involves professional development and its centralized importance in the successful implementation of online and blended learning.
Rice (2009) used the Delphi method, which was initially used in forecasting technological innovations and the social and economic impact of technological change. The research included interviewing three groups consisting of specialized areas of expertise: practitioners in distance learning, those influencing policy of distance learning, and those engaged in research involving distance learning. The focus questions included three prompts used to forecast the landscape and priority areas for K-12 distance education over the subsequent five years. Among the areas identified, professional development and proper training for practitioners ranked as a priority. Further, Barbour et al. (2011) found in their research spanning 50 countries that none had implemented a comprehensive or systematic reorientation of the entire educational profession with regard to blended learning.

Similarly, the enduring theme of professional development continued with the work of Culp, Honey, and Mandinach (2005), who examined key policy documents produced from 1983 to 2003, providing the foundational work from which subsequent research was conducted. The vast majority of the reports provided recommendations to policymakers and other stakeholders of actions needed to provide support, conditions, and research-based knowledge necessary to establish high-quality, technology-rich learning environments in American schools. The researchers looked at the changes over the past 20 years. Prevalent throughout the documents, professional development was one of the enduring themes in the reports and was often highlighted as the single most important step toward the integration of technology in education. Moreover, providing quality professional development and
sustained support for teachers seeking to innovate and progress in the technological
domain was found to trend though the documents as well. This is true for both
preservice and inservice teachers. In 2000, only 20% of teachers felt adequately
prepared to use educational technology in their teaching (U.S Department of
Education, 2000).

Further, The U.S. Department of Education, National Center for Education
Statistics (2009) surveyed public, K-12 districts, schools, and teachers to gather data
on the availability and usage of educational technology and the teachers’
corresponding preparedness. Reported for the prior year, 61% of the subjects
received professional development opportunities in educational technology, 61%
received training from school technology staff, and 78% of the subjects had to seek
out assistance themselves as independent learning.

Other studies have cited professional development and teacher quality as
being core essentials to the effectiveness of online and blended learning. Teacher
effectiveness is one of the most compelling determinants in different levels of student
success (Cavanaugh, Barbour, & Clark, 2009; Rice, 2006), and that teacher quality
had to be considered when assessing the effectiveness of virtual schooling
(Cavanaugh, Gillan, and Kromrey, 2004). Cavanaugh et al. (2004) also identified
student ability or disability, and the design of the distance learning systems as factors
impacting the effectiveness. Correspondingly, effective blended learning is more than
adding technology to a classroom, and teachers need to be supported with
professional development (Watson, 2008). Halverson, Graham, Spring, Drysdale, and
Henrie (2014) and Kvavik et al. (2004) communicated findings that support the importance of professional development and Halverson et al. (2014) stated there were gaps in professional development for blended learning.

Along with teacher characteristics, there are studies that identify student characteristics contributing to the effectiveness of online and blended learning program. Frid (2001), studied 28 subjects with ages ranging from 7-12 years old who had online learning experiences. As a result, learner autonomy could be improved with experience in distance education for younger children; however, the quality of participation decreased without adult supervision. Further, there was evidence to suggest students were more likely to persist when there was online interaction with peers. Also considering student characteristics, Weiner (2003) examined student attitudes about web-based learning by using surveys and interviews. Data suggested a high student-teacher interaction where the student received feedback was an integral part of the online learning experience. In contrast, students not receiving the interaction felt ignored, isolated, and lost in the courses. Best stated by Rice (2006), “the effectiveness of distance education appears to have more to do with who is teaching, who is learning, and how that learning is accomplished, and less to do with the medium.” (p. 440)

**Summary.** K-12 online learning has evolved into blended learning experiences since the early 2000s, converging online and face-to-face education. As this mode of learning has emerged, there are a plethora of definitions present in publications. No two definitions are exactly alike. There is very limited rigorous
research in the K-12 arena of blended learning, and the first and most comprehensive meta-analysis, which focused entirely on K-12 education, was conducted by Cavanaugh et al. (2004).

Since that time, Means et al. (2010) conducted a meta-analysis for the U.S. Department of Education, but their findings for K-12 were so limited, they cautioned generalization to this population. Two of the most pervasive themes throughout the studies were professional development and teacher quality. Teacher quality was the one variable that made a substantive difference in online and blended learning experiences. Quality programs are important; however, quality teachers are critical. As well, findings suggest student participants in online learning must be supervised (younger children) and receive a high level of interaction so as not to feel isolated and ignored.

**Academic Learning Time**

Academic learning time is the most foundational way to identify the time in which students have the opportunity to learn and, theoretically, are engaged in learning and learning tasks. Its definition; however, is complex and multidimensional (Heuston & Miller, 2011). Silva (2007) stated “…improving the quality of instructional time is at least as important as increasing the quantity of time in school” (p. 1). Although there have been numerous studies conducted regarding academic learning time and effective learning time, there are core studies that serve as the basis for these concepts.


**Models.** Beginning with Carroll’s *A Model of School Learning* (1963), several studies have secured a mark as influential studies regarding the concept of academic learning time. Next, in 1980, Denham and Lieberman had a hallmark study of the Beginning Teacher Evaluation System (BTES). Then, in 1989, Carroll wrote *The Carroll Model: A 25 Year Retrospective and Prospective View*. After this publication, Berliner presented his definition of academic learning time in 1990. Finally, in 2002, Gettinger and Seibert offered their definition of academic learning time, based on Denham and Lieberman’s 1980 study.

**Carroll Model.** Carroll (1963) supplied the foundation from which all subsequent definitions of academic learning time were built. According to Carroll, several different points of data were needed to calculate the time students spend learning. Simply stated, the opportunity to learn times the actual time engaged, divided by the time needed to learn times the quality of instruction and the student’s ability to understand equals the degree of learning. The degree of learning is actually a function of time actually spent in learning proportionate to the time needed for learning. Originally designed for foreign language acquisition, the model could be generalized to the learning of any cognitive skill or subject. Carroll (1989) explained there were five classes of variables; three for time and two for achievement. Those measuring time included:

- **aptitude** (determining the amount of time needed to complete a task);
- **opportunity to learn** (amount of time allotted for learning);
perseverance (amount of time the student is willing to spend on the task).

Those measuring achievement included:

- quality of instruction;
- ability to understand the instruction/task.

When reflecting on his model, Carroll (1989) stated it is not specific about the attributes of high-quality instruction, and “…only quality of instruction failed to show consistently significant effects; possible that is due to the problem in measuring the variable” (p. 27). Carroll further indicated that time could be measured but actual student thoughts during instruction time could not. And, with regard to time, Carroll stated educational psychology does not have adequate procedures for accurately assigning a time to a unit of instruction when considering the different aptitudes of the students.

**Beginning Teacher Evaluation Study (BTES).** Denham and Lieberman’s (1980) review of the BTES study comprehensively examined all aspects of the multi-year process that yielded a result different than what it first it was intended. The latter portion of the study, led by Charles Fischer and David Berliner from 1974-1978, began as a search for information to inform policy decisions regarding the desired competencies for beginning teachers as well as an evaluation of teacher education programs.

To gain insight for the competencies, the focus transferred to second and fifth-grade math and reading teachers. In each grade level, 10 effective and 10 less
effective teachers were selected to take part in a three-phase process. During the first phase, trained ethnographers observed each classroom and made notes about the teaching characteristics. The second phase included the teachers completing a simulated task of planning a year of instruction for students. Finally, during the third phase, the teachers watched videotapes and identified important aspects of teaching.

In the course of the next few years, the study dropped both original focuses but kept the name, BTES. The definition of academic learning time (ALT) derived from the study, which was the “amount of time students spend engaged in academic tasks of appropriate difficulty” (p. iii). To further explain, two types of time were observed in classrooms:

1. allocated time;
2. engaged time.

Allocated time represented the amount of time the teacher had allotted for the task. Engaged time represented the part of the allocated time when students were paying attention, with the understanding of the necessity of a match between the task and the students’ knowledge levels. Findings indicated the positive trajectory between increased engaged time and learning.

**Berliner’s academic learning time.** Comprehensively comparing and contrasting some of the most influential works regarding effective instructional time, Berliner (1990) defined academic learning time as “that part of allocated time in a subject-matter area …in which a student is engaged successfully in the activities or with the materials to which he or she is exposed, and in which those activities and
materials are related to educational outcomes that are valued” (para. 6). Further, findings from the works of John Carroll (1963) and Denham and Lieberman’s (1980) BTES were evident in his academic learning time model. His model included:

1. allocated time;
2. engaged time;
3. time on task.

Using the same definition for allocated time and engaged time as Denham and Lieberman (1980), Berliner (1990) added the concept of time on task, which was deep engagement in a task or activity. Further, Berliner identified four required attributes of academic learning time, which were:

- must be instructional in nature;
- the student must be engaged during a specified time period;
- the instruction must be appropriate for the student;
- the content and outcome measures must be aligned.

In addition, Berliner defined other types of time that could be observed, borrowing two from Carroll (1962). The types of time were: transition time, waiting time, aptitude (how much time is needed to complete a task), perseverance (how much time a student is willing to spend on a task), and pace (amount of content covered during a time period).

*Gettinger and Seibert’s academic learning time.* After models from Carroll (1962) Denham and Lieberman (1980) and Berliner (1990) emerged, Gettinger and
Seibert (2002) used those as a basis for determining their definition of academic learning time, which was “the portion of instructional time allocated to a content area during which students are actively and productively engaged in learning” (p. 2). Gettinger and Seibert’s model of academic learning time included four components:

1. allocated time;
2. instructional time;
3. engaged time;
4. successful and productive learning time.

Allocated time referred to the time allotted for tasks. Instructional time represented the quantity of the allocated time that was actually spent on instruction. Engaged time represented the proportion of the instruction time the students were engaged in learning. Successful and productive learning time referred to the time in which students were deeply engaged in a task, at the appropriate level, and experiencing success.

Summary. The four models as presented by Carroll (1962), Denham and Lieberman (1980), Berliner (1990), and Gettinger and Seibert (2002) served as the core for subsequent representations of academic learning time. The most fundamental summation of their work was there must be time allotted for instruction, and the amount of time students spend deeply engaged in the instructional task was their academic learning time. Moreover, instructional quality, instructional task quality, and task appropriateness were all key aspects of effective academic learning time.
Effectiveness of Time in the Classroom

Research involving the relationship between time and learning began to make a more prominent stance after the models involving academic learning time were published. In a study by Karweit and Slavin (1981), the consequences of using alternative measures of time and achievement were studied. The researchers used an observational study to examine 18 elementary school classes from four schools within rural Maryland. Six students (three boys scoring high, medium, and low and three girls scoring high, medium, and low) in each class were selected based on their Comprehensive Test of Basic Skills (CTBS) scores. Four measures of time were used: school time, actual instruction time, engaged time, and engaged rate. As the students were observed for at least 10 days each in the areas of classroom activity, child’s response, and content of the lesson, data showed there were inconsistent findings for time on task because students need different times to master tasks. Another finding reported was that how much time a student should spend in learning depends somewhat on how much time the student needs to master the task. In addition, engaged time and engaged rate (the proportion of engaged time to total instruction time) had a positive and significant effect on scores. Stated by Karweit and Slavin (1981), “…time measures seem to have the greatest impact when both achievement and time variables are chosen to match the activities of the actual instruction day” (p. 170).

Similar to Karweit and Slavin’s (1981) study, Getttinger (1984) found that “spending less time than needed in learning has a direct negative effect on
achievement” (p. 627). Her research involved 171 fourth and fifth-grade students and was designed to simulate the Carroll Model. Using the subjects of reading and spelling, tasks and trials were designed to measure TTL (time it takes to learn) and TSL (time spent learning) to 100% mastery. From the trials, the TTL measured the actual number of trials needed to learn the task. Alternately, the same trials were conducted to measure TSL, with the exception that the students self-monitored the number of trials they deemed necessary. TTL contributed more to achievement than that of TSL, thus supporting the Carroll Model. Her study demonstrated the need for adequate time to be spent on learning tasks to maximize the impact.

Approximately three decades of research with a relationship between time and learning were examined by Aronson, Zimmerman, and Carlos (1999). Through their analysis, several trends emerged, bearing striking similarities with research in more recent years. One finding was that academic learning time (aligned with student readiness) had the most impact on achievement (Abadzi, 2001; Aronson, Zimmerman, & Carlos, 1999; Brown, Rocha, Sharkey & Hadley, 2005; Farbman, 2015; Gromada & Shewbridge, 2016; Hanushek, 2015; Jez & Wassmer, 2015; Joyner, Molina, Beckwith, & Williams, 2011; Lavy, 2010; Rivkin & Schiman, 2013). Further, the researchers found that time is critical, but by itself has little impact on student performance; thus, quality is key. In fact, “it is the quality of education time that is the critical determinant of how much students will learn” (Aronson et al., 1999, p. 13). Another finding was in schools with well-utilized time with a high level of academic learning time, extending the school day or school year yielded positive
outcomes (Brown et al., 2005; Farbman, 2015; Lavy, 2010; Rivkin & Shiman, 2013; Scheerens, Henriks, Luyten, Sleegers, & Glas, 2013; Silva, 2007); the opposite was also true. Extending the school day or school year in schools with poorly-utilized time, with a low level of academic learning time, yielded little to no progress. Thus, reiterating a common throughout much of the research, quality is imperative in relation to quantity.

Over a decade later, another analysis of studies was conducted by Joyner, Molina, Beckwith, and Williams (2011). They searched for literature regarding the impact of class time on student achievement, limiting the studies to 2001 to 2011. As a method for acquiring the studies, scholarly search engines such as EBSCO, ERIC, PsychINFO, and Wilson’s database were used. After the first studies retrieved were analyzed, several studies prior to 2001 were repeatedly cited. Because of the significance of the older foundational studies, they were included in the research. In all, the predominant underlying theme was that the amount of instructional time was not as important as how the time was spent. This finding reiterated the earlier work of Aronson et al. (1999).

The same results were found from Lavy (2010) in his international study involving Organization for Economic Co-operation and Development (OECD) countries in an investigation of instructional time between subjects. When considering Program for International Student Assessment (PISA) scores for 15-16-year-old students from these countries, additional instruction time consistently had a positive effect on test scores. In the less developed countries, the impact of the
additional instruction time was much lower; just half of that of developed countries. Hence, the significance of productive instructional time. The substantial gap between constructive instructional time in more developed and less developed countries suggested productivity could be significantly improved in poorer countries.

Six years later, an additional study by Gromada and Shewbridge (2016) with OEDC countries focused on the effective use of allocated instruction time between the respective countries, examining regular lessons at school, summer and after school programs, and extracurricular activities. The result echoed the common theme that quality allocated time made a substantial difference. Further, the significant gaps between the amount of allocated time and the amount of engaged time were proportional to the improvements in performance; increases simply in allocated time did not yield substantial progression. An increase in allocated time must be accompanied by an increase in the effectiveness of the time to produce improvements in performance.

**Extended school days.** While research has been conducted on increasing school time during the day, other studies have focused on the effectiveness of extended school days or school years. Effective usage of instructional time can assist our most struggling learners and those students who are considered at-risk. In a study by Jez and Wassmer (2013), the impact of the number of instructional minutes in an academic year and school standardized test scores. The learning time of California elementary school students’ was examined for the school year 2005-2006. By adding 15 additional minutes per day, the researchers determined that this directly resulted in
an overall 1% increase in assessment scores, and a 1.5% increase for disadvantaged students. In addition, the most credentialed and effective teachers yielded a gain of seven to eight percentage points, thus substantiating teacher quality and the effective use of instructional time can make a tremendous impact. Noteworthy, the researchers cautioned that while rigorous, empirical evidence demonstrated that additional instructional time was effective, they were “not able to study what schools did during those instructional minutes” (p. 303). Similarly, Brown, Rocha, Sharkey, and Hadley (2005) state that students are in need of more learning time and “it is not enough to extend educational time; we must use the time better” (p. v).

Adding minutes to the school day was only one method by which time could be increased and its effects studied. Extended time could be categorized in different ways. Scheerens, Henriks, Luyten, Sleegers, and Glas (2013) conducted a meta-analysis of studies from 1985-2011 regarding the effect of time in three components: in school, homework, and extended school day. When considering academic learning time, Scheerens et al. used the term “gross” for allocated time, “net” for exposed time for instruction that is proportional to management tasks, and “time on task,” where students are engaged in the instructional task. Thirty-one studies met the criteria set for the meta-analysis of the effect of time at school, and the researchers were only able to use 12 of the 31 studies for a quantitative analysis of the effect sizes. Thus, the number of studies used was somewhat limited. The results, surprisingly, to the researchers, indicated the “net” instructional time appeared to have less positive effects on student achievement than the “gross” allocated time. However, most
important, the “time on task” had the greatest percentage of positive effect on achievement. With regard to extended learning time, which could include extended school days, extended school year, and tutoring, Scheerens et al. found insufficient information to make a conclusion; there were limited studies, and of those, as many positive effects as negative ones were found.

Instead of only looking at the effects of the amount of instructional time on student performance, considering its effects in relation to multiple aspects could present a more comprehensive view. Rivkin and Shiman (2013) conducted empirical research using panel data methods, investigating the effects of instructional time in 2009 PISA data. This study offered a broader view of the effects of time by being able to isolate the areas of school and teacher quality, school climate, and student ability over multiple subjects. At the conclusion of their study, Rivkin and Schiman found “…the benefit of additional instructional time appears to vary with the quality of the classroom environment” (p. 25). In fact, the researchers found that schools with ineffective classroom environments would see little or no benefit from adding instructional time, and adding time in this situation could degrade the quality more and at a much higher rate for students subjected to that type of environment. In all, teacher quality is an important variable when considering the effectiveness of additional time.

Similarly, Cattoneo, Oggenfuss, and Wolter (2016) also used PISA scores. In their study of 11,433 ninth graders in Switzerland receiving an additional hour of instruction per day, there was a positive impact on PISA scores but the effectiveness
percentage was lower than expected. Cattoneo et al. stated that the marginal gain must be weighed against other factors as well; not just time itself.

In what was seemingly a more limited view of the relationship between time and student achievement, Farbman (2015) conducted a study involving only charter schools in New York, and determined that the additional 300 hours of instruction time (and a 7-hour day) than in conventional schools was one of the strongest predictors of high achievement. His methods were based on the Carroll Model; however, Farbman only considered the time component, not time jointly with achievement. He stated two reasons for the increase in the number of hours being of benefit in highly effective schools (1) low socioeconomic status students need more time; and (2) it simply provides more classroom time. Further, Farbman added that the additional class time had a positive effect “assuming reasonably effective instruction” (p. 4). He also stated that high performing schools have an integrated series of practices to maximize instruction time and that according to a large body of research, “…[the] quality of instruction is perhaps the most significant in-school factor contributing to student achievement” (p. 5).

**Loss of instructional time.** Because Kentucky has eliminated the early, “fixed” testing timespan as a direct result of the legislative language in Senate Bill 1 (2009) and mandated the state testing window be the last 14 scheduled school days of the year, the studies seeking an answer to the question, “Do students perform better on statewide assessments in years in which they have more school days to prepare for
the tests?” is not really applicable. However, the data collected in the some of the following studies have other implications that are just as pertinent.

A study conducted by Marcotte and Hemelt (2007) posed the former question, considering whether unscheduled school closings impacted student performance. A panel was constructed from school-level data as gathered from the Maryland State Department of Education. Data on unscheduled school closings from 1993-2005 were merged and estimate models used to examine the relationship of the closures to student performance on the math and reading tests administered to students as part of their state testing. Because the Maryland state testing window fell earlier in the spring (March and April), the findings were to consider the impact of lost days before state testing, which was made up at the end of the year after the assessment had been given. Marcotte and Hemelt found that for each day missed before testing, the assessment pass rate for both reading and math was 0.5 percentage point less; thus, if the third graders missed ten days before testing, 5% less of the students would pass the assessment. Too, fifth and eighth-grade student data showed an impact, but it was smaller than that of third graders. The fifth had a larger impact than eighth, but eighth grade showed only half of the impact of third grade. Further, socioeconomically disadvantaged students showed a large discrepancy in the area of reading. Additionally, the researchers found that closures early in the school year did not make a consistent, significant impact as opposed to months closer to testing. In fact, lost days in February made the most consistent, negative impact.
Pertinent to considering the impact of time lost before testing, and similar to Marcotte and Hemelt’s (2007) findings, Marcotte and Hansen (2010) combined their separate research studies and found very comparable results. In the area of math, “the percentage of students passing the math assessment falls [fell] by about one-third to one-half of a percentage point for each day school is [was] closed” (p. 55). Further, the researchers confirmed an increase in instructional time could have large effects on learning gains; however, they were inconclusive of generalizing the results of the increased time after state testing. As an additional interesting point regarding school time, Marcotte and Hansen noted that state and federal accountability systems do not account for the time students actually spend in school when measuring gains; thus, there is no way to truly determine how efficiently schools are educating students.

The impact of the loss of school time in relation to a “fixed” state testing window was further studied in three states: Maryland, Colorado, and Minnesota. Related to Marcotte and Hemelt’s (2007) findings and Marcotte and Hansen’s (2010) findings, Hansen (2011) reported his quasi-experiment on the impact of weather cancellation days on student performance using 3rd, 5th, and 8th grade students from Maryland, 8th grade students from Colorado, and 3rd and 5th grade students from Minnesota. All three studies found similar results and Hansen (2011) stated there was “evidence consistent with increased instructional days improving student performance” (p. 24). Similarly, as well, Bellei (2009) found a statistically significant positive effect on achievement scores when studying the effect on 9th and
10th graders moving from a half-day school program to a full-day school program for the same courses.

Broadening the scope of research and extending the perspective to include student achievement according to seasons (school year and summer), Alexander, Entwisle, and Olson (2001) conducted a study following first-grade students’ California Achievement Test (CAT) scores for five years. The study took place in a low-income, urban area of Baltimore, using 20 schools of varying ethnicity makeup and socioeconomic status (SES) representation. While conducting the initial study regarding student achievement and seasons, the researchers decided to add a variable and look at how gains differ by seasons according to student backgrounds.

When following the progressing of the five years of CAT data and analyzing it by season, Alexander et al. (2001) found that lower SES and higher SES students both progressed on a similar trajectory during the school year; however, during the summer significant gaps began to form. In fact, lower SES students began the school year in the fall at approximately the same point as their spring score the year before, showing a tremendous regression, especially in the quantitative portion of the assessment. In contrast, higher SES students began the school year in the fall ahead of where they scored the same year in the spring, furthering the already significant gap between the higher and lower SES students (Alexander, Entwisle, & Olson, 2001; Cooper, Valentine, Charlton, & Melson, 2003).

School closings, teacher absences, and student absences can have an effect on student achievement whether in the United States or in other countries. Abadzi’s
(2007) study considered the amount of instructional time lost in four countries due to closings, teacher absences and student absences: Ghana, Tunisia, Morocco, and the Brazilian state of Pernambuco. Based on a methodology developed in 2003 and then carried out in 2004-2005, one should be cautioned about the results due to using very limited time for observations and then projecting and generalizing the results to the remainder of the school year. The finding, however, was that the amount learned was generally proportional to the time spent in learning. Further, compared to student absences, teacher absences, and school closings, the observations that were conducted indicated the most significant time lost was inside the classroom.

Studies had been conducted regarding the effect of weather-related closings on student achievement; however, an alternative perspective of considering the types of absences and their corresponding effect would be profound. Somewhat refuting the findings of his predecessors, Goodman (2014) examined the role that school attendance played in student achievement, and investigated attendance rates as a determinant of instructional time. More specific, the dichotomous study sought to (1) investigate if snowfall (when present, but not enough to cancel school) made an impact on student absences and, if so, (2) compare the impact of snow-related student absences and absences from whole-school cancellations on student achievement.

Student level data on attendance and achievement for 2003-2010 were obtained from the Massachusetts Department of Elementary and Secondary Education for grades three through eight and grade ten. To reiterate, Goodman (2014) sought to look at unexpected school closure absences related to snowfall and
student absences that could be related to snowfall when snow was present but school was not closed. By utilizing multiple weather instruments to credibly identify previous weather patterns in relation to snowfall, Goodman found that student absences increased when snowfall was present but school was not canceled.

Further, these absences made more of an impact on student achievement than absences from whole-school cancellations. Stated Goodman (2014), “the evidence presented [here] shows that the impact of lost instructional time depends on the particular form of the time lost. Student absences are strongly related to achievement, particularly in math…school closures show little relationship to achievement” (p. 17). Seemingly, teachers are better equipped to provide a continuity of instruction by postponing a lesson or modifying a lesson when the entire class is absent because of a school cancellation. However, noted Goodman, “schools and teachers may be underinvesting in strategies” (p. 20) when considering the impact of random student absences on the pace of classroom instruction.

Summary

Academic learning time has been identified to be a substantial predictor of student achievement. Four of the models, as formerly identified, served as a basis for countless studies, which yielded very similar results. Considering the variations in the types of time, allocated, instructional, and engagement, the time where the students are the most deeply engaged with the instructional task consistently produced the greatest impact on achievement. Further, as a statement to generalize the findings regarding academic learning time, the higher the percentage of student
time deeply engaged with an appropriate learning task, the more substantial the impact on student achievement.

The studies concerning the effect of additional school days or school time showed similar results in that the studies found a positive correlation between additional time and student achievement; however, every study identified (in some capacity) the direct correlation to the effective use of the additional time and the necessity of teacher quality. Although the predominant focus of these studies was not academic learning time, per se, as with the former studies in this section, there was either a direct or indirect association as noted by the researchers.

The impact on lost school or instructional time showed a correlation between days missed and the negative impact on achievement. Although all students were impacted by a loss of time, younger students and lower SES students seemed to indicate the greatest significance. As well, student and teacher absences made a negative impact on student achievement. In particular, student absences were shown to have more impact than whole-school closures on student performance.

“Snowbound” Programs

Although the following articles cannot be classified as rigorous research, they lend a perspective to “snowbound” programs that are becoming more prevalent in the eastern portion of the United States, including the state of Kentucky.

Milman (2014), an educator at The George Washington University, wrote an article from the perspective of an online educator [herself] of using an online medium as a means of implementing e-learning days in lieu of school cancellations. In
Milman’s experience, she stated she was “...very concerned about online education being thrust upon learners, particularly those for whom it is not developmentally, motivationally, and/or technologically appropriate, and with no input or preparation for how to be successful online learners or what to expect from online assignments” (p. 46). Further, Table 3 lists the suggested steps to prepare for e-learning days.

Within Milman’s list, all items advocate a proactive approach when considering e-learning days. Further, e-learning days should be meaningful rather than full of “busy work” and disconnected from classroom instruction.

Table 3

Steps School Leaders Can Take to Help Prepare Teachers for E-Learning Days

- Be prepared
- Develop a plan
- Be flexible
- Be available
- Educate all stakeholders about timing of communications, expectations, etc.
- Acknowledge the digital divide
- Weigh impact on parents/guardians
- Assign developmentally appropriate school work
- Practice assigning work online both in school and at home
- Assess and reflect on how e-learning worked
- Develop alternatives for students with limited or no access at home
- Get stakeholder buy-in
- Consider kids will be kids
- Provide teachers with professional development


A brief account of the use of e-learning days in Alabama and Ohio was related in an article by McIntyre (2016). Additionally, she mentioned other states who were
implementing these days such as Kentucky, West Virginia, and New Jersey. According to McIntyre, when Susan Patrick, president of the International Association for K-12 Online Learning, was interviewed regarding the effectiveness of e-learning days, she mentioned a 2006 study in Singapore where one week annually was devoted to remote learning with success. She stated, too, there are few rigorous studies about the effectiveness of K-12 online learning which have been published.

E-learning days have been fraught with limited research, relying on previous research that has some correlation, but certainly not congruency, with the days as implemented in several states. Similarly, another article written to recount e-learning days in a variety of states relayed limited research about this topic. Morones (2014), stated results from the studies of Goodman (2014) and Marcotte and Hemelt (2007). According to Morones, Goodman’s study found that snow cancellation days did not make as much of an impact on student achievement as other student absences and contrasted this with Marcotte and Hemelt’s study stating in years where ten school days would be missed, five percent fewer third-graders would pass the standardized state assessment in reading and math.

In Ohio, 95 of 614 school district submitted plans for e-learning days. The state required teachers to post lessons and assignments online for students to complete during the school day. As well, students had two weeks to make up the assignments. Students without Internet access were given “Blizzard Bags,” which contained hard copies of learning materials.
In Michigan, Morones (2014) explained a calculus teacher’s method for using e-learning days. The calculus teacher sent messages to students regarding where to find the day’s assignment. Too, this teacher used self-made videos of him teaching lessons and working out sample problems. Further, this district provides fourth through twelfth-grade students with Chromebooks and kindergarten through third-grade students with iPads. Moodle and Google Applications are just two of the technological mediums that are used during e-learning days.

Morones (2014) noted that two private schools in West Virginia were using e-learning days as well. One of the schools used e-mail to field questions about the assignments (which were due by the end of the school day), and another used an online learning management system which worked like an academic social network. This allowed students to access resources and provided opportunities for interaction among teachers and classmates.

Finally, a webinar was conducted to publicize the implementation of non-traditional instruction days in Kentucky. Flory (2016), from the Appalachian Regional Education Lab (REL), served as the delegate of information during the session. At the beginning of the slideshow, Flory noted there is limited research on “snowbound” programs. Further, the non-traditional instruction day program was explained as a program that encouraged “anytime, anywhere learning,” (slide 12) and was conducted on days where there are school-wide cancellations.

The goals of the program were to provide learning continuity and to reduce learning loss, and applying districts must explain how instruction will continue for all
students. Districts that were approved, through an application process, submitted
documentation to the Kentucky Department of Education after program
implementation. Beginning with a “Snowbound” pilot in 2009, legislation was
changed in 2014 which deemed all districts eligible in Kentucky. KRS 158.070
section 9 explained the statute concerning non-traditional instruction days, and further
stated, “the district’s plan shall demonstrate how teaching and learning in the district
will not be negatively impacted….” (slide 14). Flory reported that in 2014-2015, 13
districts participated and in 2015-2016, 44 districts participated. In addition,
Lawrence County, Jessamine County, and Corbin Independent districts were
highlighted as to their program implementation.

**Summary.** Although “snowbound” programs have a very limited research
base, it is important to consider the increasing prevalence of their presence in current
literature and other mediums. Many states and districts are continuing this movement
with very little mention of a theoretical base. Too, with legislative language such as
that of KRS 158.070 section 9, it appears as though the phrase “will not be negatively
impacted” will become the new topic, redefining once common phrasing such as,
“will show effectiveness.”
CHAPTER THREE

Methodology

The purpose of this study was to investigate the establishment of the non-traditional instruction day program in the state of Kentucky and present a timeline of its progress during from 2009 through 2017. Those influencing the policy surrounding the non-traditional instruction days, as well as participating and non-participating districts, were surveyed or interviewed so as to begin to more comprehensively understand the reasoning behind the steady increase of growth of these days as well as the reasoning some districts have chosen not to participate.

The research questions for this study were:

What is the status of non-traditional instruction day implementation in the state of Kentucky?

What are the rationales offered by both participating and non-participating districts, as well as those involved with the program at the state level?

Research Design

The research design of this study was predominantly qualitative with regard to the interviews and survey, but did include an element of simple quantitative measures within the survey. When considering the reasoning behind choosing the methodological approach of using a mixed methods design with qualitative measures as the foundational aspect, it is noteworthy that Creswell (2007) stated that qualitative research is conducted when a problem or issue needs to be explored. Further, this
research is needed “to study a group or population, identify variables that can then be measured, or hear silenced voices” (p. 40).

According to Silverman (2016), qualitative research is (1) a “theoretically-driven enterprise” (p. 3); (2) a means to enhance quantitative research in describing the how and why of phenomena; (3) about social practices as well as experience; and (4) “a credible, rigorous enterprise” (p. 3). Further, Denzin and Lincoln, in the Handbook of Qualitative Research (as cited in Creswell, 2007), encompassed the metamorphosis and many iterations of qualitative inquiry over time in their definition:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive materials practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including fieldnotes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. (p. 36)

This research, at its core, seemed to almost model that of a Socratic Seminar; always in pursuit of a higher understanding and further knowledge. Qualitative research is a critical component for explaining the intricacies behind numbers as it seeks to further explicate a deeper thought and reasoning; a way of piecing together a puzzle or
weaving an intricate tapestry. Those involved with qualitative research choose topics that are “emotion-laden, close to people, and practical” (Creswell, 2007, p. 43). Moreover, Creswell noted that qualitative researchers collect extensive data from a variety of sources and then begin identifying themes, categories and groups, traveling from generalities to “multiple levels of abstraction” (p. 43) so as to find the interrelated components.

As a simplistic example, knowing how many people chose to see a particular movie contributes one source of data and a limited view. In contrast, delving into the reasons people chose to see the movie (and, alternatively, the reasons people chose not to see the movie) offers a much broader perspective; one that lends itself to further investigation as to the why behind the what.

Further, survey research is defined by Check and Schutt (2012) as “the collection of information from a sample of individuals through their responses to questions” (p. 160). Survey research was the core method of data collection for this study. As well, simple quantitative data analysis was used as statistical techniques to describe and analyze variation in quantitative measures (Check & Schutt, 2012). Averages, percentages, and graphic representations of data were used, as quantitative data were presented in different ways.

The research design was congruent with the research problems posed in that the survey allowed the subjects an opportunity to express views in their own words instead of only using a quantitative measure such as a Likert scale or some type of multiple choice item. Having the flexibility to express views without the limitations
of a number or qualifier gave the answer authenticity and explored reasons beyond a simple “yes” or “no” answer. Again, the *why* behind the *what*. Because the Kentucky Department of Education itself does not have an absolute means of quantifying the effectiveness of the non-traditional instruction day program, the methods used for this study, which are predominantly dependent on qualitative measures, were suitable to achieve the research questions posed.

**Instrument**

For this study, an adaptive, electronic survey and electronic interview were used to gather responses from Kentucky state and district personnel. The researcher analyzed, categorized, and compared the responses of the participants.

The survey was developed with the intention of ascertaining data to more accurately identify the status of the implementation of non-traditional instruction days as well as give subjects the opportunity to provide a rationale as to the main reason for participating or not participating (in the non-traditional instruction day program). The survey contained 19 items total; however, since the survey was adaptive based on how the subjects answered, the number of items per respondent was less. For example, all subjects had to answer the first three items: informed consent, student population, and how many years non-traditional instruction days had been implemented. For districts that responded, “Do not currently use Non-Traditional Instruction Days” for item number three, the survey automatically adapted and directed them to question seventeen.
For subjects responding to the survey that were participants in the non-traditional instruction day program, the following topics were addressed in their survey component:

- informed consent;
- student population;
- number of years of non-traditional instruction day implementation;
- average number of days the district used non-instructional days over the past two years;
- method used for non-traditional instruction days;
- technology platforms used;
- student access to the Internet on non-traditional instruction days;
- participation of students without Internet access on non-traditional instruction days;
- increase or decrease of operational costs due to the implementation;
- amount of cost (decrease or increase) and corresponding areas;
- teacher participation rate for the previous year;
- student participation rate for the previous year;
- determination of the effectiveness of non-traditional instruction days;
- reason for using non-traditional instruction days as opposed to making up time traditionally;
- the main reason for implementing non-traditional instruction days.
For subjects responding to the survey that were not participants in the non-traditional instruction day program, the following topics are addressed in their survey component:

- informed consent;
- student population;
- number of years of non-traditional instruction day implementation;
- possible participation in the non-traditional instruction day program in 2014-2015 or 2015-2016;
- the main reason for not using non-traditional instruction days.

The e-mails which were sent to the DPPs and the non-traditional instruction day district contacts can be found in Appendix A. The survey items can be found in Appendix B.

An interview instrument was sent to three individuals who have an administrative role with the non-traditional instruction day program and who were the ones most likely to influence policymakers. The interview instrument was developed with the premise of gaining insight into the perceived effectiveness of non-traditional instruction days as well as the process of determining this. In addition, the instrument asked for the subject to consider the projected impact of the program in the next five to ten years and to recount the most pertinent aspects of data that have been collected over the past three years. A copy of the e-mail (which also contains the interview
questions) sent to the interview subjects can be found in Appendix C, the informed consent in Appendix D.

**Subject Selection**

Every school district in the state of Kentucky has a Director of Pupil Personnel (DPP). Further, districts participating in the non-traditional instruction day program also have a designated contact (Kentucky Department of Education Division of Innovation and Partner Engagement, 2017), which may or may not be the DPP. All 173 districts received an e-mail which was sent to the both the main contact for the non-traditional instruction day program and the DPP, requesting the main person over the non-traditional instruction day program complete a survey regarding questions about program implementation or non-implementation.

An electronic interview was sent to three people that were considered to be key personnel influencing policymakers in the area of non-traditional instruction days. The three people were determined because of their administrative role with non-traditional instruction days at the state level.

**Procedure**

The Non-Traditional Instruction Day survey link was sent via e-mail to the Director of Pupil Personnel or the main district contact for the non-traditional instruction day program for each of the 173 school districts. Since some districts had a DPP as well as an identified non-traditional instruction day contact, the e-mail specified for only the main contact to complete the survey. This request was made to ensure the data would not be skewed with a district completing two surveys. A
second e-mail was sent to the original recipients clarifying the request for both participating and non-participating districts to complete the survey. By using Google Forms as the survey medium, the researcher was able to adjust the settings, allowing for one survey submission per Internet Protocol (IP) address. Additionally, the survey was available and live to collect responses for a period of one week. At the conclusion of the survey response timeline, the researcher turned off the survey link.

Upon the closing of the survey window, the researcher used the “collect responses” tab, in Google Forms, to view the disaggregated data collected from the subjects. Data were transposed into an Excel spreadsheet for further analysis, and the qualitative data were grouped and analyzed for trends. In addition, the ATLAS.ti 8 program was used for qualitative analysis of all short answer survey questions. ATLAS.ti 8 provided computer assisted qualitative data analysis in the areas of identifying keywords in the responses, considering the frequency of the words used, coding responses, and grouping responses by code and by theme.

An electronic interview was sent to three people that were considered to be key personnel influencing policymakers in the area of non-traditional instruction days. The three people were determined because of their administrative role with non-traditional instruction days at the state level. Upon receipt of their interview answers, follow-up questions were sent to the subjects as needed. Responses from the interviews were collected, grouped, and analyzed for key points. Also, responses from the interview were compared with data from the survey to see if any trends emerged.
Results were analyzed using a computer-assisted qualitative data analysis tool (ATLAS.ti 8) as a part of thematic content analysis, which is a derivative of grounded theory analysis, founded by Glaser and Strauss in 1967. According to Opie’s work in 2004 (as cited in Chong & Yeo, 2015), “grounded theory is a process of collecting qualitative data and undertaking data analysis to generate categories (a theory) to explain a phenomenon of interest” (p. 258). Meaning, new theories generated are “grounded” in data. Similarly, the core of thematic content analysis is an inductive approach, that is, no predetermined formula or structure for analyzing the data. Flexibility to allow the data to lead the researcher propagates more of an openness for data to lead emerging trends and phenomena versus a strict process and procedure bound by limits. The steps for using this approach are:

1. summarize themes (code);
2. collect all words and phrases – look for categories that can be condensed or grouped;
3. sort through the remainder of the data and put it into one of the categories.

Limitations

Limitations are inherent in any study, this being no exception. The limitations of this study were as follows:

- The sample population was limited to districts in the state of Kentucky.
- Data from the interview instrument only came from one individual although three were sent out.
• Individuals with biases regarding non-traditional instruction days could have skewed the answers in the survey or interview.

• Since there is not a prior research base on the topic of non-traditional instruction days, this study served as exploratory research versus explanatory research.

In addition, the thematic content analysis used to analyze the qualitative data is subjective in nature, lending itself to scrutiny among scholars and practitioners. However, the methodology outweighs the risk due to new categories and theories that can emerge as part of the process.

Finally, simple quantitative analysis was used to report quantifiable data collected via the survey, using averages, percentages, and graphic representations when needed. Quantitative analysis was also used in conjunction with qualitative analysis procedures in word count and other measurable data points.
CHAPTER FOUR

Results

The purpose of this study was to recount the beginning of the non-traditional instruction day program in the state of Kentucky and present the status of its progress since the implementation six years ago. Those influencing the policy surrounding the non-traditional instruction days, as well as participating districts and non-participating districts, were surveyed or interviewed so as to begin to more comprehensively understand the reasoning behind the steady increase of the growth of these days as well as the reasoning some districts have chosen not to participate.

This study sought to answer the following research questions surrounding this capstone project:

*What is the status of non-traditional instruction day implementation in the state of Kentucky?*

*What are the rationales offered by both participating and non-participating districts, as well as those involved with the program at the state level?*

Survey

The dichotomous components of this study included a survey and interview instrument. The subjects were the main non-traditional instruction day program contacts in each district. The survey was sent to the Director of Pupil Personnel in each public school districts in Kentucky. In addition the survey was sent by way of mail to the 72 representatives identified on the Kentucky Department of Education website as being the non-traditional instruction day program contact. Included in the
e-mail were directions for only the main person overseeing the non-traditional
instruction day program in the district to complete the survey [whether it was the
Director of Pupil Personnel or the contact from the Kentucky Department of
Education webpage], allowing for only one respondent per district. A second
correspondence was sent to clarify that both participating and non-participating
districts were requested to complete the survey. A total of 104 surveys were
submitted. Of these, only one person chose to not participate by selecting “no” on the
informed consent page. As a result, the 103 respondents became the subjects for this
study, which is a total of 60% of the public school districts in Kentucky.

**Student population.** Of the 103 districts responding, 85.5% indicated their
student population was 4,000 or less. Further, there was a fairly even distribution
between districts reporting in increments of 1,000; from less than 1,000 students to
4,000 students, with the highest number of districts (25) reporting their student
population was 2,001 to 3,000 (see Table 4). Only five districts reported having more
than 8,000 students.
Table 4

2016-2017 Student Population for District Survey Respondents (n=103)

<table>
<thead>
<tr>
<th>Student Population</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 1,000</td>
<td>20</td>
<td>19.4%</td>
</tr>
<tr>
<td>1,000 to 2,000</td>
<td>22</td>
<td>21.4%</td>
</tr>
<tr>
<td>2,001 to 3,000</td>
<td>25</td>
<td>24.3%</td>
</tr>
<tr>
<td>3,001 to 4,000</td>
<td>19</td>
<td>18.4%</td>
</tr>
<tr>
<td>4,001 to 5,000</td>
<td>8</td>
<td>7.8%</td>
</tr>
<tr>
<td>5,001 to 6,000</td>
<td>1</td>
<td>1.0%</td>
</tr>
<tr>
<td>6,001 to 7,000</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>7,001 to 8,000</td>
<td>3</td>
<td>2.9%</td>
</tr>
<tr>
<td>more than 8,000</td>
<td>5</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Non-traditional instruction day implementation. When asked about the number of years each district had implemented non-traditional instruction days, 48% of the subjects reported their district did not currently participate, and 24% of the subjects reported one year of implementation (see Figure 1). This representation was similar to the growth in the number of districts participating in the non-traditional instruction day program as identified earlier in this study (see Table 1).

The former item regarding the number of years of participation in the non-traditional instruction day program was an adaptive question on the survey. That is, depending on the answer given, the subject was directed to a specific question within
the survey. In this case, subjects answering “Do not currently use non-traditional instruction days” was directed to a latter part of the survey which will be conveyed in subsequent sections. Those answering “1,” “2,” or “3” for the number of implementation years proceeded to the items in the survey regarding the use of non-traditional instruction days. This included 57 districts.

![Figure 1](image)

**Figure 1.** Graph depicting the number of years of non-traditional instruction day program implementation for reporting districts (n=103).

**Average number of NTI days used.** The next item in the survey asked the average number of non-traditional instruction days that were used in each respective district for the past two years. The subjects could choose numbers between one and ten, with “other” as an additional category (see Figure 2). According to the individual
survey response forms on Google Forms, the respondents selecting “other” did so to signify zero days used, with the exception of three, which identified this being the first year of implementation and using one day each. As a result, 16 respondents identified zero days used. Since “0” was not an answer choice, “Other” did provide an element of ambiguity that could have propagated some confusion. Aside from the 19 out of 57 subjects (33%) selecting “Other”, the largest average was four days used, which was selected by 8 out of 57 subjects (14%), followed by one day, which was selected by 4 out of the 57 subjects (12%). The choice, “one day” is shown in Figure 2 as selected by four districts; however, three additional respondents identified one day used as part of the “Other” category, making the total seven.
Figure 2. Graph depicting the average number of days districts used non-traditional instruction days over the past two years [2014-2015 and 2015-2016]. Based on the analysis of individual survey forms, the numerical breakdown from the “Other” columns showed 16 respondents identified this as “0,” and three respondents identified this as “1.” The true number of districts identifying “1” as the average number of NTI days used was 7.

**Method used for NTI days.** All subjects reported using technology as a basis for non-traditional instruction days. The vast majority of the 54 subjects (94.7%), indicated that a hybrid method was used. The remaining 3 subjects (5.3%) selected technology only (see Figure 3). None of the subjects selected “Paper/Pencil-based” or “Other.”
Technology platform use. Since all subjects reported methods for implementation using technology, the adaptive survey directed the 57 subjects to identify the technology platform used. Figure 4 shows results indicating multiple platforms are used, with a significant majority using Google Classroom (71.9%). In addition, Khan Academy, MobyMax, and Study Island each were selected by approximately one-third of the subjects. Of the list of possible technology platforms from which the subjects had to select, both teacher-driven (i.e. Google Classroom, Edmodo) and program-driven (i.e. MobyMax, Study Island) platforms indicated representation from the subjects. In addition, Table 5 shows that some districts used single technology platforms while others are used multiple ones.
Figure 4. Chart depicting the technology platforms used by districts for non-traditional instruction day implementation.
Table 5

*Number of Technology Platforms Used by Districts (n=57)*

<table>
<thead>
<tr>
<th>Technology Platforms</th>
<th>Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
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<tr>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note.* Technology platforms (n=12). District respondents (n=57).

**Students without Internet access.** All subjects indicated there were students without Internet access on non-traditional instruction days. When asked how these students participated in the program, subjects were given a space in which to type their extended response. So as to accurately analyze and account for the data, the researcher used ATLAS.ti 8 to search for keywords, consider word frequency, and code responses so as to look for themes. Analysis features within the program were used to view a visual representation of the frequency of the words used in the responses. From this initial view, the words emphasized were: students, packets,
paper, paper/pencil, complete, work, access, internet, copies, assignments, school, and days. The main words were: students, packets, and paper. Using the ATLAS.ti 8 program, the words were then transferred to “typewriter view” where they were organized according to the frequency of usage and represented accordingly by the font size (the more frequent the word usage in the responses, the larger the word appeared).

Further, the word frequency usage was determined when a threshold of 10 was applied to the list using the ATLAS.ti 8 program. This feature allowed the researcher to only view words used 10 times or more in the responses. In addition, after using the word list analyzer in ATLAS.ti 8, words that may not have been counted in the initial analysis (i.e. the plural of a word) were combined to secure a more accurate word frequency count (see Figure 5). The total number of the word count within this threshold (140) accounted for 32% of the total words (438) in the subjects’ responses. This count was then organized from the most frequent word used to the least. From the charted responses, the words “paper/pencil” and “packet” appeared the most frequent in the subjects’ responses. Further, the remainder of the words, when considered in aggregate, began to thematically present “pencil/paper [and] packet work sent home [with] students [to] complete.”

After analyzing keywords within the responses, these words were saved as codes (within the ATLAS.ti 8 program) and applied to the responses in aggregate. Fifty-four (95%) of the 57 total comments included one or more of the keywords. Further, 49 (91%) of these specifically named “paper,” “pencil,” and/or “packet” in
the responses. One response alluded to “folder assignments,” which could increase the count by one if interpreted to be packet assignments. Comments such as “paper packets are provided for all students that need them,” and “students are assigned paper packets” were representative of the comments provided by the subjects. Other comments provided an alternative perspective. One subject commented his or her district arranged for all students to participate by “giving [the] students the material required for snow learning on [a learning management system] in October,” and “students have between October and April to complete the assigned work.” Another respondent said, “[students]…have the opportunity to take a picture of all assignments on phones, tablets, etc,” and another commented his or her public library was available with free wi-fi in addition to students having “five days after the NTI day to make up the work.” A complete listing of comments providing by the subjects can be found in Appendix E.
Figure 5. Typewriter view in ATLAS.ti 8 showing organization of word frequency usage with a threshold of 10 applied. The words were from the responses given to the question “How do the students without Internet access participate in non-traditional instruction days?” Below the word frequency list the chart depicts the word count of each in the responses.

**District operational costs.** The next section of the survey focused on district operational costs associated with non-traditional instruction days. The vast majority of subjects (43) reported “No Change,” while eight reported decreased costs and six reported increased costs (see Figure 6). For those identifying an increase or decrease
in operational costs, the adaptive survey directed them to an open-ended question to explain how much the operational cost increased/decreased and in which area(s).

Figure 6. Graph depicting the change in district operational costs associated with non-traditional instruction days (n=57).

The summarized responses from subjects reporting an increase or a decrease in operational costs are shown in Table 6. Transportation and food service appeared on both lists. Responses indicated cost in both of these areas increased due to the district having to continue to pay salaries to employees in these areas, even during non-traditional instruction days, as well as no reimbursements from either area during this time; the cost decreased because of purchasing less food for food service and a savings on fuel for transportation. There are additional incidental costs for both
increased and decreased funding areas and some subjects indicated they did not know how much the district funding either increased or decreased.

Table 6

*Summarized Responses for District Operational Costs Associated with Non-Traditional Instruction Days*

<table>
<thead>
<tr>
<th>Increased</th>
<th>Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries for food service and transportation have to be paid on NTI days</td>
<td>Food costs [for purchasing food from food service]</td>
</tr>
<tr>
<td>Federal food service dollars cannot be claimed for reimbursement</td>
<td>Fuel cost [for transportation]</td>
</tr>
<tr>
<td>State transportation dollars cannot be claimed for reimbursement</td>
<td>Heating costs</td>
</tr>
<tr>
<td>Online, educational resources for students purchased</td>
<td>District Travel</td>
</tr>
<tr>
<td>Daycare was closed and did not receive funding</td>
<td>Transportation</td>
</tr>
<tr>
<td>Not sure of the exact amount</td>
<td>Substitutes</td>
</tr>
<tr>
<td></td>
<td>Not sure of the cost savings</td>
</tr>
</tbody>
</table>

*Note:* Increased (n=6) Decreased (n=8)

**Teacher and student participation rates.** The teacher and student participation rates were reported to be high for the 2015-2016 school year, as evidenced in Figure 7. Of note, 24 subjects reported their district did not participate in the non-traditional instruction day program last year, so participation data were reported for 33 districts. Teacher attendance fell between 91-95%, with the majority at 96-100%. Student participation fell between 86-100%. The majority was between 91-100%, with approximately half at 96-100%. Although the legislative language of
KRS 158.070 section 9 states there is not a minimum student and teacher participation rate required for participation in the non-traditional instruction day program, the reported participation rate was commensurate with a typical school day.

![Figure 7. Chart depicting teacher and student participation rates in 2015-2016 for the non-traditional instruction day program (n=57).](image)

**Determining the effectiveness of NTI days.** The next survey question addressed determining the effectiveness of non-traditional instruction days, even though a method of determining the effectiveness of these days has not been identified at the state level in Kentucky. Further, the language of KRS 158.070 section 9 does not identify measuring effectiveness, rather, it mandates districts ensure the days will not have a “negative impact.”
When first analyzing the subjects’ 57 responses, the researcher used the ATLAS.ti 8 program, as used previously, to accurately analyze data by searching for keywords, word frequencies, and coded responses so themes could be more readily identified. The analysis tools within the program first assisted in ascertaining the words used most frequently. Emphasized words included: student(s), work, participation, days, assignments, feedback, teacher(s), data, and survey. The main words were: student(s), work, participation, and assignments. Using the ATLAS.ti 8 program, the words were then transferred to “typewriter view” where they were organized according to the frequency of usage and represented accordingly by the font size (the more frequent the word usage in the responses, the larger the word appeared).

Figure 8 shows the word frequency usage when a threshold of 10 was applied to the list. This feature allowed the researcher to only view words used 10 times or more in the responses. In addition, after using the word list analyzer in ATLAS.ti 8, words that may not have been counted in the initial analysis (i.e. the plural of a word) were combined to secure a more accurate word frequency count. The total number of the word count within this threshold (81) accounted for 19% of the total words (431) in the subjects’ responses. This count was then organized from the most frequent word used to the least. From the charted responses, the words “student(s),” “work,” “participation,” and “assignments” appeared the most frequent in the subjects’ responses (see Figure 8). Further, the words, when considered in aggregate, began to thematically present “student work [and] participation [in] assignments.”
After analyzing keywords within the responses, the words were saved as codes (within the ATLAS.ti 8 program) and applied to the responses in aggregate. Fifty of the 57 (88%) total responses included the one or more of the keywords. Of those 50 responses, 37 (74%) included the words “work,” “participation,” and “assignments.” Subjects’ comments, such as “percent participation,” “teacher and student participation rates,” “work is evaluated,” and “student participation and feedback from assignments” were representative of the 37 responses. In addition, other comments provided further information and an alternate perspective. The word “feedback” was used in six comments like “feedback from surveys,” and “teacher, student, and parent feedback has been very positive.” As well, the word “input” was used as was “survey(s)” in comments such as “student input, staff input, [and] parent input will all be considered,” and “we survey parents, students, and staff each year to get feedback on our days.” A complete listing of comments provided by the subjects can be found in Appendix F.
SNOW DAY LEARNING: FIRST YEARS OF NTI

**Figure 8.** Typewriter view in ATLAS.ti 8 showing organization of word frequency usage with a threshold of 10 applied. The words were from the responses given to the question “How does/will your district determine if non-traditional instruction days have been effective for students?” Below the word frequency list the chart depicts the word count of each in the responses.

**Non-traditional instruction day usage versus traditional days.** The next survey question addressed determining why districts opted to use non-traditional instruction days instead of making up the time traditionally. The ATLAS.ti 8 program was again used to analyze the subjects’ responses. The tools within the program were initially used to consider the word frequency and obtain a visual representation of the words from the responses. This yielded several prominent words, including days, year, June, learning, NTI, instruction, weather, students, felt,
and district. The main words were: days, year, June, learning, instruction, and NTI.

As with previous responses to the survey questions, the words were then transferred to "typewriter view," within the ATLAS.ti 8 program, where they were organized according to the frequency of usage and then represented visually by the font size.

Figure 9 shows the word frequency usage when a threshold of 10 was applied to the list. This feature allowed the researcher to only view words used 10 times or more in the responses. In addition, after using the word list analyzer in ATLAS.ti 8, words that may not have been counted in the initial analysis (i.e. the plural of a word) were combined to secure a more accurate word frequency count. The total number of the word count within this threshold (158) accounted for 27% of the total words (587) in the subjects’ responses. This count was then organized from the most frequent word used to the least. From the charted responses, the words “day(s),” “year,” “June,” and “school,” “learning,” “NTI,” “weather,” and “felt” appeared the most frequent in the subjects’ responses (see Figure 9). The words, when considered in aggregate, began to thematically present “felt school year NTI weather days [before] June [would help] learning.”

After analyzing keywords within the responses, the words were saved as codes (within the ATLAS.ti 8 program) and applied to the responses in aggregate. Fifty-four (95%) of the 57 total responses included the one or more of the keywords. After considering the identified keywords and the coded responses, two distinct trends emerged: comments that tended toward the lack of desire to make up days at the end of the year due to summer break and the desire for continuity of instruction.
In fact, 22 (39%) of the 57 total responses alluded to not wanting to make up days late in the school year or into summer break, and 19 (33%) of the responses included the desire to provide continuity of instruction.

Responses advocating using non-traditional instruction days to avoid making up days late in the school year or summer included, “the longer we go and any into June is a struggle,” and there are “too many snow days pushing us into June, which aren’t effective.” Too, the respondents commented about the “hope of not having make-up days” as well as the desire to “alleviate making up days into June.” In contrast, responses advocating using non-traditional instruction days for continuity of instruction included, "we felt it brought about continuity in learning, less gaps for instruction,” as well as “an attempt to minimize lost instructional time.” As well, respondents stated the non-traditional instruction days were a “reinforcement of what is already occurring in classrooms” and should be able to allow “instruction to continue uninterrupted.” Comments for both are representative of responses in both respective categories. To extend, there were a few additional comments that provided an alternative perspective, and these mainly identified having non-traditional instruction days as “an option,” as well as a “safeguard against terrible weather,” and “a resource to have in case of extreme winter weather.”

A complete listing of comments providing by the subjects can be found in Appendix G.
Main reason for implementing NTI days. The next survey question addressed the main reason districts decided to use non-traditional instruction days. As with former survey questions, the researcher used the ATLAS.ti 8 program for response analysis. Keywords, word frequencies, and coded responses were considered so as to look for themes. From the initial analysis, prominent words such as days, year, school, students, learning, NTI, and June were noted. The main words were: days, year, school, instruction, students, and learning.
program, the words were then transferred to “typewriter view” where they showed a visual representation of the frequency through the font size of the words displayed.

Figure 10 shows the word frequency usage when a threshold of 10 was applied to the list. This feature allowed the researcher to only view words used 10 times or more in the responses. In addition, after using the word list analyzer in ATLAS.ti 8, words that may not have been counted in the initial analysis (i.e. the plural of a word) were combined to secure a more accurate word frequency count. The total number of the word count within this threshold (119) accounted for 25% of the total words (482) in the subjects’ responses. This count was then organized from the most frequent word used to the least (see Figure 10). From the charted responses, the words “day(s),” “year(s),” “student(s),” and “school,” “instruction,” “NTI,” and “learning” appeared the most frequent in the subjects’ responses. Further, the words, when considered in aggregate, began to thematically present “NTI school days [used for] instruction [and] learning [for] students [during the] year.”

After analyzing keywords within the responses, the words were saved as codes (within the ATLAS.ti 8 program) and applied to the responses in aggregate. Forty-eight (84%) of the 57 total responses included the one or more of the keywords. After considering the two distinct trends that emerged in the previous question regarding why districts opted to use non-traditional instruction days as opposed to makeup the time traditionally, the researcher decided to consider both components for the current question, “What is the main reason that your district decided to implement non-traditional instruction days,” to consider comments that tended toward the lack
of desire to make up days at the end of the year due to summer break and the desire for continuity of instruction. Thirteen of the 57 (23%) responses identified not wanting to make up days in the summer and 23 (40%) identified the desire for continuity of instruction. This contrasts with the results of the former question where more respondents identified not wanting to make up days in the summer. Responses regarding not making up days at the end of the year included “not having to extend the school year beyond May,” and “to avoid makeup days in late May and June,” as well as “to avoid going to school in the second week of June or beyond.” Those advocating continuity of instruction provided comments such as using non-traditional instruction days to “keep students engaged in school even with [a] large number of snow days” to “maintain instructional continuity” and “consistency of instruction.” These comments were representative of those of other respondents in each respective category. Other responses provided a different perspective with comments such as, “the application occurred before my employment,” “safety,” and “pressure from the public to get out early.” A complete listing of comments providing by the subjects can be found in Appendix H.
Figure 10. Typewriter view in ATLAS.ti 8 showing organization of word frequency usage with a threshold of 10 applied. The words were from the responses given to the question “What is the main reason that your district decided to implement non-traditional instruction days?” Below the word frequency list, the chart depicts the word count of each in the responses.

After completion of the former question, the survey ended for the 57 subjects who were participants in the non-traditional instruction day program. In question three, subjects who identified their district did not participate in the non-traditional instruction day program were directed to question 17. This question asked if the district participated in using non-traditional instruction days during 2014-2015 or
2015-2016, which provided data to substantiate if districts had started using the program and then decided not to implement it. Of the 46 districts directed to this section, none had been participants in 2014-2015 or 2015-2016.

**Reasons for not implementing NTI days.** The subjects were directed to the final question of their survey component, which addressed the reason each respective district decided not to use non-traditional instruction days. The ATLAS.ti 8 program was again used to analyze the subjects’ responses by assisting with identifying word frequencies and then using the words appearing most frequent to code the responses. Several words of emphasis, including day(s), district, NTI, school, feel, students, and instruction were identified by the program. The main words were: day(s), district, NTI, school, feel, and students. The “typewriter view” of the ATLAS.ti 8 program then provided a visual representation of the word frequencies through the font size.

Figure 11 shows the word frequency usage when a threshold of eight was applied to the list. This threshold was lower than what was used when analyzing previous questions. When the researcher used a threshold of 10 for the current question, the words appearing in the list were somewhat vague when considering them in aggregate so as to suggest a possible theme. There was no change in the number of words when a threshold of nine was used; thus, eight provided the researcher with an additional word. This feature allowed the researcher to only view words used eight times or more in the responses. In addition, after using the word list analyzer in ATLAS.ti 8, words that may not have been counted in the initial analysis (i.e. the plural of a word) were combined to secure a more accurate word frequency
count. The total number of the word count within this threshold (185) accounted for 28% of the total words (654) in the subjects’ responses. This count was then organized from the most frequent word used to the least. From the charted responses, the words “day(s),” “district,” “NTI,” “student(s),” “instruction,” “school,” “feel,” “use,” and “classroom” appeared the most frequent in the subjects’ responses (see Figure 11). Further, the words, when considered in aggregate, began to thematically present “District feels [the] use [of] NTI school days [are not like] student instruction [in the] classroom.”

After analyzing keywords within the responses, the words were saved as codes (within the ATLAS.ti 8 program) and applied to the responses in aggregate. Forty-one of the 46 total responses (89%) included the one or more of the keywords. To extend, three subjects stated their district applied for non-traditional instruction days but they were not granted. Further, one additional comment, “we didn’t,” in response to the question, “Why did your district decide not to use non-traditional instruction days,” implied that particular district, too, was not granted the days after applying. The most substantial theme throughout the responses was that non-traditional instruction days were not effective, or would not be as effective as traditional instruction, warranting 22 (48%) of the 46 responses. Subjects responded with comments such as “an NTI day does not compare to a traditional day of school,” “our administration and board felt that it devalues the educational process…we did not feel NTI days are an equal opportunity for every student,” “we don’t believe you can provide the same rigor with a packet as you have in the school setting…students
are being short-changed by using non-traditional days,” and there was a “concern for instructional effectiveness.” The next largest theme present in the responses regarded comments alluding that district calendars and allocated minutes contained adequate time to “bank” school days or that districts traditionally did not miss many days, alleviating their need for non-traditional instruction days. This accounted for 10 of the 46 responses (22%). Comments included “we typically miss fewer than five days due to weather,” and “my district’s instructional day is already extended to ensure flexibility in the calendar.” Notable, as well, two subjects stated there needed to be further information (research) on non-traditional instruction days. A complete listing of comments providing by the subjects can be found in Appendix I.

*Figure 11.* Typewriter view in ATLAS.ti 8 showing organization of word frequency usage with a threshold of 8 applied. The words were from the responses given to the
question “Why did your district decide not to use non-traditional instruction days?”

Below the word frequency list the chart depicts the word count of each in the responses.

Interview

In addition to the survey, an electronic interview instrument was sent to three individuals who had an administrative role with the non-traditional instruction day program and who were the ones most likely to influence policymakers. Developed with the premise of gaining insight into different aspects of the non-traditional instruction day program, the questions asked of the subjects were as follows:

1. What are your experiences with non-traditional instruction days in Kentucky?
2. Do non-traditional instruction days help or hinder students? Please explain.
3. What impact do you think non-traditional instruction days will have on Kentucky students in the next 5-10 years if the legislation remains the same?
4. What process is used to evaluate the effectiveness of each district’s use of non-traditional instruction days?
5. Have there been districts turned down that have submitted an application for non-traditional instruction days? If so, what has been the cause?
6. What are the most pertinent aspects of the data you have collected over the past three years regarding non-traditional instruction days?

Of the three individuals receiving an e-mail requesting their participation in the interview, only one person provided responses to the questions. A second e-mail was sent requesting participation in the electronic interview; however, the researcher
received no other responses. Although seemingly limited, there were only three individuals at the state level directly overseeing non-traditional instruction days. The completed interview, then, constituted 33% participation.

**Question one.** When asked, “What are your experiences with non-traditional instruction days in Kentucky? The subject indicated no direct knowledge of the creation of the initial or revised statutes on which the program was based. Over the years of managing the program, the subject noted “exponential growth in the number of participating districts.” The subject commented on visiting many of the participating sites and interviewed superintendents, administrators, teachers, students, parents, and community members about their experiences with the non-traditional instruction day program. In addition, the subject indicated he or she has presented on the topic at in-state, national, and international conferences. Providing further comments, the subject has “found many more positives to the program than negatives,” and further stated that districts participating in the non-traditional instruction day program have seen the value and have continued to participate in the program.

**Question two.** When the next question, ‘Do non-traditional instruction days help or hinder students? Please explain.” was posed, the subject stated that based on interviews with administrators, teachers, students, and parents, he or she believes non-traditional instruction days helps students. According to the subject, teachers reported when students returned to school [after participating in an NTI day] behavior was better and there was less re-teaching than would be with a typical absence.
Further, since the students did school work during the days off, they remained in the “school mindset” and performed better in the content than with “regular” lessons. The subject commented that parents reported their children (especially elementary school students) were excited to do the non-traditional instruction days and were more engaged with the content than with “regular” lessons.

The respondent further explained that teachers and administrators reported students were “learning other skills while completing coursework such as time management, self-motivation, self-advocacy, and problem-solving.” Further, schools which had a learning management system (LMS) in place (especially at the high school level) “reported students feeling less anxious and more prepared for college courses.” So as to provide an illustration, the subject gave an example of a graduate from one district who commented that the first year at college was easier because of the LMS already in place from the district where he attended high school. Additionally, the subjected reported that teachers remarked that shy or reluctant students participated more online and were more engaged.

The subject further stated that “due to the anytime/anywhere nature of the non-traditional instruction days, students had the opportunity to complete schoolwork as well as do other activities during the day such as working a job or getting extra hours at an internship.” Finally, the subject commented on non-traditional instruction days were great for personalized learning and that students were able to review specific skills, move ahead if ready, or have content tailored to their personal interests.
**Question three.** The next question was “What impact do you think non-traditional instruction days will have on Kentucky students in the next 5-10 years if the legislation remains the same?” According to the subject, the impact would be seen in a change in teaching, as opposed to test scores. Further, the subject heard about teachers implementing more technology into everyday lessons. He or she stated that teachers have reported seeing the “enthusiasm students have with the online lessons” and they [the teachers] would like to build upon that by using similar technology as that being used for non-traditional instruction days during regular school days. In addition, the subject reported that “non-traditional instruction days served as an initial step into technology-based lessons for some teachers, and the experience creating online and technology-based lessons helped teachers become more comfortable with educational technology.”

**Question four.** When asked, “What process is used to evaluate the effectiveness of each district’s use of non-traditional instruction days?” The subject reported that districts had to submit “three data points for each non-traditional instruction day” they used, including the percent of student participation, the percent of teacher participation, and proof of learning. The subject further stated the “proof of learning was the tricky part” and that districts usually submitted a sample lesson plan or a student work sample from the elementary, middle, and high school levels [for each NTI day]. As per the subject, the “Kentucky Department of Education (KDE) did not evaluate the rigor or the appropriateness of the lessons;” districts were responsible for determining what was required for each lesson. In addition, the
subject reported that some districts had teachers submit lessons to the principal or curriculum director prior to the non-traditional instruction day, some teachers had to develop lessons during team planning, and other districts presented general guidelines for the teachers to follow. The subject said he or she had heard of districts where the lessons submitted by the teacher to the administrator was returned [to the teacher] because it was not deemed rigorous or lengthy enough.

**Question five.** When posed the question, “Have there been districts turned down that have submitted an application for non-traditional instruction days? If so, what has been the cause?” the subject reported there were applications submitted that were rejected. Although the applications “were not judged on the implementation method or approach, the thought put into developing a plan to best fit the students and teachers had to be evident.” The subject reported that the applications which had been rejected were mainly due to details lacking in the responses, or little evidence that all populations had been considered.

**Question six.** The final question asked was, “What are the most pertinent aspects of the data you have collected over the past three years regarding non-traditional instruction days?” The subject reported that the “absolute best piece of data” that had been collected regarding the NTI program was a written testimonial from a superintendent. In the superintendent’s statement, the comment was made that the district earned a “High Progress” distinction from the 2013-2014 state testing results after missing 30 days of school that year.
In addition, the subject reported the “value of student participation rates” and commented that “many times the NTI participation rate is higher than the attendance rate on a regular day.” Further, the interviews conducted with stakeholders provided “honest qualitative data,” and that those at the Kentucky Department of Education loved to hear about kids excited to do their NTI work, how social media involved the community in instruction, and how teachers have become comfortable with technology and incorporating it into regular lessons.

Summary. The respondent, one of the overseers of the non-traditional instruction day program, has served in this role for multiple years and has had a variety of experiences with it. He or she, however, was not familiar with the statutes (or revisions thereof) on which the program was based. So as to gain more knowledge of the program, the subject has interviewed numerous stakeholders about their experiences with the non-traditional instruction day program. Further, the subject felt that non-traditional instruction days helped students, and stated reasons for this such as less re-teaching for teachers, better student performance in academics and behavior, and students learning skills such as time management, self-motivation, self-advocacy, and problem-solving. Too, the subject commented on the “anytime/anywhere” and personalized learning aspect for students as promulgated by the implementation of non-traditional instruction days. In the next five to ten years, the respondent stated he or she believed that the impact would not be in test scores, but rather in the change in teaching. He or she felt educational technology would become more prevalent in the instruction delivered to students. With regard to the
process used to evaluate the effectiveness of the use of non-traditional instruction
days, the subject commented that districts had to submit three data points (teacher
participation percentage, student participation percentage, and proof of learning);
however, the Kentucky Department of Education did not evaluate the lessons
submitted. The responsibility of the quality of lessons being used in non-traditional
instruction days, then, resided at the district level. When districts have applied for the
program, some have been turned down due to lacking details or failure to consider all
affected parties. Finally, the subject reported the most pertinent piece of data
collected was a written testimonial from a superintendent whose district missed 30
days, during one school year, and still earned “High Progress” status. The
superintendent credited non-traditional instruction days.
CHAPTER FIVE
Discussions Of Findings And Recommendations

Since 2011-2012, non-traditional instruction days have become more accessible and prevalent in the state of Kentucky. Since the restrictions were lifted with House Bill 211 (2014) there are both participants and non-participants. Although the number of participating districts have continued to increase, not all districts agree on the usage. The purpose of this study was to recount the beginning of the non-traditional instruction day program in the state of Kentucky and present the status of its progress since the implementation seven years ago. When conducting this exploratory study, the researcher focused on two guiding questions: (1) What is the status of non-traditional instruction day implementation in the state of Kentucky? and (2) What are the rationales offered by both participating and non-participating districts, as well as those involved with the program at the state level? This chapter will discuss pertinent findings, unexpected findings, limitations of the study, and recommendations for further research.

Status of Non-Traditional Instruction Day Program Implementation

Finding one. Districts averaged using between zero and ten non-traditional instruction days during 2014-2015 and 2015-2016, with “other” being identified most often. Figure 2 shows that 19 (33%) districts selected “other” on the survey (16 of which identified zero after individual responses were analyzed). Further, eight subjects (14%) identified four days usage, and six subjects (11%) identified five days. Three, seven, nine, and ten days average usage were each selected by four (7% each).
subjects. Three subjects (5%) identified two days average, and one subject (2%) identified six days. The answer choice “1” originally showed four respondents; however, after analysis of individual response forms, three of the “Other” responses identified “1” in their explanation, thus, making the total number of respondents seven (12%) that selected “1.” The answer choice “other” could have propagated ambiguity, and the large number of subjects who selected “other” were districts in their first year of implementation (2016-2017). An answer choice of both “zero” and “this is the first year of implementation” could have yielded more accurate data. This finding substantiates districts who have applied for and participated in the non-traditional instruction day program are using the days, albeit a wide span in the number exists.

**Finding two.** Technology was used in all districts as either the primary mode or as part of a hybrid (or blended) learning model for non-traditional instruction days. Figure 3 shows that 54 (95%) of the subjects identified their district as using a hybrid learning model and 3 (5%) of the subjects identified using technology only as their mode of instruction for non-traditional instruction days. This finding is substantial because 100% of the district respondents are utilizing technology in some capacity. Perhaps this is preliminary evidence that one-to-one initiatives will see a positive trajectory in the near future. Although the percentage of students with access to technology may be on the rise, implementing learning structures that involve the use of technology places a burden at the school and district levels to ensure that students have access to the learning tools they need to perform and achieve at high
levels. Further, this finding is congruent with Drysdale, Graham, Halverson, and Spring (2013) in that the progression of K-12 online education has increased since becoming more consistently prevalent in literature in 2008. As well, Watson (2008) found that K-12 online learning was growing rapidly at thirty percent annually for the past ten years.

**Finding three.** *Districts used a variety of (and multiple) learning management systems and technology platforms for non-traditional instruction days.*

As shown in Figure 4, Google Classroom was used by 41 (72%) districts and had the highest number of participants. MobyMax was selected by 20 (35%) subjects, followed by Khan Academy (19, 33%), and Study Island (18, 32%). Edgenuity and Edmodo were each selected by 15 (26%) subjects. Data indicated that some districts were not using only one technology-based learning management system, but rather multiple systems. Table 5 shows the number of technology platforms used by districts, ranging from one to twelve. Sixteen (28%) of the districts identified using a single method of technology, hence, making one technology platform the most frequently selected. Five (15.7%) platforms were selected the second most frequent, and two (14%) and four (14%) platforms were respectively selected third. In addition to the platforms listed in Figure 4, ones listed by respondents in the “Other” category included: Learnzillion, Education Galaxy, Summit Base Camp, See Saw, Math XL, Odysseyware, iReading, Pearson Realize, Lexia, Reading Plus, Converge, Symphony Math, Remind 101, school web page, and teacher-created content. This finding substantiates the broad continuum for both the blended learning concept as well as the
variety of learning resources utilized with students; not one single method was used across the districts. Districts, then, have each subscribed to an individualized and differentiated viewpoint as to the learning model that will be used, and to what extent technology will be integrated. This finding is similar to Watson’s (2008) finding that schools have trended toward using a blended, or hybrid learning medium. Too, Watson stated that the blended learning model is likely to emerge as the predominant model of the future. Also, according to Rice (2006), the continuum is so broad it could include practically any learning experience involving technology. As well, this finding seems to be similar to the disruptive innovation model as proposed by Christiansen et al. (2013). Considering the number and variety of the platforms identified, companies are responding to the needs of schools and districts, as they have redefined and redesigned products to make them more accessible to all.

**Finding four.** All districts had students without Internet access when participating in the non-traditional instruction day program and paper/pencil, or packet, assignments were used most often to accommodate them. Fifty-seven (100%) of the subjects reported their district had students without Internet access on non-traditional instruction days. Since all districts reported utilizing technology as either part of a hybrid system or a stand-alone system, having students without the ability to access the technology had to be addressed. As shown in Figure 5, an analysis of keywords in the responses showed “paper/pencil” and “packets” as being used most often in responses. Forty-nine (91%) of the subjects used these keywords. Clearly, paper/pencil, or packet, assignments were used most often when dealing with students
not having Internet access on days where the non-traditional instruction program was used. This finding is substantial due to the potential differences in the learning experiences for students. With 100% of the district respondents reporting there were students without access to the Internet during non-traditional instruction days, all students, then, would potentially not have equal access to the same learning opportunities. For example, a paper/pencil packet would not provide the same experience as using the Study Island adaptive computer program. Even if the same skills were targeted the experience would not be the same.

As an opposing viewpoint to this finding, Cavanaugh and Clark (2007), after analyzing 229 practitioner reports and studies, found mixed reviews about the advantages of online learning, as the education community offered no agreement that online learning provided high-quality learning experiences. Similar to questioning the effectiveness, Cavanaugh et al. (2009), Drysdale et al. (2013), and McCombs and Valiki (2005) identified a lack of a research base for the framework as a guide for e-learning. This propagates the question, then, with which criteria are schools and districts matching their technology platforms which are being used with students? What constitutes the criteria for the selection: the research base, the aesthetics, the cost, or other factors?

**Finding five.** *A significant number of districts reported no change in operational costs.* Forty-three (75%) subjects reported no change in their district operational costs, while 8 (14%) reported a decrease and 6 (11%) reported an increase (see Figure 6). For the one who identified a change, Table 6 summarizes the content
of their responses. Because of the large number of respondents reporting “no change,” the researcher speculated as to why this number encompassed 75% of the selection by the subjects. First, and based on the number of districts identifying “other” in a previous question regarding the average number of days used for non-traditional instruction days, many districts may have been in their first year of implementation and not yet used any of the days. Too, the subjects may not have been aware of the incidental costs associated with the use of these days.

**Finding six.** The teacher and student participation rate for non-traditional instruction days were high. In this survey section, 24 of the respondents did not participate in 2015-2016, which was the year identified in the in question from which the participation rates were to be gauged. Thirty-three subjects, then, identified participation rates for their students and teachers. The participation rate for teachers was between 91-100%, with 30 (91%) of the subjects identifying the rate falling between 96-100%. The participation rate for students was between 86-100%, with 17 (52%) of the subjects identifying the rate falling between 96-100% and 13 (39%) identifying the rate falling between 91-95% (see Figure 7). These data are congruent, as well, with the interviewee, who stated that “many times the NTI participation rate is higher than the attendance rate on a regular day.” As a point of discussion, the guidance document from the Kentucky Department of Education Division of Innovation and Partner Engagement (2017) states that “all students are expected to participate,” yet there is “no set percentage of student participation necessary for non-traditional instruction days to be approved.” (p.9) Further, “the revised statute in
2014 removed the requirement for the participation threshold.” (p.9) As well, there is “no threshold of teacher participation required for non-traditional instruction days to be approved.” (p.9) Although data from the survey indicated high participation, this was not a requirement for the days to be approved and used. This raises the question, then, of the threshold that can feasibly “demonstrate how teaching and learning in the district will not be negatively impacted,” as indicated by Kentucky Revised Statute 158.070 section 9. (General Assembly, 2014) If there is not an attendance threshold required for non-traditional instruction days to be approved, what assurance is there for teaching and learning to not be negatively impacted?

**Finding seven.** Most districts determine the effectiveness of non-traditional instruction days by considering participation, work, and assignments; however, there is a broad range of interpretation within those. Thirty-seven (65%) of the subjects’ responses for the question regarding how districts determine the effectiveness of the days contained one or more of the words, “participation,” “work,” and “assignments.” Too, those were the same words identified as some of the most frequent used within the responses (see Figure 8). Even within the use of the three keywords within the responses, there were different meanings. For example, when considering the term “participation,” some districts considered student participation only when looking at effectiveness and others considered both student and teacher participation. This was substantiated by comments such as “student participation and feedback from assignments,” “based on student participation,” and “through teacher and student participation rates as well as teacher and parent survey.” Similarly, the interview
yielded the response, “we also value the student participation rates, because many
times the NTI participation rate is higher than the attendance on a regular school
day.” Regarding the term “work,” comments emerged from survey subjects such as,
“evaluation of student work [for] both paper packets and online assessments,”
“student work submitted,” “student work samples,” “student work completed to
mastery,” and “completion of work.” Those responses appear to be representative of
a broad continuum. Some districts judged the effectiveness of the non-traditional
instruction days simply on work completed while others expected mastery. The same
discrepancies appeared when considering the word “assignments” as there was a
continuum of expectations as well. This was substantiated through comments such
as, “assignments are graded,” “review of assignments…by a curriculum team,”
“feedback from assignments,” Although the former three keywords were used most
frequently in the responses, there were other comments that alluded to effectiveness
being determined different ways. Some examples were: teacher, student and parent
feedback; surveys; teacher, parent, and student input; and state testing scores.

As well, the interview yielded further insight into the perception of how to
determine the effectiveness of the non-traditional instruction day program. The
subject stated that the Kentucky Department of Education had each district submit
three data points: (1) percentage of district-wide student participation, (2) percentage
of district-wide teacher participation, and (3) proof of learning. As the subject
explained further, the proof of learning could be fulfilled by a sample lesson plan or
student work from each level (elementary, middle, high) for each non-traditional
instruction day. As well, the subject commented, “I don’t think the impact will be seen in test scores, but instead a change in teaching, and finally, “Districts may judge effectiveness differently, but at KDE we believe NTI days are effective as long as students are engaged in learning.”

The non-traditional instruction day program was designed with the idea of innovation and additional latitude and creativity to offer learning experiences for students when traditional means of school was not possible due to unforeseen circumstances. Although the legislative language does not use the term “determining effectiveness,” (but rather the opposite, as discussed in the former finding), the researcher feels this should be paramount when implementing any program, idea, or initiative which affects students. The irony precipitated when gathering the data for the question, How does/will your district determine if non-traditional instruction days have been effective for students, was not only in the broad continuum of the responses but in the three data points collected from each district, after each NTI day used, by the state. The three data points included (1) student attendance; (2) teacher attendance; and (3) proof of learning. The irony? There are not required thresholds for student and teacher participation for non-traditional instruction days to be state-approved. Further, the data point for the proof of learning is the submission of “sample lessons and/or student work samples from all grade levels (elementary, middle, high) for each NTI day.” (Kentucky Department of Education Division of Innovation and Partner Engagement, 2017, p.12) According to the interviewee, too, the state department “did not evaluate the rigor or the appropriateness of the lessons,”
as districts were responsible for determining what was required for each lesson. The fact that the state department does not evaluate the lessons for NTI days is understandable because the Kentucky Department of Education does not evaluate lessons for a regular school day either. This was mentioned by the interviewee as well. However, it seems that the data collection points used, then, are based on compliance and not to either determine the effectiveness of the program or to determine if there is a negative impact on teaching and learning.

**Rationales of Participating and Non-Participating Districts**

Since the official pilot of the non-traditional instruction day program in 2011-2012, and especially after the signing of House Bill 211 (2014), which lifted the restriction for the number of days missed and allowed all 173 districts in Kentucky to be eligible for the days, the number of participating districts has steadily increased. Noteworthy as well, there are a sizable number of districts who have chosen not to participate. This study sought to ascertain the rationales for both perspectives.

Two separate survey questions indicated reason(s) for using non-traditional instruction days for participating districts. The first asked subjects to explain why their respective districts opted to use these days to make up days, as opposed to making up the time traditionally. The second question asked the subjects the main reason their respective districts chose to implement non-traditional instruction days. In contrast, non-participants were asked to explain why their respective districts chose not to implement the days.
**Finding one.** The majority of participating districts used non-traditional instruction days for either continuity of instruction or to keep from extending the school year into the summer. From the keywords (see Figure 9) in the responses for the question regarding why districts opted to use non-traditional instruction days instead of making up the time traditionally, a possible delineation was noted when the words “June” and “instruction” both appeared as two of the most frequently used words. After further analysis, a clear delineation did exist. In fact, 22 (39%) of the responses indicated the desire to use the days so as not to extend the year into summer break, and 19 (33%) of the responses indicated to use the days for continuity of instruction. Ironically, this percentage presented the inverse in the subsequent question regarding the main reason the subjects’ districts chose to implement non-traditional instruction days. For that question, 13 (23%) of the responses indicated the desire to use the days so as not to extend the year into summer break and 23 (40%) of the responses indicated a desire to use the days for continuity of instruction. However, these two themes were the predominant ones that emerged from the response data from both questions.

The theme of continuity of instruction was congruent with the theme communicated in the interview. The subject indicated that non-traditional instruction days assisted with “personalized” and “anytime/anywhere” learning, as well as “less re-teaching than would be expected after an absence from school.” Further, the subject stated because students are participating in the non-traditional instruction day program during the days off, “students remain in the ‘school mindset’ and perform
better academically and behaviorally than without NTI days.” Notable as well, the subject commented that he or she had been told by teachers that students who are “shy or reluctant” are more engaged in lessons online and participate more often than when in a traditional class.

The interviewee did not address using non-traditional instruction days being used for the intent of not making up days late in the school year and into summer break as a possible reason for districts electing to participate in this program. This could be that the state department’s premise for instituting the non-traditional instruction day program was for continuity of instruction. However, based on the district survey respondents, the researcher feels that the state department may, perhaps, benefit from re-evaluating the motivation for the substantial growth over the past three years as well as the implementation and impact on students. While several districts identified using the days for continuity of instruction, other reasons were identified as well.

**Finding two.** *Almost half of the non-participating districts decided not to use non-traditional instruction days because they felt the days were ineffective.*

From the keywords (see Figure 11) in the responses for the question regarding why districts decided not to use non-traditional instruction days, the term “instruction” was one of the most frequently used words. Using “instruction” as a code in the ATLAS.ti 8 program and applying it to the responses yielded comments such as, “we feel like students being in the classroom provides better instruction,” “we consider NTI less beneficial to student learning than regular school instructional days,” “[we
are worried that we might be cheating the kids out of instruction,” and “[it is] not an effective use of the instructional day.” Because the responses regarding the perceived ineffectiveness of non-traditional instruction days constituted 48% of the subjects’ responses, there were other minor themes that emerged. The first dealt with the districts’ calendars, daily instructional minutes, and the number of days missed, which accounted for 10 (22%) of the respondents. In these, the subjects’ comments alluded to not needing to use non-traditional instruction days. Some of the comments included, “we typically miss fewer than five days due to weather,”[the] daily instructional day is already extended to ensure flexibility in the calendar,” and “we do not miss enough snow days to warrant such a plan.” In addition, three subjects (and perhaps a fourth, depending on how one response was interpreted) applied for non-traditional instruction days but they were not granted. The reasoning for many applications being rejected, as stated by the interview subject, was the “lacking of details in the application responses” or if “not all affected parties [had] been considered.” Further, two survey subjects indicated more information (research) was needed on non-traditional instruction days before their particular districts would implement them.

Based on the substantial percentage of the district respondents (48%) identifying “the days are not effective” when answering the question, Why did your district decide not to use non-traditional instruction days, the need for a determinant of the effectiveness the non-traditional instruction day program seems to be warranted, or at the very least, considered. Perhaps there would be additional districts
utilize the program if there was a “determinant of effectiveness” rather than an effort to alleviate the “negative impact” on teaching and learning.

**Further Discussion and Unexpected Finding**

The data presented in this study showed the status of the implementation of non-traditional instruction days in the state of Kentucky, as well as presented different rationales for both program participants and non-participants. Keyword analyses and coding of responses uncovered underlying themes regarding both arguments. Despite the conveyance of the goal of the non-traditional instruction day program from the Kentucky Department of Education, which advocates the days be used for continuity of instruction, data indicated a clear delineation of districts that desired to use program days to keep from extending the school year into summertime and districts that indicated program days would be used for instructional continuity. A few responses, however, indicated both. Minor themes emerged as well, which showed the diverse views of why districts have opted to apply for and use non-traditional instruction days.

Presenting another view, districts opting not to implement non-traditional instruction days were candid in their comments regarding their perceived ineffectiveness of them. Strong words such as “waste of time” and “devalues the educational process” were only some of the conveyances of the subjects’ responses. Clearly, there were very distinct and poignant viewpoints.
Characterized by an unexpected finding, there were sources of evidence and data that emerged which certainly warranted further consideration and discussion. According to the subject interviewed:

Teachers report that when students return to school, behavior is better and there is less re-teaching than would be expected after an absence from school; they say that since the students are doing school work during the days off, the students remain in the “school mindset” and perform better academically and behaviorally than without NTI days.

In contrast, several districts indicated in the survey (when responding to the question of how students participate without Internet access) there is a make-up window for the work assigned during the non-traditional instruction day. Comments such as, “if a student plans to use the online assignments but is unable to access them, he/she has two days to complete either the online or paper/pencil assignments after returning to school,” as well as, “we have a grace period to complete work,” “paper/pencil and/or assisted with time to complete upon return,” “we offer students the opportunity to stay after school for the five days following an NTI day in order to make up missed work,” “paper packets or spend the two days they have after return to school to do their work,” and “all students have a five-day grace period to turn in completed work after the non-traditional day.” What, then, is the true outcome of the non-traditional instruction day if the instruction and learning do not occur that day?

In a webinar by Flory (2016), representing the Appalachian Regional Lab (REL) and in partnership with the Kentucky Department of Education, one of the
presentations slides stated, “absence has a larger impact than closure,” which, although not stated on the slide, was a direct outcome of Goodman’s study in 2014. As well, Marcotte and Hemelt’s study in 2007 was cited on the reference page and the abbreviated findings from the study were displayed as a pictorial graph on one of the slides. The significance? The framework of Marcotte and Hemelt’s (2007) research was somewhat out of context in that the basis of their study was considering the impact of absences before state testing when the assessment window fell earlier in the school year. In the state of Kentucky, Senate Bill 1 (2009) mandated the testing window be the last two weeks a school/district was in session, alleviating the premise of the potential for missed days that have to be made up after the testing window.

Interestingly, Goodman’s (2014) study did indeed indicate that unplanned student absences had a larger impact than school-wide closures. As well, Goodman theorized this finding could be the direct result of teachers being better prepared for a school closure which would affect all students at once, as opposed to having to accommodate differences in learning when a student has been absent, missed instruction, and resulted in the student who was absent being in a different learning place than the other students. Certainly, it would be more complex to accommodate individual students than having to move an entire lesson for all students back a day.

How, then, does this relate to non-traditional instruction days? The researcher’s interpretation of continuity of instruction during this type of day would be that students’ learning and instruction occurs on the day that is missed. The fact that many districts offer a grace period or time period in which non-traditional
instruction day assignments can be completed and submitted, suggests evidence that not all students have the means to complete the assignments on the NTI day missed. This break in the instruction would then, for all intents and purposes, be the same as an absence where no instruction is received. Hence, in this scenario, there is not continuity of instruction. With the assumption, as well, that a large number of the students who do not have access to technology (and are given paper/pencil packets) are also some of our most disadvantaged students, not completing the work on the NTI day and having to make up the work in addition to the regular school day assignments would again put them at a disadvantage.

**Limitations of the Study**

To reiterate, limitations are inherent in any study, this being no exception. The limitations of this study were as follows:

- The sample population was limited to districts in the state of Kentucky.
- Data from the interview instrument only came from one individual although three were sent out.
- Individuals with biases regarding non-traditional instruction days could have skewed the answers in the survey or interview.
- The crux of the study relied on qualitative measures, which can be viewed by some as more subjective.
Since there is not a prior research base on the topic of non-traditional instruction days, this study served as exploratory research versus explanatory research.

**Recommendations for Additional Research**

1. Research regarding models for non-traditional instruction days that promote true continuity of learning.
2. Case studies of successful participating and non-participating districts in the non-traditional instruction day program.
3. Focus group interviews with administrators, teachers, students, and parents concerning the use and effectiveness of the non-traditional instruction day program.
4. Student case studies regarding the amount of academic learning time used when participating in non-traditional instruction days.
5. Effective models of technology and alternative methods when all students do not have Internet access.

**Conclusion**

This study provided a foundational segway into the topic of non-traditional instruction days in the state of Kentucky. Categorized as exploratory research, the status of the non-traditional instruction day program, as well as the rationales for both participating and non-participating districts, were explored. The results show districts participating in the program are using technology either as a stand-alone system or as
part of a hybrid (or blended) learning model. In addition, multiple technology platforms and learning management systems are being used. Although all districts identified having students without Internet access, paper/pencil packets are being used most often to accommodate these learners. In addition, teacher and student participation rates are reported to be high, and most districts reported no change in operational costs. Overall, participants and non-participants both offered responses to substantiate their reasoning, and many of the comments were direct and poignant. Although non-traditional instruction days offer an innovative approach to traditional districtwide closings due to weather or illness, additional research will further improve the program.
References


SNOW DAY LEARNING: FIRST YEARS OF NTI


Kvavik, R. B., Caruso, J. B., & Morgan, G. (2004). *ECAR study of students and*


Appendix A

E-mails to Request Survey Participation to Director of Pupil Personnel and/or the District Non-Traditional Instruction Day Program Contact

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From: Hammons, Karen - Instructional Supervisor
Sent: Monday, January 30, 2017 2:14 PM
Subject: Non-Traditional Instruction Day Survey
Importance: High

Good afternoon, and I hope everyone is staying warm as we are finally experiencing a little bit of winter!

My name is Karen Hammons and I am the instructional supervisor for the Bath County school district. I am also completing my doctorate in educational administration and have chosen the topic of non-traditional instruction days on which to do my capstone. This e-mail has been sent to all DPPs and identified Non-Traditional Instruction Day contacts as listed on the KDE website. I know each of you are incredibly busy, but if you could have the person most involved with Non-Traditional Instruction Days in your district complete the following survey I would really appreciate it. It should only take about five minutes to complete. I plan to keep the survey live through Friday, February 3rd. Here is the link:

https://goo.gl/forms/9svY7jM0vG9RcQD2

Thank you again,

Karen Hammons
Instructional Supervisor
Bath County Schools
405 West Main Street
Owingsville, KY 40360
tel. 606.674.6314 ext. 6616
tax 606.674.2647

*The most beautiful people we have known are those who have known defeat, known suffering, known struggle, known loss, and have found their way out of the depths. These people have an appreciation, a sensibility, and an understanding of life that fills them with compassion, gentleness, and a deep loving concern. Beautiful people do not just happen.*

-Elizabeth Kubler-Ross
Hammons, Karen - Instructional Supervisor

From: Hammons, Karen - Instructional Supervisor
Sent: Monday, January 30, 2017 2:24 PM
Subject: PW: Non-Traditional Instruction Day Survey
Importance: High

Forgive the additional e-mail, but to clarify, even if you do not participate in NTI days please complete the survey. There are a couple of questions directed to non-participating districts as well.

Thank you!

From: Hammons, Karen - Instructional Supervisor
Sent: Monday, January 30, 2017 2:14 PM
Subject: Non-Traditional Instruction Day Survey
Importance: High

Good afternoon, and I hope everyone is staying warm as we are finally experiencing a little bit of winter!

My name is Karen Hammons and I am the instructional supervisor for the Bath County school district. I am also completing my doctorate in educational administration and have chosen the topic of non-traditional instruction days on which to do my capstone. This e-mail has been sent to all DPPs and identified Non-Traditional Instruction Day contacts as listed on the KDE website. I know each of you are incredibly busy, but if you could have the person most involved with Non-Traditional Instruction Days in your district complete the following survey I would really appreciate it. It should only take about five minutes to complete. I plan to keep the survey live through Friday, February 3rd. Here is the link:
https://goo.gl/forms/9udV17iMOd9fRQ2

Thank you again,

Karen Hammons
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Bath County Schools
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Owingsville, KY 40360
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"The most beautiful people we have known are those who have known defeat, known suffering, known struggle, known loss, and have found their way out of the depths. These persons have an appreciation, a sensitivity, and an understanding of life that fill them with compassion, gentleness, and a deep loving concern. Beautiful people do not just happen."

~Elizabeth Kubler Ross
Hammons, Karen - Instructional Supervisor

From: Hammons, Karen - Instructional Supervisor
Sent: Friday, February 03, 2017 8:28 AM
Subject: PW: Non-Traditional Instruction Day Survey
Importance: High

Good morning,

Thank you so much to those who have completed the survey. If you have not yet responded by visiting the survey link and wouldn't mind doing so, the link will be live through today. It only takes about five minutes to complete and I would appreciate it!

The link is: https://goo.gl/forms/9sdvL7jIDQy9HRQU2.

Thank you,

Karen Hammons
Instructional Supervisor
Bath County Schools
405 West Main Street
Owingsville, KY 40360
tel. 606.674.6314 ext. 6616
tax. 606.674.2647

*The most beautiful people we have known are those who have known defeat, lameness, suffering, known struggle, known loss, and have found their way out of the depths. These persons have an appreciation, a sensitivity, and an understanding of life that fills them with compassion, gentleness, and a deep loving concern. Beautiful people do not just happen.*

~Elizabeth Kubler Ross
Appendix B

Survey Questions for Director of Pupil Personnel and/or the District Non-Traditional Instruction Day Program Contact

Survey Regarding Non-Traditional Instruction Days

The purpose of this research project is to collect information from Director of Pupil Personnel (DPP) administrators and non-traditional instruction day contacts regarding the non-traditional instruction day progression in the state of Kentucky. This is a research project being conducted by Karen Hammons, doctoral candidate, at Morehead State University. You are invited to participate in this research project because you are a DPP or a non-traditional instructional day district contact.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time.

The procedure involves completing an online survey that will take approximately 5 minutes. Your responses will be confidential and no identifying information will be sought or used such as your name, email address or IP address. The survey questions will be about non-traditional instruction days.

The results of this study will be used for scholarly purposes only and may be shared with Morehead State University representatives and will appear in the capstone project for which this survey is being conducted.

If you have any questions about the research study, please contact Karen Hammons at karen_99_03_07@yahoo.com.

* Required

1. Informed Consent *
   Mark only one oval.
   ☐ Yes, I will participate in the survey
   ☐ No, I will not participate in the survey

2. What is your student population? *
   Mark only one oval.
   ☐ less than 1,000
   ☐ 1,000 to 2,000
   ☐ 2,001 to 3,000
   ☐ 3,001 to 4,000
   ☐ 4,001 to 5,000
   ☐ 5,001 to 6,000
   ☐ 6,001 to 7,000
   ☐ 7,001 to 8,000
   ☐ more than 8,000
3. How many years have you implemented a non-traditional instruction day for students? *
Mark only one oval.
- 1 year     Skip to question 4.
- 2 years     Skip to question 4.
- 3 years     Skip to question 4.
- Do not currently use Non-Traditional Instruction Days  Skip to question 17.

4. What is the average number of days your district used non-traditional instruction days over the past two years?
Mark only one oval.
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- Other:

5. What method does your district use for non-traditional instruction days? *
Mark only one oval.
- Technology-based  Skip to question 6.
- Paper/Pencil-based  Skip to question 9.
- Hybrid (technology and paper/pencil)  Skip to question 6.
- Other:

Untitled Section
6. If you use technology, which platform(s) do you use? *
Check all that apply:
- A+
- Accelerated Math
- Accelerated Reader
- ALEKS
- APEX
- Blackboard
- Discovery Education
- Edgenuity
- Edmodo
- Google Classroom
- Khan Academy
- MobyMax
- Moodle
- Schoology
- Study Island
- WIN Learning
- Other: ______________________________

7. Are there students that do not have access to the Internet on non-traditional instruction days? *
Mark only one oval.
- Yes     Skip to question 8.
- No      Skip to question 9.

8. How do the students without Internet access participate in non-traditional instruction days? *

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

9. Have district operational costs increased or decreased due to implementation of non-traditional instruction days? *
Mark only one oval.
- Increased     Skip to question 10.
- Decreased     Skip to question 11.
- No Change     Skip to question 12.
10. How much has the operational cost increased, and in which area(s)? *


11. How much has the operational cost decreased, and in which area(s)? *


12. What was your teacher participation rate last year? *
   Mark only one oval.
   - Below 80%
   - 81-85%
   - 86-90%
   - 91-95%
   - 96-100%
   - Did not participate last year

13. What was your student participation rate last year? *
   Mark only one oval.
   - Below 80%
   - 81-85%
   - 86-90%
   - 91-95%
   - 96-100%
   - Did not participate last year
14. How does/will your district determine if non-traditional instruction days have been effective for students? *

15. Why did your district opt to implement non-traditional instruction days instead of making up the time traditionally? *

16. What is the MAIN REASON that your district decided to implement non-traditional instruction days?

Stop filling out this form.

Untitled Section

17. Did your district participate in using non-traditional instruction days in 2014-2015 or 2015-2016? *
   Mark only one oval.
   
   ○ Yes    Skip to question 18.
   ○ No     Skip to question 19.

Untitled Section

18. Why did your district choose not to continue non-traditional instruction days? *
Stop filling out this form.

Untitled Section

19. Why did your district decide not to use non-traditional instruction days? *
Appendix C

E-mail to Request Interview Participation for State-Level Personnel Overseeing the Non-Traditional Instruction Day Program

Good afternoon.

My name is Karen Hammons and I am the instructional supervisor for the Bath County school district. I am also completing my doctorate in educational administration and have chosen the topic of non-traditional instruction days on which to do my capstone. If you don’t mind, would you please provide answers to the following questions? The informed consent is attached for you to read before answering the questions should you agree to complete the electronic interview.

Thank you very much.

Do you agree to the informed consent?

1. What are your experiences with non-traditional instruction days in Kentucky?

2. Do non-traditional instruction days help or hinder students? Please explain.

3. What impact do you think non-traditional instruction days will have on Kentucky students in the next 5-10 years if the legislation remains the same?

4. What process is used to evaluate the effectiveness of each district’s use of non-traditional instruction days?
5. Have there been districts turned down that have submitted an application for non-traditional instruction days? If so, what has been the cause?

6. What are the most pertinent aspects of the data you have collected over the past three years regarding non-traditional instruction days?

Again, thank you,

Karen Hammons
Instructional Supervisor
Bath County Schools
405 West Main Street
Owingsville, KY 40360
tel. 606.674.6314 ext. 6616
tax 606.674.2647

"The most beautiful people we have known are those who have known defeat, known suffering, known struggle, known loss, and have found their way out of the depths. These persons have an appreciation, a sensitivity, and an understanding of life that fills them with compassion, gentleness, and a deep loving concern. Beautiful people do not just happen."

—Elizabeth Kübler-Ross
Appendix D

Informed Consent for State-Level Personnel Overseeing the Non-Traditional Instruction Day Program

The purpose of this research project is to collect information regarding the progression of non-traditional instruction days in the state of Kentucky. This is a research project being conducted by Karen Hammons, doctoral candidate, at Morehead State University. You are invited to participate in this research project because of your knowledge or experiences with non-traditional instruction days.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time.

The procedure involves an interview that will take approximately 10 minutes. Your responses will be confidential and no identifying information will be sought or used. The interview questions will be about your experiences and knowledge of non-traditional instruction days.

The results of this study will be used for scholarly purposes only and may be shared with Morehead State University representatives and will appear in the capstone project for which this survey is being conducted.

If you have any questions about the research study, please contact Karen Hammons at karen_99_03_07@yahoo.com. This research has been reviewed according to Morehead State University IRB procedures for research involving human subjects. By proceeding with the interview, this indicates that:

• you have read the above information;
• you voluntarily agree to participate;

If you do not wish to participate in the research study, please decline participation by telling the researcher that you do not wish to be interviewed.
Appendix E

Survey Comments Regarding How Districts Have Students Without Internet Access Participate in Non-Traditional Instruction Days

How do the students without Internet access participate in non-traditional instruction days?

- Paper packets are provided for all students that need them.
- We download homework to their iPad prior to missing. Elementary students have preloaded backpack folder with instructional NTI materials.
- Packets
- Packet
- Paper Pencil
- Paper copies
- Students are assigned paper packets.
- Paper/pencil. Packets were sent home in early December.
- Alternate activity provided via paper/pencil, also computer labs are open for parents to bring them in if needed
- Packets or our buildings are open to students.
- Paper pencil projects
- Hard copy packets are sent home.
- Variety of means: packet work, downloaded to device or thumb-drive
- They complete the hard copy packets that are sent home with every student.
- Each student received a paper/pencil copy of an assignment in case of a lack of technology
- Paper packets
- The students without Internet access will usually complete a paper/pencil packet that is provided prior to the NTI day.
- If a student plans to use the online assignments but is unable to access them, he/she has two days to complete either the online or paper/pencil assignments after returning to school.
- Can download packets to desktop in advance of the day, or complete hard copy.
- They have a paper/pencil assignment with them.
- That is why we have a Hybrid program. All students get a paper packet with technology options available.
- Packets are made for anyone that may not have access to the internet and we have our public libraries who are partnering with us on these days so they will allow students to use their computers if needed.
- Pencil and paper assignments
- Paper pencil options
- 100%--We have a grace period to complete work, along with paper packets provided in advance.
- Everyone gets a folder assignment but those who have internet access can choose to work on it.
- They try to find access but if they can't, they have 3 days upon returning to school to finish the assignments.
- Paper/Pencil Packets- Project based learning
- Hard copy packets are sent home
- Packets and other hands-on activities
- Paper/pencil packets sent home with the students at the start of January.
- All students are given the option to receive paper/pencil packets or complete work on-line.
- Paper pencil and/or assisted with time to complete upon return
- Our program is arranged by giving our students the material required for snow learning on [omitted] in October. Students have between October and April to
complete the assigned work. We open our schools up throughout the week for students to stay after and work on their snow learning material. Students can also come early to school. In this way, we support students who may not have access during a snow learning day.

- We sent home paper packets with all students in case they didn't have internet or if their internet wasn't working or if there were multiple students in the family who would need the family computer.
- Paper-pencil versions of the work
- Traditional Pen and Paper. Some online platforms provide paper copies of work.
- Paper copies are provided.
- They receive paper copies. They also have the opportunity to take a picture of all assignments on phones, tablets, etc...
- Paper/Pencil
- The local public library remains open and has Wi-Fi available for students. We also offer students the opportunity to stay after school for the 5 days following an NTI day in order to make up missed work.
- Some complete a paper/pencil assignment and some do the online learning activity during the makeup window when they return.
- Paper packets/assignments.
- Packets are sent home and returned.
- Paper Packets or spend the 2 days they have after return to school to do their work.
- Paper and pencil
- Paper copies that include resources
- We plan ahead and make sure they have a paper copy of the assignment
- Paper packet and/or Offline mode with Chromebooks
- Paper and pencil
- Paper packets sent home with each child.
- They complete instructional packets sent home the first of December.
- Students who do not have access to the internet may complete the assignments via a paper/pencil packet that is available in hard copy from the schools or from the central office. All students have a [omitted] day grace period to turn in completed work after the non-traditional day. This allows student’s time to access whichever accommodation most suits their situation.
- Packets are sent home with students. Teachers are available by phone.
- Every student received a folder with already printed lessons to complete plus the online submission option. Both options are available for students without and with internet access.
- Any student that does not choose to use the digital formats is given hard copies of the lessons.
- After school or public library
Appendix F

Survey Comments Regarding How Districts Determine the Effectiveness of Non-Traditional Instruction Days

How does/will your district determine if non-traditional instruction days have been effective for students?

- Teacher, student and parent feedback have been very positive. Our teachers grade assignments and provide feedback to parents.
- We will look at student performance data at all levels and then compare to prior years. We use NTI days after so many days are missed; therefore there is no guarantee that we will use NTI days. Our goal is to be out of school prior to Memorial Day.
- Participation, loss of funding, etc.
- N/A
- Percentage Participation rate shared by Schoology Data and Teacher Feedback.
- Participation
- Evaluation of student work both paper packets and online assessments.
- % Participation
- Survey and quality of work returned
- Assignments are graded just as on all daily assignments are.
- Examine student data
- Student work submitted and teacher data.
- Through teacher and student participation rates as well as teacher and parent survey
- We gauge the instructional activities required of students along with the participation rates.
- Reflection from teachers on assigned skills
- Feedback from surveys; analysis of work; data review
- NTI days are used for content review purposes. Teacher grade and analyze student work.
- Review of assignments and student work samples by curriculum team
- Proficiency rate
• Analysis of work samples
• We have surveys with the community and during our District Leadership Team meetings we continually talk with our staff and leadership to make sure the quality of instruction is rigorous.
• By assignments and accuracy of completed assignments.
• student/teacher participation and work samples as well as surveys of stakeholders
• Work is evaluated.
• Student input, staff input, parent input will all be considered.
• Teachers spend some time upon returning questioning the students, grading assignments and if appropriate conducting formative assessments.
• Teacher/parent/student input, progress reports
• Teachers analyze student work to determine proficiency. Teachers report this information to the district via a Google Form. They also meet in PLCs to discuss student proficiency, student participation, and quality of work.
• Student participation and feedback from assignments
• Based on student participation
• Based on student participation
• K-prep/EOC scores - looking for substantial change from prior years; surveys to students, parents, faculty, community
• Assigned work continues instruction and is used to make instructional decisions regarding students' understanding of concepts.
• If the normal learning progression continues in similar fashion to the degree had they been in school.
• We survey parents, students, and staff each year to get feedback on our days.
• Participation
• Survey principals, teachers, and parents
• Graded assignments. Annual in-house assessments.
• Based on standardized accountability.
• All lessons are built with a teaching, student practice, and reflection/formative assessment component that mirrors classroom instruction. Since most of the work is review, it may free some teacher time when students return to school.
• By evaluating student work
• Review detailed participation among students and staff as well as macro data on student achievement. In short, if there is a correlation between a decline in student achievement and NTI, we will cease to use it.
• Monitoring of student completed work to mastery.
• Common sense-ical philosophy that we will not receive 100% funding, and as in a typical school day, every student will not work six total hours, but all current learning does not take place in classrooms either, and those who do our provided NTI assignments will better maintain academic skills than those who have traditionally played in the snow on days out of school.
• From input by the teachers as to how students responded.
• Grades and test scores
• Student work samples, survey data
• Determination will made based upon: participation, grades and performances on summative evaluations
• Survey of parents and students
• We survey parents, students, and teachers. And we quality control content before and after NTI
• Teacher/parent/student feedback
• Through Parent/Student feedback along with all stakeholders as to successes of the program. We still have not used any of these days, so we are looking forward to seeing the response of all involved.
• Completion of work
• We review data from the following sources to determine effectiveness of non-traditional days: formative assessments, classroom assessments, student work on non-traditional days, feedback from parents/students/teachers, and participation rates of students.
• Evaluation of student work and participation rate.
• The work that our teachers send home is review materials, never any new material
• We look at classroom performance and test results to see if continuous learning has helped students.
• Course work
Appendix G

Survey Comments Regarding Why Districts Opted to Make Up Weather or Illness-Related Missed Days Using Non-Traditional Instruction Days

Why did your district opt to implement non-traditional instruction days instead of making up the time traditionally?

- We felt that the quality of learning that takes place on an NTI day far surpasses instruction that occurs in June.
- Attendance suffers towards the end of the year as well as staff attendance. The longer we go and any into June is a struggle.
- A resource to have in case of extreme winter weather.
- We still make up time traditionally...yet to use an NTI day.
- To maintain instructional continuity.
- Time.
- Our district feels that our students benefit more from work assigned by their teachers on NTI days vs. days made up at end of the year, usually in June.
- Because the opportunity exists to try it this way.
- We felt it brought about continuity in learning, less gaps for instruction.
- Long snow lags in learning.
- We have to place 22 snow make up days in our calendar due to high number missed in previous years.
- The number of weather makeup days to build in the school calendar is 20. In school year 2014-2015, the district ended the school year on [omitted]. We found from the first NTI year that student learning was greater for the NTI days than for the first week of June when other surrounding districts were already on summer break.
As a district of innovation, our students K-12 are very familiar with working in a personalized and blended environment, an NTI day would just be an extension and reinforcement of what is already occurring in classrooms across the district; staff and parents were surveyed and felt that it would benefit the students.

In the past we have missed a large number of instructional days and found that adding days to the end of the calendar often proved to be less instructionally beneficial.

An option for extreme weather situations.

Balancing the days during year vs extending into summer

Our make-up days were requiring us to attend school well into June. Our board asked us to consider other options for school attendance or an adjustment to the calendar.

An attempt to minimize lost instructional time.

A neighboring district was doing it so we were pressured into it by the public

To keep students engaged over unexpected breaks. Making up days at the end of the calendar when the weather is nice is counterproductive. Our absenteeism increases on make-up days.

We felt the time made up after the end of year testing was finished was not helping our students gain the depth of knowledge of the curriculum as they did during the school year without interruption.

Attendance rates decrease when other districts call off school.

Too much down time with several snow days in a row

Instruction does not have to be connected to traditional schedules.

We had [omitted] hours over state mandated 1062 and felt like it would not hurt for us to miss and have something to do. Many years we will not make up one or two days anyway so why not use these.
• We are a district with 1 to 1 access at the MS and HS along with lots of digital implementation at elementary level. This made utilizing NTI Days a reality for us.
• NTI will be used as a lot result to assist in providing continuity in student learning.
• The district felt that instructional days of any type occurring during these months would be more beneficial than those in late May or early June. Since our district tends to miss a large number of snow days we also felt this was a way for students to continue their learning, even when weather is bad.
• To continue student learning and access to instruction during inclement weather
• In hopes of not having make-up days
• To alleviate making up days into June
• It allows instruction to continue uninterrupted and is more productive than adding days to the end of the school year.
• We felt there would be more accomplished on NTI days than there would be in late May and early June.
• On average, we are a district that misses 20 plus days of school in a year. This puts us way into June for dismissal which, we feel, is not optimal for instruction.
• Continuity of learning
• Too many snow days pushing us into June, which aren't effective
• The average number of days we miss is typically 15-25 days. The interruption in consistent instruction is too large when that number of days is missed. For our district NTI Days are essential.
• Due to the amount of days missed for weather issues.
• To solidify the school calendar and to avoid going into June.
• Because of excessive weather days 20+ each year
• We believe that NTI allows us to maintain the momentum of learning more so than making up days at the end of the year. We believe adding days to the end of the year creates a "putting in time" mentality that produces no academic benefit.

• Teachers state the NTI is more "real time" than making it up after testing. It is extremely beneficial for our AP courses since the exam dates for those are nationally set.

• To maintain our calendar closing day, keep planned graduation dates, and limit June attendance days.

• We never know how weather is going to affect us. It is good to have an option.

• Calendar conflicts going late into May. Unpredictable weather in a mountainous region.

• To combat learning loss that can occur when school isn't in session because of weather conditions

• Traditional makeup days result in poor student attendance and no positive affect on mandated testing

• We feel that after testing is complete it is almost impossible to have consistent instruction up into June.

• We felt like instructional time at home was more valuable than tacked on days at the end of the year

• Already schedule 175 instructional days per year.

• For us it has been adopted to safeguard against a terrible winter and having to make-up days into June.

• Continue instruction before the testing window

• The non-traditional day allows our students to remain engaged in learning during inclement weather while remaining safe at times when travel may be hazardous. Completion of assignments and practice in reading, writing/math
skills and work on all school subjects is viewed as optimal use of the time students are spending at home during snow days.

- Harsh winters led to 25 to 30 school days missed over the last two years.
- Our staff voted to try the NTI days, to see how we felt students did with them. We were approved for 10, but decided to just try 5 days this year and see how we do with them.
- To provide continuous instruction and learning when we have multiple missed days of school.
- Continual learning
Appendix H

Survey Comments Regarding the Main Reason Districts Decided to Implement Non-Traditional Instruction Days

What is the main reason that your district decided to implement non-traditional instruction days?

- Our district provided 1:1 technology for our students prior to becoming an NTI participant. NTI days and our 1:1 technology initiative seemed like a natural fit.
- We miss many days due to weather and rural roads
- To maintain instructional continuity.
- Days missed per year due to bad weather/road conditions.
- Not having to extend the school year beyond May.
- Consistency/continuity in learning
- Long snow lags in learning.
- Keep students focused on academics throughout the year instead of end of year. End of year everyone is ready to go home. It can be a waste of instructional time when going to school in June.
- As previously stated, for school year 2014-15, [omitted] was the last day for students. Neighboring districts had already closed the previous week for summer break; it was very difficult to maintain attendance and instruction. Data indicates that the first NTI year yielded higher student participation and more quality learning than carrying the school year into June.
- During the [omitted] school year the concept of NTI days were discussed with building and district administrative personnel and it was decided that informational presentations on NTI days be conducted at each school for staff. [omitted] presentations were conducted and the majority of the staff surveyed was not supportive of the implementation of NTI days for the [omitted] school
year. As staff advanced their knowledge and experience with personalized and blended learning, the topic of NTI for the [omitted] school year was discussed among building and district administrative staff. A PowerPoint and survey was created, and [omitted] the staff surveyed was in favor of pursuing NTI days. A community survey was then created and conducted. Of those surveyed [omitted] responded that NTI days would be a positive initiative our students and families.

- As an alternative for makeup days at the end of the calendar.
- Consistency of instruction
- To combat loss of instructional time due to weather
- Pressure from the public to get out early
- To have some continuity to instruction.
- To keep the closing day at the end of the year fairly consistent from year to year.
- Too much down time with snow days
- Flexible scheduling works.
- Safety
- Main reason was to avoid going to school in the 2nd week of June or beyond.
- Our district implemented NTI in order to continue learning when students are out for several days. We are hoping that it will offer continuity to our students.
- Keeping students engaged in school even with large number of snow days.
- To continue student learning and access to instruction during inclement weather
- To avoid makeup days in late May and June
- So many families have church camps, family vacations scheduled within the first few days of June. This affected overall attendance if we had to make-up days in June.
• Instruction continues.
• Instruction continues, plus, we hope to move NTI type of student participation to the normal/regular school day.
• There is not a MAIN reason, really. Our typical number of snow days, plus our desire to step into innovation supported the decision to apply. We have been involved for 3 years and our program has been revised each year for improvement.
• Continuity of learning
• To avoid going too far into June
• To allow for consistent, rigorous, instruction to continue when large numbers of days are missed due to winter weather.
• To provide the students with ongoing instruction without a loss of time on task.
• Recover days during winters in which we miss a great number due to inclement weather. We make up the first [omitted] days missed and have the option to make up additional. We plan to use a maximum of five depending on weather factors.
• Excessive weather days
• In the grand scheme of things, 10 or fewer instructional days completed in a non-traditional manner will likely have minimal negative impact on students' overall academic achievement. We use discretion when utilizing NTI, so believe very strongly that the pros far outweigh the cons.
• All learning does not take place only in traditional classroom settings.
• We have more control over weather days.
Continuous/uninterrupted instruction bad weather can bring.

Overall, [omitted] of student population has internet capability or access.

Students are motivated to work on project based instruction

So that we could maintain some continuity in instruction and be able to get the students out of school before Memorial Day

To keep learning continuing. To spiral content

Unknown.

Unknown.

Making up days at the end of the year are not as productive

The MAIN REASON we are implementing non-traditional days is to keep students engaged in learning.

Would have been attending school well into June without relief from the State. We also wanted to avoid extended periods of time with no academic engagement.

Our district implements a lot of technology into our classrooms. So many districts are already using the NTI option that we decided to try the process and see how it worked for our students and staff.

To provide continuous instruction and learning when we have multiple missed days of school.

Continual learning
Appendix I

Survey Comments Regarding Why Districts Decided Not to Use Non-Traditional Instruction Days

Why did your district decide not to use non-traditional instruction days?

- An NTI day does not compare to a traditional day of school. Until our connectivity is strengthened across the county, we feel that there has yet to be a plan devised that serves kids appropriately.
- We are [omitted] and it wouldn't look good for us to apply and take away face-to-face instructional time.
- We believe the students learn more by being served by teachers in the school setting. Also, there is not much of a need since the state assessment is now the last two weeks that a district is in session.
- At this time, we are unsure if the non-traditional instruction will be effective enough to supplant classroom instruction. We are waiting on more data before discussing implementation in our district.
- We typically miss fewer than 5 days due to weather.
- We have enough minutes banked to not need to worry about it too much.
- We feel like students being in the classroom provide better instruction. We prefer to make up the days.
- Our board will not use them. We make up each day we miss.
- My district's daily instructional day is already extended to ensure flexibility in the calendar...
- Concern for Instructional effectiveness
  - We consider NTI less beneficial to student learning than regular school instructional days.
- Board feels more important to make up missed days in the classroom
- We are a [omitted] district and we rarely close for school.
• Our district does not routinely miss a great deal of school due to weather and we feel the quality of instruction is better when students are in attendance at school vs. home.
• We do not miss enough snow days to warrant such a plan.
• Did not see a need for NTI days in our calendar.
• Our district did apply, they were not granted to us as a district.
• We only miss 3-6 snow days a year and did not feel the need to use NTI days. Also, we do not think that NTI days are as beneficial instructionally as a traditional school day and would not consider using them at this time.
• Our administration and board felt that it devalues the educational process. Instructional time needs to be guarded wisely. We did not feel NTI days are an equal opportunity for every student.
• Do not believe that NTI are in the best interest of the child.
• We believe days spent with teachers are more beneficial
• Not every household in our district has internet access. We feel that sending a packet of work home with a student is a poor representation of a day of school. When we can assure that every household has a computer and internet access we will participate. If so, our teachers could actually communicate with their students and we would feel as if some instruction took place.
• It was not sought as a need.
• We just do not feel that the use of packets is anywhere near what the child will receive in the classroom.
• We didn't.
• We are a small [omitted] school district. [omitted]. We have very few snow days.
• Not good for kids.....a wasted day!
• Worried that we might be cheating the kids out of instruction.
• The best place for a student is in front of their teacher and receiving instruction. The board of education allocates funds for teacher salaries to teach students. As a district we want our students in front of their teachers. We are not willing to sacrifice student achievement for a longer summer break.

• Not best instructional practice for students

• Did not get approved.

• We feel it is impossible to replace the classroom instruction that is lost with NTI days

• Our district averages missing about 1.5 days/year due to inclement weather

• Our Board wants to make up days in the classroom setting. We have not missed enough days in the past to make that impossible.

• Still evaluating the potential effectiveness of these days

• Just don't..... we do not miss many days due to weather etc.

• The staff did not favor its use at a high enough rate for effective implementation.

• We don't believe you can provide the same rigor with a packet as you have in the school setting. We feel like students are being short-changed by using non-traditional days.

• [omitted]. [omitted] not guarantee the consistency or validity of the work students were doing, some teachers issued grades on snow day work and others didn't, and we know in our district some kids don't have families that are home to help them on snow days while others do. Additionally, we have [omitted] student days in our initial calendar, so if we were to use non-traditional days our students could be in school only [omitted] days and we feel like that would put them at an unfair advantage. While non-traditional school work can be quality work, we don't have a way to guarantee it is of equal value of having a teacher in the classroom. We feel our kids deserve at least [omitted] days in the classroom with teachers. Many schools using non-
traditional days start out with 175-177 student days so they end up with approximately 170 in the end by using 5-7 days, and some may use 10 which could take them under the 170 days.

- Did not qualify when it was first available. We normally miss fewer than 10 days each year.
- Board was not interested.
- We applied and the application was for some reason not approved.
- We feel the educational day would be more valuable spend as a makeup day first and foremost, but also the loss of transportation and feeding funds also would hurt our shrinking district budget. What would we do with cooks, aids, bus drivers etc. they are contracted to work?
- We had several reasons for not participating. One big reason was the dilemma that presented itself with employee contracted days, specifically classified employees and being able to find things for them to complete to make up NTI days in their contracts. Another area that has made us hesitant to utilize NTI days is the fact that our food service program at the [omitted] is a [omitted] and could cause us to not have enough participation to keep our eligibility for that program.
- We have very successfully utilized make-up days, and even extended days, in winters where 10+ days were missed due to snow; have been able to complete the school year prior to June 1. We have discussed NTI at length, and our MS/HS teachers do employ quite a bit of blended learning (embedded tech). We feel that any makeup day would be more beneficial than any NTI day. We would have a fairly large chunk of students with an IEP, or lack of internet access, or limited electronic devices to access the internet to participate in remote learning. Based on KDE website data, in 2015-16 NTI was used by 44 of the 174 districts. [omitted] of those districts scored higher than our district in the state accountability measures. My counterparts in neighboring districts
using NTI report that the instructional time during the first day(s) returning from NTI are often used to 'do the NTI homework packets to get the participation rate up so the NTI day(s) count'. I do feel that NTI would work ok for a smaller segment of our population. I can think of some AP HS courses with highly motivated students who have access to resources to learn remotely. Lastly, I think NTI in its original format - for use by districts with 20+ weather days for three years in a row - probably was overall better than those districts having to extend the school year into the 3rd or 4th week of June.

- Not an effective use of the instructional day.
VITA

KAREN R. HAMMONS

EDUCATION

May, 1997  Bachelor of Arts
           Morehead State University
           Morehead, Kentucky

July, 2003  Master of Arts
           Morehead State University
           Morehead, Kentucky

Pending  Doctor of Education
         Morehead State University
         Morehead, Kentucky

PROFESSIONAL EXPERIENCES

July 2010-Present  Instructional Supervisor
                  Bath County Schools
                  Owingsville, Kentucky

July 2005-July 2010  Assistant Principal, Bath County Middle School
                     Bath County Schools
                     Owingsville, Kentucky

                     Bath County Schools
                     Owingsville, Kentucky

July 1999-Jan. 2004  Teacher
                     Bath County Schools
                     Owingsville, Kentucky

July 1998-July 1999  Teacher
                     Rowan County Schools
                     Morehead, Kentucky
July 1997-July 1998  Teacher
Bath County Schools
Owingsville, Kentucky

HONORS

May, 1997  Outstanding Undergraduate in the Education Department
Morehead State University
Morehead, Kentucky