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Initially Budgeted Stimulus Funds for Special Education by Local Education Agencies
in East Tennessee

A dissertation

presented to

the faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education in Educational Leadership

by

Martha Hughes Murray

August 2011

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Dr. Donald Good

Keywords: stimulus funds, ARRA funds, special education

ABSTRACT

Initially Budgeted Stimulus Funds for Special Education by Local Education Agencies in East Tennessee

by

Martha Hughes Murray

The purpose of this study was to determine how Individuals with Disabilities Education Act (IDEA) Part B funds in the American Recovery and Reinvestment Act (ARRA) were initially budgeted for sustainable or unsustainable purposes by the 50 Local Education Agencies (LEAs) in East Tennessee in 2009-2010. Federal guidance for use of ARRA funds suggested funds should be spent quickly to create or save jobs and support education reforms. Thoughtful investment in order to avoid the funding cliff when ARRA funds ended was also stressed. The one-time funds presented a substantial increase in federal dollars and provided opportunity for LEAs to reduce maintenance of effort, the level of state and local funds an LEA must maintain in order to receive federal funds. The study was conducted to determine if significant relationships existed among the percentage of economically disadvantaged students, the percentage of dollars taken in reduction of maintenance of effort, geographic demographics of the LEAs, and the percentage of dollars budgeted for sustainable purposes.

Data sources included the 2009-2010 IDEA Part B ARRA budget applications and 2009-2010 IDEA Special Education Services LEA Budget Applications as approved by the Tennessee

Department of Education. The LEA Report Card Profiles were the source for the percentage of economically disadvantaged population.

Significant results were found in the difference in dollars budgeted for unsustainable and sustainable purposes with more funds for unsustainable efforts. No significant relationships were found among the percentage of dollars budgeted for sustainable purposes, the percentage of reduction in maintenance of effort, the percentage of economically disadvantaged students, and the rural-urban index classifications of the LEAs.

The study indicates the importance of careful long-term planning by LEAs to identify and prioritize needs in order to appropriately budget short-term funds to the best advantage for students. There may also be implications for state and federal entities that underscore the importance of specific structuring and clear communication of parameters for use of short-term funds.

DEDICATION

To the memory of my father Edward Ward Hughes, who recognized the importance of education, sacrificed his own aspirations to provide opportunity for his children, and inspired me to be a life-long learner.

To my mother Dorothy Hughes, who shared the sacrifice and has been a constant source of encouragement.

To my husband Lynn Murray and daughter Leanne Murray, for their love and support.

To my brothers Grady Hughes and Charles Douglas Hughes, who encouraged me to pursue a dream.

To my Lord and Savior, Jesus Christ, for strength and ability.

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Dr. Pamela Scott has been a constant source of support and encouragement through the cohort and through the preparation of my dissertation. Her skill as an instructor and her wise counsel as chair of my committee have enabled me to remain on target through the process.

Dr. Cecil Blankenship provided initial instruction to the cohort, guided me through independent studies, and offered encouragement at key times.

Dr. Eric Glover was actively involved in the formation of the cohort and has provided assistance along the way.

Dr. Donald Good provided on-going guidance in the research process and has continuously provided assistance in refining the study.

I owe a debt of gratitude to Dr. Soo-Hee Park who worked diligently in analyzing the data for my study.

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CHAPTER 1

INTRODUCTION

The American Recovery and Reinvestment Act of 2009 (ARRA) included a major increase in funding for special education under Part B of the Individuals with Disabilities Education Act (IDEA). These one-time funds channeled through the states were made available to Local Education Agencies (LEAs) beginning with the 2009-2010 school year. The funding, which could be expended over a 1-or 2-year period, effectively doubled the annual allocation of federal IDEA funds received by individual LEAs for support of programs for students receiving special education services. According to the U.S. Department of Education (U.S. DOE, 2009a), the overriding purposes of the funding were to save and create jobs, enhance programs through innovative strategies, and improve outcomes for children. If spent wisely these funds had potential to yield benefits and bolster education infrastructure for future years. Within guidelines established by the federal government and administered by the states, LEAs were presented with the opportunity to consider and implement innovative ways of improving services to special education students.

Statement of the Problem

Each LEA received notification from the Tennessee Department of Education (TN DOE) of the amount of funds from the ARRA that would be received for use in 2009-2010 and 2010-2011. Guidance was given from the federal government to the states and to LEAs regarding the expenditure of funds. At the midpoint, 1 year into the funding, studies of the allocation or use of the ARRA funds for special education at the national level or in Tennessee are minimal or not available. The purpose of this inquiry was to provide insight into how the ARRA funds were initially budgeted by LEAs in East Tennessee for sustainable or unsustainable purposes. The

study also was intended to determine if there was a significant relationship between geographic demographics, the percentage of economically disadvantaged students, reduction in maintenance of effort, and the budgeting of the funds.

In accordance with a provision in 2004 IDEA legislation, maintenance of effort (the state and local funds budgeted and used for special education) could be reduced by an LEA if there was an increase in IDEA dollars for special education in a subsequent year (U.S. DOE, 2009c). Prior to 2009-2010 the increases in allocations of IDEA funds had not been substantial enough to enable or encourage LEAs to reduce maintenance of effort. The addition of IDEA ARRA dollars served to increase federal dollars by approximately 100% over and above the federal IDEA allocations previously received by LEAs for special education. This provided opportunity for LEAs to reduce maintenance of effort in 2009-2010; however, only some of the LEAs chose to make the reduction.

Funding for special education from all sources including the use and sustainable impact from the investment of ARRA dollars were valid concerns, particularly in a climate of increased accountability and tight or austere budgets. The study was timely and was intended to provide insight into these areas.

Research Questions

The following research questions were investigated in the quantitative study of the budgeting of IDEA Part B ARRA funds by LEAs in East Tennessee.

1. Were the number of dollars budgeted for sustainable efforts significantly different from the number of dollars budgeted for unsustainable efforts by LEAs?

2. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars budgeted for sustainable purposes by LEAs?
3. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars taken in reduction of maintenance of effort by LEAs?
4. Is there a significant relationship between the rural-urban index classification and the percentage of sustainable dollars budgeted by LEAs?
5. Is there a significant relationship between the rural-urban index codes and the percentage of dollars taken in reduction of maintenance of effort by LEAs?
6. Is there a significant relationship between the dependent variable, (a) percentage of dollars budgeted for sustainable purposes and the independent variables, (b) the percentage of economically disadvantaged students, and (c) the percentage of dollars taken in reduction of maintenance of effort?
7. Are there meaningful groups or clusters that summarize budget patterns for ARRA funds in LEAs using (a) the percentage of economically disadvantaged students, (b) the percentage of dollars taken in reduction of maintenance of effort, and (c) the percentage of dollars budgeted for sustainable purposes?

Significance of the Study

The funding made available through the ARRA was a major one-time increase in monies for special education programming. The study was completed at the end of the first year of the 2-year period during which ARRA funding was available. As LEAs continued to use the allocated ARRA funds for special education, a study of this nature was intended to identify areas

and changes that would have more sustained effects in programs serving special education students. Study of the use of ARRA funds was limited at the national level and had not occurred in Tennessee; therefore, an investigation into the use, sustainability, and problems associated with the funds was timely, warranted, and appropriate. Insight into issues and concerns identified in the study may be applicable for future funding of similar nature.

Scope of the Study

A quantitative study was used to examine and analyze the budgeting of ARRA funds and the reduction of maintenance of effort by LEAs in East Tennessee. The budget year 2009-2010 chosen for study was the first of 2 years that stimulus funds were available to local school districts. The ARRA dollars provided LEAs the opportunity to reduce maintenance of effort during the 2009-2010 budget year; however, only some LEAs chose to make the reduction. In 2009-2010 each LEA budgeted the total allocation of stimulus funds into line items. These funds were available for expenditures during the 2009-2010 and 2010-2011 budget years over a period of 27 months. Funds that were to be expended in the second year were budgeted into specific line items such as Other Materials and Supplies or Other Contracted Services. At the end of the 2009-2010 year each LEA budgeted unexpended funds into line items in a carryover budget for use in the 2010-2011 year. The database in the study consisted of 50 LEAs receiving ARRA funds for special education in East Tennessee. One LEA in East Tennessee, a state special school serving students across the state, was not included in the study because it did not have comparable geographic demographics and funding sources to the other 50 LEAs in the region.

Limitations of the Study

The study of the initial budgeting of ARRA funds by LEAs in East Tennessee had the following limitations that must be recognized:

1. The study examined the budgeting of ARRA funds for special education in 2009-2010, the initial year of availability. LEAs continued to use remaining allocated funds in 2010-2011, the second year of availability, and were able to alter the areas in which funds were budgeted.
2. The study focused on LEAs in East Tennessee; therefore generalization of the findings to other divisions of the state or to other states may not be applicable.
3. Amendments reflecting changes in the budgeting of ARRA funds by LEAs were not included in the data used in the study. Budgets were subject to amendment throughout the 15 months during which they were effective. The possibility of multiple amendments greatly increased the difficulty in insuring that all changes to all budgets were reflected in the data; therefore, the initial budgeting of funds by LEAs was used in the study. Data reflecting all ARRA amendments was not available at the time of this study.
4. The study included only IDEA Part B ARRA funds allocated for special education for students 6-21 years of age. Allocations of IDEA Part B Preschool ARRA funds for special education services for students 3-5 years of age were small, reflected in separate budgets by the LEAs, and not included in the study.

Definitions of Terms

The following terms were used as defined in the study:

1. American Recovery and Reinvestment Act of 2009 (ARRA) – Public Law 111-5 that appropriated funds “for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization” (American Recovery and Reinvestment Act of 2009, para. 1).

2. Freed up funds – general purpose funds from state and local sources or from local sources which are usually used for special education but were available for use in regular education for activities allowable under the Elementary and Secondary Education Act (ESEA) when the maintenance of effort was reduced. (U.S. DOE, 2009c, p. 17).
3. Geographic demographics – factors including population size and proximity to a metropolitan area used to describe or classify counties with metropolitan or nonmetropolitan designations.
4. Individuals with Disabilities Act (IDEA) – federal law that insures that students with disabilities are entitled to a free appropriate public education.
5. Local Education Agency (LEA) – a local school district that may be a city, special school district, county, or state special school.
6. Maintenance of Effort – the level of state and local funds that a local education agency must maintain in each subsequent year in order to receive federal funds.
7. Reduction in Maintenance of Effort – the decrease in the level of state and local funds a local education agency must maintain in order to receive federal funds. (U.S. DOE, 2009c, p. 17).
8. State special school – a school administered and funded by the state of Tennessee for students with low incidence disabilities such as blindness, hearing impairment, or deafness.
9. Stimulus funds – appropriations from the American Recovery and Reinvestment Act 2009 (ARRA).

10. Sustainable efforts – goods or services that have a lasting value of more than 1 year, such as staff development or equipment; expenses that are not recurring at regular intervals such as yearly.
11. Unsustainable efforts – goods or services that have a lasting value of a year or less and are recurring expenses at a frequency of 1 year or less, such as salaries, benefits, supplies, travel, and contracted services.

Overview of the Study

Chapter 1 includes the introduction of the study, a statement of the problem, and a listing of the research questions to be investigated. Chapter 2 encompasses a review of the literature relative to ARRA funds; this is prefaced by an overview of early development and financial support of education. Literature specific to ARRA in the following areas are also included in the review: the passage of ARRA and guidance provided to LEAs, accountability, reduction in maintenance of effort, use and projected impact of ARRA funds, program cuts and funding shifts, the funding cliff, and concerns and issues resulting from the availability and use of ARRA funds. Chapter 3 describes the research design, the research questions, a description of the data including the data source and collection, an explanation of the procedure for data analysis, and a summary. Chapter 4 includes the analysis of the data and a summary. The findings of the study, recommendations for practice, recommendations for future study, the summary of general findings comprise Chapter 5.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Among the provisions of the American Recovery and Reinvestment Act (ARRA) of 2009 passed by the U. S Congress and signed into law was one-time major funding of 12.2 billion dollars for special education programs during 2009-2010 and 2010-2011 academic years. Available literature related to the topic, specifically the use of ARRA funding for special education, was limited. As this study began research into the use of these funds was not prevalent. Literature written specifically about ARRA funding for special education was found in professional journals, U.S. government articles, and reports generated by state and federal governments. Chapter 2 is a brief review of the development of education in the United States, including major laws, policy, and funding. The passage of ARRA and guidance provided to LEAs, use of the funds, program cuts and retentions, funding shifts, accountability, the funding cliff, and related concerns and issues resulting from the availability and use of ARRA funds are an integral part of this chapter.

Early Development and Financial Support of Education

Pulliam and Van Patten (2007) detailed the development of education across the colonies and the influence of religion and social class on the development of education. They described a range in opportunities from “no single educational pattern” (p. 91) and “a lack of public interest in schools” (p. 91) in Southern colonies to a variety of schools influenced by religious and cultural differences in Middle colonies. In the New England colonies “positive support of religion required not only the creation of schools but also that every child be able to read and understand both the Scriptures and the capital laws” (p. 96).

Variety in financial support and opportunity for education was described by Pulliam and Van Patten (2007). They noted that education was the responsibility of each family according to its financial means. Children of wealthy Southern landholders were educated by tutors while children of working class families were apprenticed to learn a trade. Children of poor families usually lacked opportunity for being educated. “Charity education” (p. 91) provided by religious organizations and charitable societies “for the training of orphans and paupers” (p. 91) was an exception.

Pulliam and Van Patten (2007) described varying public financial support for education across the colonies. They noted that funds were set aside in Virginia in 1618 but were no longer available when the charter of the Virginia Company was revoked. Laws requiring instruction in religion for children were passed without the necessary funds for implementation. They further noted differences in the Middle colonies in the schools and institutions supported by local congregations and in private schools supported by tuition charged in towns. Pulliam and Van Patten indicated that church related and supported schools continued until after the American Revolution when financial support from England ceased.

The Old Deluder Satan Act of 1647 enacted in Massachusetts was “the first major school law” (Pulliam & Van Patten, 2007, p. 25). Sparkman (1994) noted the importance of the act that began to “formalize the schooling process by requiring towns of fifty households to employ a teacher” (p. 571). Sparkman further commented that towns of 100 households were mandated to provide a school and a teacher to prepare students beyond basic reading and writing for study at the university. He noted that the law required parents or the town to pay the teacher’s salary; noncompliance resulted in a fine against the town that was then given to a school. Sparkman also indicated that schools were in other towns in Massachusetts prior to 1647. “Such laws

began to accustom the people to the idea that government had the right and, indeed, the duty to require the provision of education for children” (Sparkman, 1994, p. 571).

Pulliam and Van Patton (2007) suggested that as parents were inconsistent or uninvolved in supporting the education of their children, the responsibility for establishing and maintaining schools was assumed by towns. They noted the 1648 property tax in Dedham, Massachusetts for the support of schools as the first example. In time similar taxes in other locales paid teachers and provided school buildings.

Rury (2005) noted federal support of education in the 1797 passage of the Northwest Ordinance “which provided for the sale of public (federal) lands to support education, as a condition for admitting new states to the union” (p. 81). He indicated that the support set a precedent for government involvement that continued as the nation grew. Rury noted the movement toward education reform in areas such as more consistency among schools, longer school terms, trained teachers, and financial support from property taxes. Although opposition to reform had begun to fade by the 1860s, changes in education occurred at an uneven pace in states and regions of the country (Rury, 2005). The uneven progression of education reform in schools and funding among states was also noted by Pulliam and Van Patton (2007).

The Constitution of the United States makes no mention of education. The Tenth Amendment states, “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people” (U.S. Constitution, Tenth Amendment). The power and responsibility for education was retained by states through these words of the Tenth Amendment. Pulliam and Van Patten (2007) noted that the states have supplemented local districts financing of education through a variety of sources including sale of public lands in the 1700s and tax levies. They also discussed how the federal

government's right to levy taxes was underscored by the Whiskey Rebellion in 1794 and was a source of offense by segments of the populace.

Cross (n.d.) wrote of the progression of influence by the federal government into education. He described the sphere of influence as moving from offering guidance to that of directing policy and practice in states across the country. Effect from the federal government was facilitated by inaction of states and by political and social changes in the country. Cross summarized these changes in categories including “(1) national security and defense, (2) international economic competitiveness, (3) civil rights, (4) religion, and (5) the War on Poverty” (p. 2). Federal actions in each of these areas generally included legislation with attached funding for specific initiatives.

National security and defense as discussed by Cross (n.d.) became a focus due to the level of illiteracy and lack of skills among men drafted in World War I. He indicated that this was initially addressed through passage of the Smith-Hughes Act in 1917, which reformed curriculum and provided funding for vocational education. This eventually became the Perkins Act. Another important piece of legislation noted in his writing was the Impact Aid Act of 1950 that provided financial relief to communities with military installations that could not be taxed by local government to offset the cost of educating the children of military personnel.

Cross (n.d.) discussed the evidence of federal influence on international competitiveness that resulted from the launch of Sputnik in 1957; this was apparent in the emphasis on math and science necessary for producing scientists and engineers. He stated this was addressed by the federal government in the passage of the National Defense Education Act of 1958. He recognized that international competitiveness has continued to be an issue as recently as in the Goals 2000 legislation passed in the Clinton administration.

Cross (n.d.) noted that implementation of Civil Rights legislation was initially slow but had lasting influence with the introduction of federal funds through key pieces of legislation that impacted education, including the Education of All Handicapped Children Act of 1975 (EHA or Public Law 94-142). This act provided the legal and financial basis for the education of students with disabilities many of whom had limited access or were excluded from school on the basis of disability.

The U.S. DOE (n.d.c) described the passage of EHA, Public Law 94-142 as the forerunner to other legislation and subsequent amendments including the name change to Individuals with Disabilities Education Act (IDEA). Appropriate and effective programming in the least restrictive environment, protection of rights of children and parents, and extension of service from birth for children resulted from advanced legislation. IDEA also addressed needs of older students with disabilities including transition services to prepare students for adult living, postsecondary education and vocational skills, linkage with community services, and improvement in high school graduation rates (U.S. DOE, n.d.c). The U.S. DOE (n.d.b) detailed No Child Left Behind (NCLB) in the 2001 and subsequent 2004 reauthorization of IDEA during the Bush administration as legislation that strengthened the relationship between regular education and special education as schools are held accountable for addressing individual student needs and insuring student achievement through the use of research based instructional programs.

Cross (n.d.) discussed how religion, including separation of church and state, has commanded attention at the federal level for over half a century. Important federal policy regarding the use of funds to benefit the students and not the school in parochial settings was set in the passage of the Elementary and Secondary Education Act (ESEA). Cross predicted that

future funding for students in parochial schools will likely result in restructuring curriculum to be more congruent with public schools, student testing, and increased accountability. As significant numbers of students attend private parochial schools, the issue of school vouchers has continued.

Cross (n.d.) commented that in the haste to address social issues such as race, religion, and poverty, major pieces of legislation such as ESEA were enacted without developed accountability safeguards planned or in place. He stated that the issue was raised by Robert Kennedy before 1964 passage of ESEA but was not really addressed until NCLB in 2001. He indicated that the impact of ESEA increased over time with related legislation and reauthorizations. “By 1994 the federal government had moved from being a passive actor providing funds, research, and some guidance to the schools, to being the partner that provided the intellectual framework for school reform and education improvement” (pp 10-11).

Cross (2004) wrote of many other significant changes that were initiated from the Kennedy and Johnson administrations as the federal government became actively involved in education. The creation of research centers or regional laboratories at universities and the growth of state departments of education are examples of the changes. Cross suggested that because the federal government lacked the capability for administering programs and funds with the multitude of school districts across the nation, the responsibility was vested in states to have the necessary staff and expertise but with somewhat limited funding.

The U. S. Department of Education (n.d.a) regarded responsibility for education as that of states and local communities; this has been reflected as such in current overall funding. Federal dollars for elementary and secondary education from all sources including the Department of Education, Head Start in Department of Health and Human Services, and the school lunch program in the Department of Agriculture were stated to be about 10.5% while state and local

support comprised approximately 89.5%. The U.S. DOE (n.d.a.) acknowledged the expenditure of federal funds in targeted areas to achieve the greatest impact and to supplement programs supported by state and local dollars.

In summary, education in the United States has evolved from colonial times when children of affluent parents studied the classics to the present day compulsory attendance for all students including those with disabilities. The focus on quality research based programs, student achievement, and school accountability is directed toward preparing students to live in today's world. Although responsibility for education is vested in the states, the role of the federal government has increasingly advanced through the infusion of funding from legislation passed by Congress from the 1960s forward. "Federal dollars are often the 'leadership dollars' to ensure that needs are met, progress is made, and all children are served" (Cross, 2004, p. 155). Despite the growing influence only a small portion of the costs of education is funded by the federal government.

Passage of ARRA and Guidance to LEAs

The American Recovery and Reinvestment Act of 2009 was in response to the financial crisis facing the nation. Gravelle, Hungerford, and Labonte (2009) described economic stimulus issues and policies and summarized steps taken by the government to address the declining economy, including intervention in financial markets and ultimately the passage of ARRA. They explained that the legislation was a combination of spending for infrastructure, unemployment benefits, revenue to states, and tax cuts for middle class and business intended to counter the economic recession at the end of 2008.

Gravelle et al. (2009) explained that stimulus spending contained in the ARRA legislation was expected to increase the federal deficit; however, spending by the government or

by business or individuals receiving tax cuts would increase overall spending and boost the economy. They indicated that direct government spending in areas generally supported by government funding would result in maximum economic impact while tax breaks for individuals may be spent or saved by the recipients. “Many economists have reasoned that higher income recipients would save more than lower income recipients since U.S. saving is highly correlated with income” (Gravelle et al., 2009, p. 13). Stimulation of the economy through tax breaks for business was also viewed by Gravelle et al. as somewhat less effective due to the time necessary for startup or expansion planning and the typical slowed nature of business during times of recession. Gravelle et al. reported that direct spending by government on planned projects such as infrastructure awaiting funding was the most expeditious means of stimulating the economy across the broad spectrum of society and the country.

The purposes of the American Recovery and Reinvestment Act of 2009 were stated in the initial words of the bill passed by the 111th Congress: “An Act making supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization, for the fiscal year ending September 30, 2009, and for other purposes” (2009). The U.S. DOE (2009b) noted the high level of accountability and transparency to be addressed through mandatory quarterly reporting by recipients on the use of the funds; the reports were to be posted on Recovery.gov for public review.

The U.S. DOE (2009a) described ARRA as providing \$100 billion for education to save jobs and to support school districts in reforming and improving education for students at all levels, including early learning, K-12, and postsecondary. Stated principles of ARRA funds for education were outlined in four categories: “(a) Spend funds quickly to save and create jobs; (b)

Improve student achievement through school improvement and reform; (c) Ensure transparency, reporting and accountability; (d) Invest one-time ARRA funds thoughtfully to minimize the ‘funding cliff’” (para. 2). Suggested education reform to affect student achievement included enhanced “college and career-ready standards” (para. 2), development of “pre-K to college data systems” (para. 2) to track student progress, increased “teacher effectiveness and . . . equitable distribution of qualified teachers for all students” (para. 2), and “intensive support and effective interventions for lowest performing schools” (para. 2). The U.S. DOE specifically cautioned school districts about the potential funding cliff that could result from unsustainable obligations when the one-time, temporary funds were no longer available.

The portion of funds designated for education of students with special needs was stipulated in the ARRA (2009) as “\$12,200,000,000, of which \$11,300,000,000 shall be available for section 611 of the IDEA. . . . That \$400,000,000 shall be available for section 619 of the IDEA and \$500,000,000 shall be available for part C of the IDEA” (ARRA, 2009). The U.S. DOE (2009b) offered further explanation of ARRA funds for IDEA that included \$11.7 billion; \$11.3 billion was for IDEA Part B and \$.4 billion was slated for IDEA Part B Preschool services. Among other ARRA monies for education of students with special needs was \$500 million for IDEA Part C, Infants and Children. The timeline for awarding the funds was explained by the U.S. DOE; 50% of the ARRA funds were to be available to the states by the end of March 2009 and the remaining 50% was to be available by October 1, 2009. State education agencies were instructed by the U.S. DOE that monies received in March 2009 were to be available to LEAs by the end of April 2009; all funds were to be obligated by LEAs by September 30, 2011.

Direction provided by the U.S. DOE (2009b) indicated “all IDEA ARRA funds must be used consistent with the current IDEA, Part B funds statutory and regulatory requirements and

applicable requirements in the General Education Provisions Act (GEPA) and with the Education Department Administrative Regulations (EDGAR)” (para. 5). These funds were to be used only for the extra cost of providing services to students with disabilities. The U.S. DOE advised use of the funds for sustainable purposes directed toward reform and increased access to the general curriculum for students with disabilities. Several suggestions for the use of funds were offered by U.S. DOE: (1) purchase of assistive technology and training in appropriate use, (2) system-wide professional development for regular and special education teachers in evidenced based strategies in core areas and behavior support, (3) data collection and use to enhance student progress, (4) expansion of inclusive preschool placements, and (5) transition services and staff to increase community job placements.

Accountability

The U.S. DOE (2009b) emphasized that an “unprecedented level of transparency and accountability” (para. 1) was expected of states and LEAs. Separate accountability in the use and the impact of ARRA funds was required. Posting of reported expenditures to the government website, Recovery.gov, was promised by the U.S. DOE. In reviewing the mandate for accounting for stimulus funds, McNeil (2010a) commented, “The expectations for public information about the stimulus program have been set extremely high, from President Barack Obama on down” (p. 1); however, initially the information about ARRA funds made available to individual states was not readily provided to the public despite the guidance from the U.S. DOE and assurance from the Obama administration. McNeil noted that accountability for reporting the funds belonged to the federal, state, and local governments in a variety of ways. The responsibilities for the federal government included maintaining a website with current information to provide ongoing public communication about stimulus funds. McNeil (2009a)

reported that states were responsible for quarterly reporting of expenditures of stimulus funds and numbers of jobs saved or created. She stated that LEAs were responsible for maintaining accurate and detailed records of spending including contractors or subcontractors hired and for reporting on IDEA funds already in place.

Klein (2009b) commented on the obstacles that were inherent in managing stimulus funds made available by the passage of ARRA. The enthusiasm of the states and local school districts to receive the funds and the hopes of some congressmen for substantial increases in funding that would begin to flow quickly to states for programs including IDEA for special education was discussed. Klein noted specific challenges to transparency in the management of ARRA including effective communication between the federal government and states with differing needs as parameters for the funds were established while some top political positions at the U.S. DOE remain unfilled. Klein also recalled caution from former U.S. Secretary of Education Margaret Spellings about potential attempts by individual Congressmen to influence funding in specific instances. In considering the task ahead for Secretary of Education Arne Duncan, Klein suggested, "... Secretary Duncan will have to hold school officials accountable for following through on 'transparency' requirements in the stimulus measure, which call for schools to give public notice, on the Internet of how the funds are being used" (p. 23).

In view of the commitment to transparency and accountability from the federal government, McNeil (2009c) considered the difficulties and inconsistencies that occurred in the first quarterly reporting of expenditures of ARRA funds by school districts. She noted that print media such as the Chicago Tribune and USA Today discovered inaccurate reporting in the numbers of jobs created or saved, sometimes exceeding the personnel of the school district. The other issues she listed included an inflexible reporting form used by all ARRA recipients,

inconsistency in detailed reporting in the kinds and areas where jobs were saved or created, and a lack of information about purchases with ARRA dollars. In subsequent quarters McNeil (2010) noted that parameters for reporting were altered by the federal government; initial instructions included a formula for calculating jobs saved or created because of ARRA funds regardless of whether they were positions paid through ARRA funds. Revised instructions from the federal government were set to calculate jobs saved or created using time worked only if funded by ARRA. McNeil pointed to the difficulty and inconsistencies in attempts to compare the data.

Reduction in Maintenance of Effort

Information issued by the U.S. DOE (2009c) indicated that the ARRA funds “are in addition to the regular federal fiscal year (FFY 2009) Part B awards that will be made on July 1, 2009” (p. 8, para. A-1). The increase in federal funds provided individual LEAs the opportunity to reduce the maintenance of effort, the level of state and local funding that an LEA must budget and expend for special education in each fiscal year. The U.S. DOE indicated that in accordance with the provision in IDEA Section 613(a)(2)(C) of federal law (34 CFR § 300.205), an LEA may reduce its maintenance of effort by up to 50% of the increase in federal funds.

The U.S. DOE (2009c, pp. 17-18) indicated that in accordance with IDEA Section 613(a)(2)(C) of federal law (34 CFR § 300.205) a LEA may reduce its maintenance of effort when certain requirements are met including: (1) the LEA receives an increase in IDEA Part B funds over the previous year, (2) the LEA is determined by the state education agency to meet requirements of Part B and target performance levels in the state plan, (3) the LEA provides a Free Appropriate Public Education (FAPE) to students with disabilities without intervention by the state education agency, and (4) the LEA does not have disproportionality in categories in accordance with 34 CFR§300.646. In determining reduction in maintenance of effort the Fiscal

Year (FY) 2009 IDEA Part B allocation is compared with the 2010 IDEA Part B and the IDEA Part B ARRA allocations a LEA is projected to receive. U.S. DOE (p. 17) indicated that an LEA may reduce maintenance of effort by up to 50% of the increase in IDEA funds. The reduction must be used for expenditures that would be appropriate under the Elementary and Secondary Education Act. Maintenance of effort remains at the reduced level until the LEA chooses to increase it again. Additional guidance from U.S. DOE (2009b) specified that an LEA may take up to 15% of IDEA Part B and Preschool funds for early intervening services for K-12 students not identified as eligible for special education; funds taken for early intervening services must be calculated into the overall reduction in maintenance of effort.

The maintenance of effort required of states in order to receive federal funds to pass to LEAs was addressed by the U.S. DOE (2009b). In some circumstances such as a disaster, financial crisis, or downturn, the Secretary of Education could grant a 1-year waiver of the maintenance of effort to individual states. There were no similar waivers for LEAs.

The opportunity and effects of a reduction of maintenance of effort was a consideration for school districts. Rebell, Wolff, and Yaverbaum (2010) discussed that provisions in Title I and IDEA that allowed school districts to take a part of the state and local funds and use in regular education rather than expanding, improving, or instituting new services for economically disadvantaged or disabled students. They noted that although the provision was included in IDEA in 2004 it had been unused by school districts because increases in federal funds from year to year were not substantial enough to warrant a reduction in maintenance of effort. With the allocation of stimulus funds that effectively doubled the amount of federal funds received by a school district, a reduction in state and local funds up to half the amount of the stimulus funds was taken by many districts. Rebell et al. commented that the provision that allowed reduction

effectively perpetuated the reduced level of state and local dollars for services to students with disabilities in future years. They recommended that Congress “close an IDEA loophole” (p. 5). In reviewing the report of Rebell et al., McNeil (2010b) commented that the stimulus funds presented school districts the funding for reform but also “set the stage for long-term – and not necessarily positive – consequence” (p.1). She noted that the U.S. DOE was aware of the concern and assured that stimulus funds were spent appropriately for eligible students.

Naik, Yorkman, and Casserly (2010) discussed the responses of LEAs in large cities to the possibility for reduction in maintenance of effort available under IDEA as a result of the infusion of ARRA funds. They reported that LEAs anticipated using the resulting dollars for program reform and improvements and to fill gaps in local funding. A narrow interpretation of the provision by US DOE prohibited a reduction in maintenance of effort by LEAs that were designated as needing assistance in implementing IDEA requirements. Naik et al. noted that “the standard for a school district needing assistance, moreover, differs from state to state, and there is no single definition of what this label means or available data on how many districts would fall into this category” (p. 30).

Use of ARRA Funds

Guidance from the U.S. DOE (2009a) reflected the expectation that states institute educational reforms in key areas including student achievement, teacher effectiveness, data collection, and improvement of low performing schools made possible by funding from the passage of the ARRA. Klein (2009a) noted that the government guidelines for timely distribution of stimulus funds also enhanced the government’s ability to require improvements in school districts. She echoed the government warning that LEAs should not expect the enhanced funding level made possible by ARRA monies to continue over time, rather the funds should be

used “over the next two years for short-term expenditures that could have longer-term benefits for student learning” (p. 1).

Even in a time of unfavorable economics, Hess (2009) questioned the state of financial woes of school districts and the effect that stimulus funds would have in bringing about the intended education reform outlined in the law. He indicated that current budget levels stemmed from the 1970s in which increases in numbers of teachers exceeded the increases in student population; in recent years the increase in teachers was more than twice the increase in numbers of students. Hess contended that difficult cuts or changes to budgets, personnel, and programs were evident when necessitated by stringent financial circumstances. He predicted the availability of stimulus funds would likely enable school districts to fill funding gaps and maintain the status quo rather than make changes necessary for reform.

Ellerson (2009) discussed the response of 160 members of the American Association of School Administrators to a survey of the use of ARRA funds by school districts in 37 states. Her summary of the survey indicated that “a lack of flexibility in the funding and the use of the money to backfill federal, state, and local budget holes have limited the ability of districts to implement innovative reforms and changes” (p. 2). She noted that school districts used or planned to use ARRA funds for “one-time costs such as professional development, classroom technology and classroom supplies” (p. 1). She found that some staff positions were saved, but more than half of the responders reported the districts were unable to save core or special education positions with ARRA funds. She also reported the time necessary for reporting and for working with bureaucracy were listed as issues that diverted attention from student achievement.

Samuels (2009) discussed cautions raised as a result of the special education stimulus funds available to school districts. She noted 12.2 billion dollars from the ARRA was in addition to 11 billion dollars already available to special education that school administrators have considered to be under funded. Guidelines from the U.S. DOE cautioned that stimulus funds should be used as “short term investments that have the potential for long term benefits” (p. 6) such as staff development. Samuels commented that administrators were aware the expansion of program and staff would result in the shift of the financial responsibility to LEAs when stimulus funding ends, in accordance with IDEA provisions that prevent substantial cuts in special education programs year to year.

Naik et al. (2010) investigated the use of ARRA funds including those in IDEA Part B by LEAs in major cities. They commented that 40 LEAs responding to the series of four surveys reported having received 1.4 billion dollars between June 2009 and January 2010. Naik et al. found among LEAs able to reduce maintenance of effort that some made the reduction while others did not want to take the reduction. The LEAs reported approximately 8,773 full-time equivalent jobs were paid with the funds. LEAs in major cities across the country such as Milwaukee, Portland, Seattle, Denver, New York City, Clark County (Las Vegas), and Jefferson County (Louisville) reported uses of ARRA funds for special education including retaining jobs in special education, materials, equipment, assistive technology, professional development, implementation of effective strategies, IEP development and enhancement, parent training and involvement, and data collection. Naik et al. noted program improvements and expansion in areas such as related services, school-to-work, dropout prevention, extended school day, credit retrieval, and additional staff in core content areas such as math, science, social studies, and reading. Differences in the purpose for ARRA funding were discussed; US DOE advocated

education reform, while the Congress stressed saving jobs. Naik et al. noted the difficulty LEAs encountered in determining the priority for use of the funds. They also acknowledged that budget difficulties would likely persist as the ARRA funds are expended and local funding remain the same or decline.

The uses and impact of ARRA funds in states and LEAs were examined by Mead, Vaishnav, Porter, and Rothertham (2010). While noting the somewhat differing “goals of short-term stimulus and long-term reform” (p. 1, para. 2) intended by the federal government, Mead et al. identified major patterns and issues with the funds including: (1) use of ARRA to fill funding gaps in state and local funds, (2) use of ARRA funds for ongoing or current priorities of LEAs, and (3) tactical use of ARRA funds were more likely to result from local influences than from federal guidance. “Multiple competing priorities and delays in official guidance from the Department of Education” (p. 4, para. 1) were issues in the implementation of ARRA funding. Mead et al. concluded that although ARRA dollars have filled funding gaps and created or saved jobs, state and local budget issues are expected to continue especially when the funding ends.

Suggested strategies to potentially bring about reform with future federal funding were summarized by Mead et al. (2010). These included (1) the pairing of federal funds and clearly stated expectation for reform; (2) disallowing use of federal funds for ineffective education practices; (3) developing local capacity for use of data, analysis and research in allocating resources; and (4) guidelines and financial support to encourage LEAs to make decisive choices rather than continuing expensive and unsustainable practices. They indicate that focused parameters at the federal level must be in place to effect meaningful reform.

Projected Impact of ARRA Funds

The use and impact of ARRA funds for education was discussed by various individuals. Holzer (2009) discussed the impact that ARRA funds would have on the economy both at the local level and in the long term. He refuted the position of some economists who had questioned the inclusion of education in the ARRA legislation as it moved through Congress. The economic impact of stimulus dollars used for personnel in the spectrum of educational settings from early childhood to college levels was expected to result in jobs and ultimately spending in local communities. Holzer commented that targeted use of the funds for the low income segment of the population would potentially result in long-term positive results in communities in areas such as jobs, health, and reduced crime. Garrett (2009) supported including education in the stimulus package to enable school districts to institute reforms including expansion of existing programs and creation of new ones; without stimulus dollars districts could be forced to cut programs in order to balance the budget. Further, he noted the funding would impact communities through job creation and assistance to at-risk students that would have lasting economic impact. Duncan (2009) stated, “We have to educate our way to a better economy.” (para. 3). “With this economic stimulus package, there’s an opportunity that has never before existed to invest dramatically in what works.” (para. 9).

The intended purpose of ARRA funds to reform or to maintain education in the current status was discussed by Smarick (2009). He noted that although reform was included in Congressional discussions of ARRA, the law and the guidance provided by U.S. DOE for “Recovery-First Funds” (p. 2) did not promote reform. The use of ARRA funds for K-12 education impacted a large section of the economy in the number of jobs and total state and local spending. Smarick pointed to the conflict between stabilization, characterized by spending funds

quickly and creating jobs, and reform that requires careful planning. He indicated the availability of funds to fill budget gaps in school districts served to delay or prevent reform such as realigning staff or prioritizing programs that would have otherwise resulted from the recession. The allocation of ARRA funds to school districts through the same formula and guidelines consistent with previous IDEA funds also discouraged reform according to Smarick.

In an era of tight budgets and the passage of ARRA, Grubb (2009b) questioned the influence of money as the deciding factor in student outcomes and contended, “the link between spending per pupil and outcomes has always been weak” (p. 32). In attempt to ensure the greatest impact from available funds for education he recommended five areas of action school districts should take. The initial action was to “eliminate waste” (p. 32). He warned of waste in several ways such as spending for programs and strategies that do not improve student outcomes and failure to recognize and commit necessary funds to adequately address complex issues. Investment of funds without adequate staff development and staff commitment were also noted by Grubb as important areas to consider in eliminating waste. Secondly, Grubb cautioned that districts must “avoid spending on expensive but ineffective, even counterproductive programs” (p. 32). This includes any program or practice that does not maximize learning and progress of students through school. Thirdly, Grubb stressed that “districts and schools should understand the power of complex resources, usually related to instruction (p. 32). Resources such as time, talent, and creativity of teachers are all important human elements that cannot be purchased. In identifying the fourth area, Grubb noted that “abstract resources are powerful” (p. 24); this was defined as a safe, stable school environment free of distraction, with strong personal relationships. “School districts should recognize and eliminate the mistreatment of students of color” (p. 24) was the fifth area of attention identified by Grubb. Adequate supports must be in

place to address and alleviate achievement gaps and lower graduation rates often evident among minority populations. Grubb (2009a) acknowledged the need for funding for facilities, staff, and materials for education; however, he discredited the idea that money was the ultimate solution to educating students. Over time, emphasis in education shifted away from providing basics needs such as buildings, books, and teachers to student achievement, dropout prevention, and graduation rates. “Dollar bills do not educate children, teachers with particular instructional approaches, principals capable of instructional leadership, schools with supportive climates, and many other resources do” (p. 52). Grubb further stated, “We need a new approach that replaces our fixation on revenues and expenditures, on finance formulas as mechanisms of reform, with an explicit concept of how money affects outcomes” (p. 52).

A ranking of states according to the likely affect of the stimulus funds in state K-12 spending was completed by Roza (2009) using the most current budget shortfall projections, the state ARRA allocations, and 2009 state education budgets. This ranking categorized states into three groups according to their financial health. Roza suggested that states with severe budget deficits would likely find the allocation and timing of ARRA funds inadequate to prevent program cuts and loss of staff. States with no major deficits would likely find the ARRA dollars enabled them to implement improvements. She also suggested states in the middle of the financial spectrum would likely maintain status quo. With ARRA funding a comparison of states by projected 2009 revenues indicated that K-12 per pupil spending was projected to be below 2008-09 levels in 21 states. Roza projected change that ranged from an 11.6% decrease in California to an 18.9% increase in South Dakota. She projected Tennessee would likely experience a 7.3% increase in K-12 spending. Roza indicated that although increased funding

may more readily enable states to institute improvements, a realigned and more efficient use of resources may be very effective for states with budget deficits.

The impact of stimulus funds was investigated by Rebell et al. (2010) using early information from a sampling of 20 states that were representative of the nation in characteristics such as “location, size, urbanization and equity in funding” (p. 3). They commented that stimulus funds for Title I and IDEA had allowed schools districts to invest in programs and infrastructure, and serve additional “disadvantaged students” (p. 4). As a result of the government guidance to spend the funds quickly, Rebell et al. found temporary staff, technology, and one-time staff development were funded through stimulus dollars. More long-term sustainable uses such as teacher recruitment and staff development to build local capacity were not priorities.

Program Cuts and Retentions and Funding Shifts

Ellerson and McCord (2009) investigated the effects of economic decline and the impact of government intervention in the form of stimulus funds in school districts. In a survey of 875 administrators from 48 states and the District of Columbia they found economic challenges continued and were expected to extend into the 2010-11 and 2011-12 school years as the end of ARRA funding approached and an uncertain economic outlook was anticipated. The survey found “stopgap efforts to avoid reductions in force were short-lived” (p. 4). Some administrators reported the availability of ARRA dollars was accompanied by decreased state and local funds; the use of ARRA funds to fill budget gaps resulted in no funding increase in the districts.

Ellerson and McCord made the following comment about funding shifts:

The replacement of state operating revenue with ARRA funds only delays the inevitable and provides a temporary solution to a lingering problem: unstable or inadequate state and local budgets. Balancing state budgets using ARRA funds is

not a solution, and the sobering realities ... present a challenge that can be neither overstated nor ignored. (p. 10)

As a result of the continuing economic woes, Ellerson and McCord (2009) suggested that schools moved beyond measures such as budget tightening and implementation of changes to more stringent measures including cuts that directly influence student outcomes. Given the share necessary for education in state budgets they indicated many states were unlikely to be able to return to previous funding levels. Further, they noted that deepening budget cuts result in staff reductions that impact the ability of schools to adequately address student achievement. Ellerson and McCord cautioned that an upturn in the economy at the national level would not automatically result in similar change at the state and local levels; economic rebound at those levels would be slower.

The Funding Cliff

Concern about a potential funding cliff at the end of ARRA funding was a topic of comment by various individuals. Fine (2010) commented on the use of ARRA funds by LEAs and the potential impact when funds are no longer available. She noted the conflict between federal guidance to improve effectiveness of education but avoid the funding cliff and the reality of strained budgets that resulted in use of ARRA funds for recurring expenses such as salaries. LEAs were encouraged to use the dollars for one-time expenditures such as "technology, training, school improvement programs, and infrastructure" (p. 1). Fine acknowledged the long-standing concern of advocates about the history of incomplete funding of special education; the long-term goal of full federal funding for special education made possible through ARRA would be adversely affected by the funding cliff. Advocates also hoped for a continuation of enhanced federal funding in a reauthorization of IDEA; however, Fine discussed potential perils created

within LEAs from reduction in maintenance of effort and the use of ARRA funds to fill budget gaps.

Ellerson (2009) reported the concern of members of the American Association of School Administrators (AASA) with the potential funding cliff that could result when ARRA funds are no longer available. She found that administrators reported status quo funding levels or cuts in state, local, and federal budgets and use of ARRA dollars to fill the resulting gaps in budgets. The limited ability of administrators to enact innovative changes in schools in such climate was acknowledged by Ellerson. Reluctance to hire new staff positions and the need to maintain positions created through ARRA funds were issues Ellerson also observed. Cohen (2010) commented on the advice from U.S. DOE to states and school districts to spend ARRA funds wisely for one-time rather than for recurring expenditures in order to avoid the funding cliff; staff development and materials were given as examples. She also noted the conflict in advice between the caution about using ARRA for salaries and the encouragement to create jobs that are recurring expenses. Cohen predicted school districts using ARRA funds for salaries may face serious decisions when the funding ends in 2010 or 2011.

Issues Resulting from the Availability and Use of ARRA Funds

A variety of concerns related to the availability and use of ARRA funds were identified and discussed by Ellerson (2010). In a survey of school administrators she found the funds had helped LEAs maintain jobs and programs; however, the ARRA may have only delayed the inevitable. The end of ARRA funding and a continuation of the economic downturn were expected to bring changes that would have major impact for LEAs, most notably those that were small and rural. She noted that cuts in personnel were predicted in future budgets given the fact that salaries and benefits are the largest line items. Ellerson reported that cuts in personnel were

projected to impact programs such as increased pupil-teacher ratios, decrease or elimination of summer schools programs, cuts in extracurricular activities, decreases in transportation, and change to a 4-day school week. She noted only approximately 10% of the administrators responding indicated the availability of ARRA funds had increased the overall dollars available for education; overwhelmingly, administrators viewed the funding as “a *shell game* in which state budgets were cut only after it was known that ARRA included money for education” (p. 4). Ellerson and McCord (2009) noted the shell game in earlier writing in which they reported that ARRA funds did not represent an increase in funding in the view of a majority of school administrators in an AASA survey.

Oliff, Williams, and Johnson (2010) addressed the end of ARRA funds and the anticipated effect on budgets, jobs, and education reform. They commented that ARRA funds helped to fill budget gaps in school districts; however, funding continued to be an issue due to the depressed economy that resulted in fewer state and local dollars going into education. They also noted the loss of jobs since mid 2008 and anticipated further job losses coupled with other changes such as reductions in salaries and contracts for services with the ending of ARRA funding. Comments by Oliff et al. echoed the concern expressed by Education Secretary Arne Duncan that reforms achieved thus far could be in jeopardy as schools face budget cuts.

Summary

“From the Olde Deluder Satan Acts of 1642 and 1647 to the nation’s latest appropriations and budgets, Congress, the executive branch, and state legislatures work to provide more opportunities for upward mobility through education...”(Pulliam & Van Patten, 2007, p. 244). The passage and availability of ARRA funding to LEAs is one of the latest examples of these opportunities. As LEAs work to budget these funds there is an obligation to use these funds

within guidelines and accountability measures established by the federal government. At a time of economic downturn in the nation the one-time, short-term ARRA funds provided a unique opportunity to create jobs and to improve student outcomes through previously unavailable materials, supplies, equipment, and services. The unique opportunity was accompanied by the obligation to spend the funds wisely and guard the future of programs from the perils of a potential funding cliff when ARRA funding ends. The cuts and shifts in state and local budgets to support education were noted to be serious issues that must be addressed in order for schools to adequately provide services necessary to insure student achievement.

CHAPTER 3

RESEARCH METHOD

LEAs in Tennessee were allocated funds from the American Recovery and Reinvestment Act of 2009 to be used in 2009-2010 and 2010-2011 for serving students with disabilities. Guidance from the federal government was provided by Tennessee Department of Education to LEAs regarding parameters for using the funds. U.S. DOE (2009b) advised use of the funds for sustainable purposes directed toward reform and increased access to the general curriculum for students with disabilities. The suggestions from U.S. DOE for use of ARRA funds included: (1) purchase of assistive technology and training in its appropriate use, (2) system wide professional development in evidenced based strategies in core areas and behavior support for regular and special education teachers, (3) data collection and use to enhance student progress, (4) expansion of inclusive preschool placements, and (5) transition services and staff to increase community job placements. Investment of ARRA funds wisely to avoid the funding cliff that could result from unsustainable obligations when the one-time, temporary funds were no longer available was stressed by the federal government. (U.S. DOE)

In accordance with a provision in IDEA legislation in 2004, the opportunity to reduce maintenance of effort was available to LEAs as a result of the increase in IDEA funding for Fiscal Year 2009 over the amount received in Fiscal Year 2008. LEAs received IDEA Part B monies for special education for students ages 6-21 years and IDEA Part B Preschool monies for serving 3-5 year old students in special education. According to guidance from U.S. DOE (2009c), an LEA's eligibility to reduce maintenance of effort was based on increase in Part B funds and included IDEA Part B and IDEA Part B ARRA funds. LEAs received separate allocations of both IDEA Part B preschool (3-5) and school aged (6-21) and IDEA Part B ARRA

preschool (3-5) and school aged (6-21) funds. Eligibility to reduce maintenance of effort was based on increase in IDEA Part B and IDEA Part B ARRA school aged funds; therefore, this study included only IDEA Part B ARRA funds allocated for special education for students 6-21 years of age. Allocations of IDEA Part B Preschool ARRA funds for special education services for students 3-5 years of age were small and were reflected in separate budgets by the LEAs; these funds were not included in the study.

The quantitative study of the initial budgeting of IDEA Part B ARRA funds by LEAs in East Tennessee used a descriptive correlational research design that focused on a cross sectional study. Gall, Borg, and Gall (1996) explained that descriptive research is useful for “making careful descriptions of educational phenomena” (p. 374) in order to understand, explain, and effect change. The use of a descriptive design as a means to provide “very valuable data, particularly when first investigating an area” (p. 215, para. 3) was also noted by McMillan and Schumacher (2006).

The purpose of this study was to determine how the IDEA Part B ARRA funds were initially budgeted for sustainable or unsustainable purposes in 2009-2010 by LEAs in East Tennessee. Analysis of data to determine if significant relationships existed among the percentage of economically disadvantaged students, the percentage of dollars taken in reduction of maintenance of effort, geographic demographics, and the percentage of IDEA Part B funds budgeted for sustainable purposes was a part of the study.

The study, which investigated four variables, was designed to be correlational in nature. Gall et al. (1996) noted the correlational method is frequently used in investigating relationships between multiple variables that impact an occurrence. The ability to ascertain the extent of the relationship between variables was discussed by Gall et al. as an advantage of this method. They

suggested “correlational statistics can be used to explore cause-and-effect relationships between variables, but the obtained results generally do not lead to strong conclusions” (p. 414). They further cautioned that investigation through an experimental study would be necessary to establish a causal relationship between the variables.

Research Questions

The following research questions were investigated in the quantitative study of budgeted IDEA Part B ARRA funds by LEAs in East Tennessee.

1. Were the number of dollars budgeted for sustainable efforts significantly different from the number of dollars budgeted for unsustainable efforts by LEAs?
2. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars budgeted for sustainable purposes by LEAs?
3. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars taken in reduction of maintenance of effort by LEAs?
4. Is there a significant relationship between the rural-urban index classification and the percentage of sustainable dollars budgeted by LEAs?
5. Is there a significant relationship between the rural-urban index classification and the percentage of dollars taken in reduction of maintenance of effort by LEAs?
6. Is there a significant relationship between the dependent variable, (a) percentage of dollars budgeted for sustainable purposes and the independent variables, (b) the percentage of economically disadvantaged students and (c) the percentage of dollars taken in reduction of maintenance of effort?

7. Are there meaningful groups or clusters that summarize budget patterns for ARRA funds in LEAs, using (a) the percentage of economically disadvantaged students, (b) the percentage of dollars taken in reduction of maintenance of effort, and (c) the percentage of dollars budgeted for sustainable purposes?

Instrumentation

The main data source was the 2009-2010 American Recovery and Reinvestment Act (ARRA) Special Education Services LEA Budget Applications approved by TN DOE. The applications detailed the accounts and line items in which ARRA funds were budgeted. The approved budgets of LEAs were posted on the Tennessee Department of Education website in keeping with the federal government requirement for transparency in the use of ARRA funds.

Maintenance of effort, the state and local dollars allocated as General Purpose funds for special education, was detailed in the 2009-2010 IDEA Special Education Services LEA Budget Applications. Similarly, dollars taken in reduction in maintenance of effort by each LEA was reflected in the IDEA budget; these budgets were the sources for this data. The approved IDEA budgets were posted on the Tennessee Department of Education website.

Additional sources of data were necessary for the analysis of the ARRA funds budgeted by LEAs in East Tennessee. The Economic Research Service, United States Department of Agriculture Rural-Urban Continuum Codes contained designations to describe or classify counties into one of nine codes that include three metropolitan designations by population size and six nonmetropolitan designations by proximity to a metropolitan area and urbanization or size. The most recently available codes were from 2003 (ERS /USDA Data -2003 Rural-Urban Continuum Codes). The percent of economically disadvantaged students included in the Tennessee Department of Education Report Card Profile of each LEA was an additional source

of information used in the analysis (Tennessee Department of Education Report Card Profile, 2008). The 2008 Report Card Profiles were the most current information available to LEAs at the time ARRA funds were initially budgeted and were relevant for use in this study.

Data used for the study were accessed from public sources of information, specifically from the Tennessee Department of Education website; therefore, permission for collection and analysis of the data was not required. Details of the proposed study were submitted to the East Tennessee State University Institutional Review Board (IRB), which determined the study did not meet the definition of research involving human subjects; therefore, approval by the IRB was not required.

Population

Fifty of the 51 LEAs receiving IDEA Part B ARRA funds for special education in East Tennessee were used in the study. One additional LEA, a state special school located in East Tennessee and serving students across the state, was not included in the study because the geographic demographics and funding sources were not comparable to the other LEAs in the region. Nineteen of the LEAs in the population were city districts and 32 were county school districts. The percentage of disadvantaged students ranged from 26.2 to 81.2. The Rural-Urban Continuum Codes for the location of LEAs in the study ranged from a county in a metro area with population of 250,000 to 1 million to a nonmetro county that is completely rural or with less than 2,500 urban populations adjacent to a metro area (ERS /USDA Data -2003 Rural-Urban Continuum Codes). The IDEA Part B ARRA funds allocated to LEAs were from approximately \$63,000 to \$13,400,000 for services to students with disabilities. LEAs also differed in response to the opportunity to reduce local maintenance of effort. Some LEAs took no reduction, some took partial reduction, and others took the maximum reduction allowable.

Data Collection

The data source for ARRA funds as initially budgeted was the 2009-2010 IDEA Part B ARRA approved applications posted on the Tennessee Department of Education website. Funds as budgeted into line items in the applications were entered into columns in a spreadsheet. The line items were subsequently grouped into categories including personnel, contracts with private agencies, contracted services, materials and supplies, in-service training and staff development, equipment, indirect cost, permissive use of funds for early intervening services, and other. The 2009-2010 IDEA Part B application of each of the LEAs was the data source for reduction in maintenance of effort. These applications were also posted on the Tennessee Department of Education website. The amount of each reduction in maintenance was entered into a column in the spreadsheet for each of the respective LEAs. The amounts entered into the respective columns on the spreadsheet were rechecked for accuracy. Confidentiality was preserved by the assignment of an identification number to each of the LEAs in the study.

Data Analysis

The data were analyzed using SAS 9.2 (SAS Institute Inc., Cary, NC). Four research variables were included in the study. Three of these, (a) the percentage of economically disadvantaged students (ECODIS), (b) the percentage of dollars taken in reduction in maintenance of effort (PARMOE), and (c) the rural-urban index codes (RLUB) were independent variables. The fourth variable, the dependent variable in the study, was the percentage of dollars budgeted for sustainable purposes (PBUDSUS). Three variables, the percentage of economically disadvantaged students (ECODIS), the percentage of dollars taken in reduction in maintenance of effort (PARMOE), and the percentage of dollars budgeted for sustainable purposes (PBUDSUS), were ratio and continuous; the rural-urban index codes

(RULB) was an ordinal and categorical variable. The four research variables could also be classified as budget or demographic variables. The percentage of dollars taken in reduction in maintenance of effort (PARMOE) and the percentage of dollars budgeted for sustainable purposes (PBUDSUS) were budget in nature. The remaining variables, the percentage of economically disadvantaged students (ECODIS) and the rural urban codes (RLUB), were demographic.

A one sample *t*-test was used to determine the difference in dollars budgeted for sustainable and dollars budgeted for unsustainable purposes for Question 1. In considering a statistical measure, Witte and Witte (2007) indicated a *t*-test is appropriate for use with a one group or a single sample.

In addition to the *t*-test, an additional statistical method, bootstrap, was used in further analysis in research question one to ensure accuracy of the estimations in the study. In view of the limited population of 50 LEAs in the study, bootstrap involving resampling data multiple times was used to increase confidence in the analysis. Bootstrap was discussed by Efron and Tibshirani (1986, 1993) as a resampling method that can be used in standard error and confidence intervals in situations involving a single data sample. Bootstrap was also applied to Research Questions 2 – 5.

Product-moment correlation coefficient (*Pearson r*) was the statistical test used to determine the existence of significant linear relationships between variables in Research Questions 2, 3, 4, and 5 including the following: the percentage of economically disadvantaged students and the percentage of dollars budgeted for sustainable purposes (Question 2), the percentage of economically disadvantaged students and the percentage of dollars taken in reduction in maintenance of effort (Question 3), the rural-urban index classification and the

percentage of dollars for sustainable purposes (Question 4), and the rural-urban index classification and the percentage of dollars taken in reduction in maintenance of effort (Question 5). Gall et al. (1996) noted the common use of *Pearson r* with continuous variables in educational studies; however, this may also be used even though all variables are not continuous. In consideration of the nature of the variables, including continuous and ordinal categorical, the study also calculated polyserial correlation for additional information in Questions 4 – 5. PRELIS 2.80 was used for estimating the polyserial correlation coefficients.

Multiple regression analysis was used in investigating the relationships between the dependent variable (a) percentage of dollars budgeted for sustainable purposes and the independent variables, (b) the percentage of economically disadvantaged students, and (c) the percentage of dollars taken in reduction of maintenance of effort. Gall et al. (1996) discussed the use of multiple regression in education in analysis of data “from any of the major quantitative research design causal-comparative, correlational, and experimental” (p. 434). They also noted use of the method with ordinal, interval, and categorical data as well use in “estimates of both the magnitude and statistical significance of relationships between variables” (p. 434).

Hierarchical cluster analysis with Ward’s method was used as a descriptive tool to identify meaningful subgroups of LEAs based on the percentage of economically disadvantaged students, the percentage of reduction in maintenance of effort, and the percentage of dollars budgeted for sustainable purposes. Hair, Black, Babin, and Anderson (2009) described cluster analysis as “a group of multivariate techniques whose primary purpose is to group objects based on the characteristics they possess” (p. 486). The use of cluster analysis in multiple research areas for “reducing the information from an entire population to information about specific groups” (p. 487) was discussed. Hair et al. emphasized the importance of “a strong conceptual

support” (p. 488) in the use of the technique. They suggested the use of cluster analysis in identifying “groupings (clusters) of objects that are not discernible through other multivariate techniques” (p. 539). In this study cluster analysis allowed grouping and summarization of the budget pattern of the total population of LEAs that received the same guidance in the use of ARRA funds and budgeted the dollars at a time of economic downturn.

Summary

This chapter provided a brief introduction to the quantitative study that investigated the initial budgeting of IDEA Part B ARRA funds and the existence of significant relationships with geographic demographics, the percentage of economic disadvantaged student population, and the reduction in maintenance of effort funds. The descriptive correlational study involved four variables including one independent and three dependent variables. The research questions, instrumentation, population in the study, data collection procedures, and methods used in data analysis were described in Chapter 3.

CHAPTER 4

ANALYSIS OF DATA

Funds from the American Recovery and Reinvestment Act of 2009 were allocated to LEAs in Tennessee to be used in 2009-2010 and 2010-2011 for serving students with disabilities. Guidance from the federal government was provided by TN DOE to LEAs regarding parameters for using the funds. U.S. DOE (2009b) advised use of the funds for sustainable purposes directed toward reform and increased access to the general curriculum for students with disabilities. The suggestions included purchase of assistive technology and training in appropriate use, system-wide professional development for regular and special education teachers in evidenced-based strategies in core areas and behavior support, data collection and use to enhance student progress, expansion of inclusive preschool placements, and transition services and staff to increase community job placements. U.S. DOE also cautioned that ARRA funds should be invested wisely to avoid the funding cliff that could result from unsustainable obligations when the one-time, temporary funds were no longer available to school districts. In accordance with a provision in IDEA legislation in 2004, the opportunity to reduce maintenance of effort was available to LEAs as a result of the increase in federal funding from 2008-2009.

Data used in the study were gathered from public sources. Funds as budgeted by LEAs were reflected in 2009-2010 IDEA ARRA Part B applications posted on the TN DOE website. Funds budgeted into the line items on these applications were entered into a spreadsheet. The line items were then grouped into categories including personnel, contracts with private agencies, other, contracted services, materials and supplies, and in-service training and staff development. The categories were subsequently assembled into sustainable and unsustainable uses.

Maintenance of effort, the state and local dollars allocated as General Purpose funds for special education, was detailed in the 2009-2010 IDEA Special Education Services LEA Budget Applications. Similarly, dollars taken in reduction in maintenance of effort by each LEA was reflected in the IDEA budget; these budgets were the sources for this data. The approved IDEA budgets were posted on the Tennessee DOE website.

The percentage of economically disadvantaged students in each district was gathered from the 2008 Tennessee Department of Education Report Card Profiles posted on the TN DOE website. The rural-urban index codes were accessed in the 2003 Rural-Urban Continuum Codes from the Economic Research Service, United States Department of Agriculture.

The purpose of this study was to determine how the ARRA funds were initially budgeted, for sustainable or unsustainable purposes in 2009-2010 by the 50 LEAs in East Tennessee. The study was conducted to determine if significant relationships exist among four variables: the percentage of economically disadvantaged students (ECODIS), the percentage of dollars taken in reduction of maintenance of effort (PARMOE), the rural-urban index code (RLUB), and the percentage of ARRA funds budgeted for sustainable purposes (PBUDSUS). The study also involved one criterion (dependent) variable, PBUDSUS, and two predictor (independent) variables, ECODIS and PARMOE.

Research Questions

Research Question 1

Were the number of dollars budgeted for sustainable efforts significantly different from the number of dollars budgeted for unsustainable efforts by LEAs?

A one-sample *t*-test was conducted on the difference in budgeted dollars (DIFBUD) ($M = -\$694,580$, $SD = \$1,194,532$) to evaluate whether its mean was significantly different from 0.0,

the expected mean for the difference between the dollars budgeted for sustainable purposes (BUDSUS) ($M = 392860$, $SD = 729373$) and the dollars budgeted for unsustainable purposes (BUDNSUS) ($M = 1087440$, $SD = 1649247$). The one-sample t -test was significantly different from 0.0, $t(49) = -4.11$, $p = .0001$, $d = .58$. The effect size of .58 indicates a medium effect.

Although $n > 40$ t statistic will be valid even with strong skewness, the study applied two nonparametric methods because the assumption of normality is violated, Shapiro-Wilk's $W = .610$, $p = .0001$. The two methods were sign test (M) and Wilcoxon signed rank test (S). Sign test was significant, $M = -19$, $p = .0001$; Wilcoxon test also indicated significant, $S = -552.5$, $p = .0001$.

Two large and two small LEAs were included in the population. When the two largest and the two smallest LEAs were deleted in the test, $t(45) = -5.83$, $p = .0001$, $d = .86$. The effect size of .86 indicates a large effect.

Results were DIFBUD ($M = -509426$, $SD = 592290$) and Shapiro-Wilk's $W = .922$, $p = .0001$. The two nonparametric methods, sign test (M) and Wilcoxon signed rank test (S), were applied. Both the sign test, $M = -17$, $p = .0001$ and Wilcoxon test, $S = -460.5$, $p = .0001$ indicated significant difference between BUDSUS and BUDNSUS.

The study population of 50 was adequate for the t -test; however, resampling of the data 10,000 times using the bootstrap approach supported the validity of the original result with all 50 LEAs. The 95% boot confidence interval (CI) was $-5.379 - -2.611$ which did not include zero. Bootstrap approach confirmed the above finding of $t = -4.11$ because the t value is within the CI. This indicated more dollars were budgeted for unsustainable purposes.

Research Question 2

Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars budgeted for sustainable purposes by LEAs?

Product-moment correlation coefficient (*Pearson r*) was used to investigate the relationship between the percentage of economically disadvantaged students (ECODIS) and the percentage of dollars budgeted for sustainable purposes (PBUDSUS) in the fifty LEAs in the study. ECODIS ($M = 56.976$, $SD = 11.514$) and PBUDSUS ($M = 26.291$, $SD = 19.183$) were not significantly correlated, $r = -0.132$, $p = .359$. The 95% bootstrap CI provided possible r values that extended from -0.381 to 0.128 and included zero. The calculations were based on 10,000 bootstrap replicates. This CI also indicated no relationship between the two variables.

Research Question 3

Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars taken in reduction of maintenance of effort by LEAs?

Product-moment correlation coefficient was computed to assess the relationship between the percentage of economically disadvantaged students (ECODIS) and the percentage of reduction in maintenance of effort (PARMOE) in the 50 LEAs in the study. ECODIS ($M = 56.976$, $SD = 11.514$) and PARMOE ($M = 36.929$, $SD = 40.653$) were not significantly correlated, $r = -0.236$, $p = .098$. The 95% bootstrap CI provided possible r values that extended from -0.445 to -0.005 and did not include zero; however, the value of -0.005 is close to zero. This CI also indicated no relationship between the two variables.

Research Question 4

Is there a significant relationship between the rural-urban index codes and the percentage of sustainable dollars budgeted by LEAs?

Product-moment correlation coefficient was used to investigate the relationship between percentage of dollars budgeted for sustainable purposes (PBUDSUS) and rural-urban index codes (RLUB) in the 50 LEAs in the study. There was no significant correlation between the variables, $r = -0.007$, $n = 50$, $p = 0.961$. The 95% bootstrap CI provided possible r values that extended from -0.211 to 0.207 and included zero. This CI also indicated no relationship between the two variables.

The correlation included an interval variable, PBUDSUS, and an ordinal variable, RLUB, which was reflected and treated as a continuous variable and interpreted like Pearson r . The polyserial correlation between PBUDSUS and RLUB was 0.012 and close to the above correlation coefficient.

Research Question 5

Is there a significant relationship between the rural-urban index codes and the percentage of dollars taken in reduction of maintenance of effort by LEAs?

Product-moment correlation coefficient was computed to assess the relationship between percentage of dollars taken in reduction in maintenance of effort (PARMOE) and the rural-urban index codes (RLUB). There was not a significant correlation between the two variables, $r = .140$, $n = 50$, $p = 0.333$. The 95% bootstrap CI provided possible r values that extended from -0.341 to 0.077 and included zero. This CI also indicated no relationship between the two variables.

The correlation included an interval variable, PARMOE, and an ordinal variable, RLUB, which was reflected and treated as a continuous variable and interpreted like Pearson r . The polyserial correlation between PARMOE and RLUB was 0.093 and close to the above correlation coefficient.

Research Question 6

Is there a significant relationship between the dependent variable, (a) percentage of dollars budgeted for sustainable purposes and the independent variables, (b) the percentage of economically disadvantaged students, and (c) the percentage of dollars taken in reduction of maintenance of effort?

Multiple regression analysis was applied for finding relationships between the percentage of dollars budgeted for sustainable purposes (PBUDSUS) and the percentage of dollars taken in reduction in maintenance of effort (PARMOE) and the percentage of economically disadvantaged students (ECODIS). In this analysis the criterion variable was PBUDSUS and the other two were predictor variables. The summary of multiple regression analysis is presented in Table 1. Therefore, ECODIS and PARMOE did not contribute well for predicting PBUDSUS. There were no significant relationships.

Table 1

Summary of Multiple Regression Analysis for PBUDSUS

Variable	B	SE (B)	β	T	P
ECODIS	-0.297	0.243	-0.178	-1.22	0.229
PARMOE	-0.091	0.069	-0.192	-1.32	0.194

Notes: PBUDSUS = Percentage of Dollars Budgeted for Sustainable Purposes, PARMOE = Percentage of Reduction in Maintenance of Effort, $R^2 = .053$, $F(2, 47) = 1.30$, $p = .282$, **B** = unstandardized beta coefficient, **SE (B)** = standard error of **B**, **β** = standardized beta.

The bootstrap approach was applied with data resampled 10,000 times. The 95% boot confidence interval estimation for ECODIS was from -0.653 to 0.170. The 95% confidence interval estimation for PARMOE was -0.202 to 0.009.

Research Question 7

Are there meaningful groups or clusters that summarize budget patterns (profiles) for ARRA funds in LEAs using (a) the percentage of economically disadvantaged students, (b) the percentage of dollars taken in reduction of maintenance of effort, and (c) the percentage of dollars budgeted for sustainable purposes?

Cluster analysis was used to group LEAs based on correlation or similarities in continuous variables the percentage of dollars budgeted for sustainable purposes (PBUDSUS), the percentage of economically disadvantaged students (ECODIS), and the percentage of dollars taken in reduction in maintenance of effort (PARMOE). “Cluster analysis is a group of multivariate techniques whose primary purpose is to group objects based on characteristics they possess” (Hair et al., 2009, p. 496). In this study the object is LEAs and the characteristics are PBUDSUS, ECODIS, and PARMOE. Those variables were measured on the same scale (0 to 100). Thus, this study did not standardize the variables. Cluster analysis provided groupings of LEAs based on multiple variables rather than by individual variable. This approach provided for the grouping and summarizing budget patterns of all LEAs in the study rather than individually.

The number of significant clusters was determined by selecting a high R^2 (RSQ), cubic clustering criterion (CCC), and Pseudo F (PSF) with the small value of Pseudo $-T^2$ (PST²). Using this criterion, the four-cluster group was selected as meaningful. The criterion for cluster groups and the selected cluster are listed in Table 2.

Table 2

Cluster Results with High R^2 , Pseudo F, and Cubic Clustering Criterion

NCL	RSQ	CCC	PSF	PST2
11	.944	.	65.8	7.1
10	.936	2.52	65.1	5.2
9	.927	2.46	65.2	3.6
8	.917	2.51	66.5	10.9
7	.905	2.53	68.1	5.4
6	.888	2.06	70.1	18.9
5	.868	2.17	73.7	12.0
4	.841	2.56	81.0	10.1
3	.771	1.91	79.2	17.1
2	.681	2.24	102.0	31.2
1	.000	0.00	.	102.0

Notes: NCL = Number of Cluster, RSQ = High R^2 , CCC = Cubic Clustering Criterion, PSF = Pseudo F, PST2 = Pseudo $-T^2$

The cluster groups are illustrated in the following Figure 1 in which LEAID refers to identification numbers assigned to LEAs for this study.

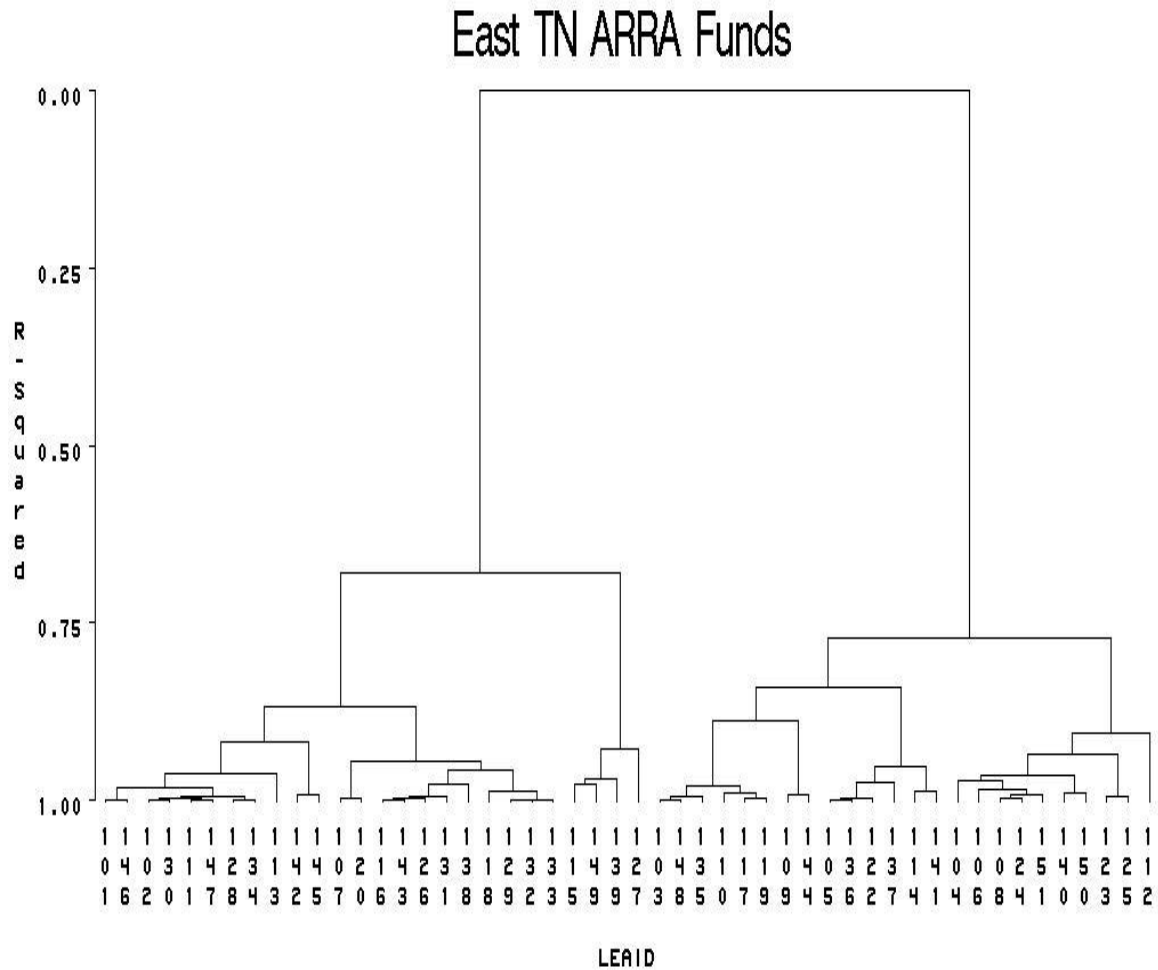


Figure 1. Dendrogram of LEA Clusters

Figure 2 presented the characteristics of LEAs in each of the four cluster groups. Cluster 1, characterized by low PBUDSUS, low PARMOE, and highest ECODIS, was the largest group of 21 LEAs (44%). Cluster 2 consisting of 14 LEAs (28%) had the lowest PBUDSUS and 2nd highest PARMOE and ECODIS. Cluster 3 included 10 LEAs (20%) that had low PBUDSUS,

the highest PARMOE, and the lowest ECODIS. Cluster 4 with four LEAs (8%) was the smallest group with the highest PBUDSUS, lowest PARMOE, and low ECODIS.

The present study profiled the clustering variables for the four-cluster solution to confirm that the differences between clusters are distinctive and significant to define the characteristics of the clusters. The predictor variable was cluster membership, and criteria variables were the three clustering variables. The results in Table 3 showed there were significant differences between the clusters on all three variables. The significant F statistics and ω^2 provided evidence that each of the four clusters was distinctive and significant.

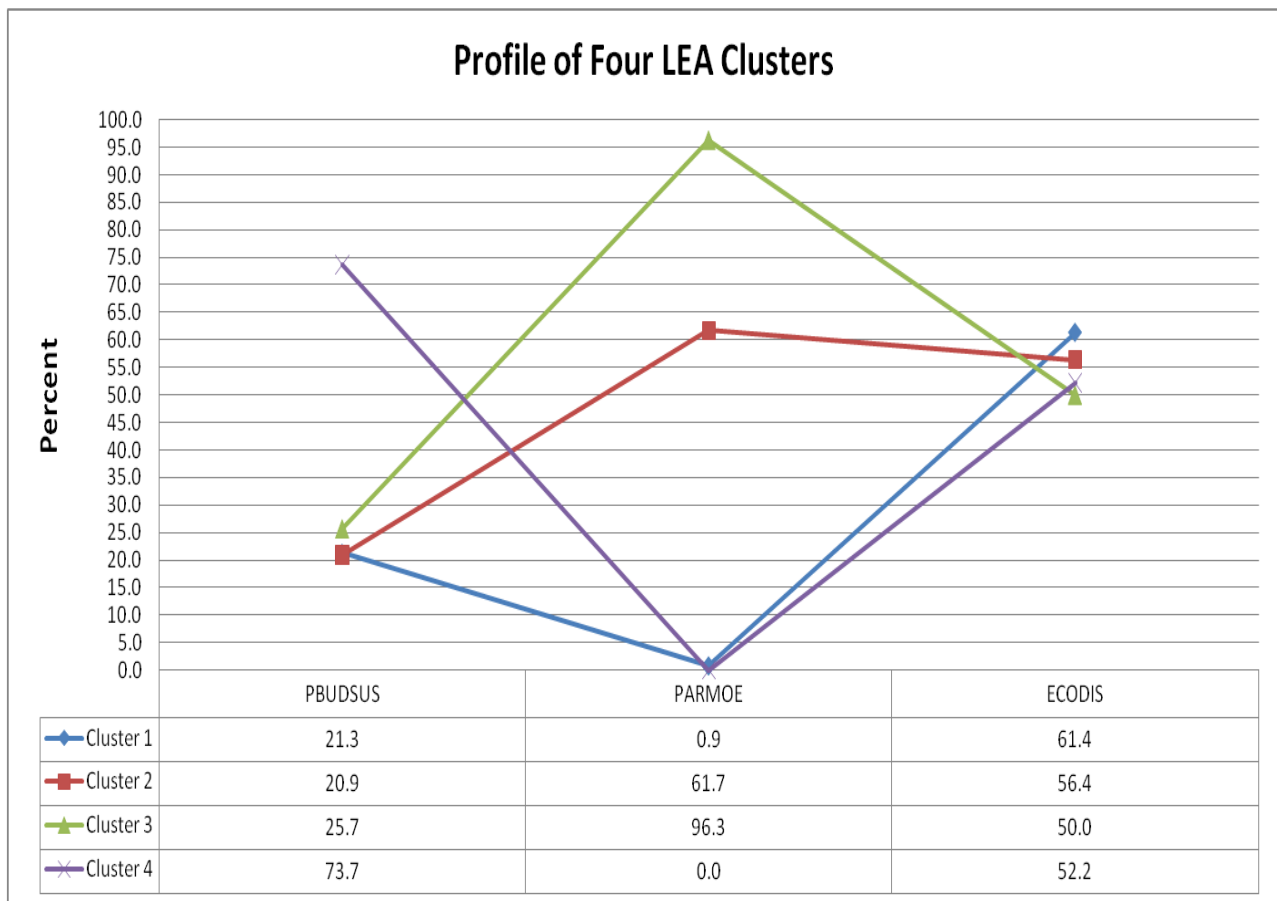


Figure 2. Profile of Four LEA Clusters

Table 3

Cluster Means, Standard Deviations, F Test, Omega Square, and Levene's F Test

Variables	Cluster Number								Statistical Test				
	1 (n = 22)		2 (n = 14)		3 (n = 10)		4 (n = 4)		Overall F Test	Omega Square	Levene's F		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	ω^2	95% CI	<i>P</i>
PBUDSUS	21.3	12.3	20.9	12.9	25.7	14.3	73.7	17.8	18.75	< .0001	0.52	(.32, .66)	0.8691
PARMOE	0.9	4.1	61.7	13.7	96.3	5.7	0.0	0.0	387.75	< .0001	0.96	(.94, .97)	0.0001
ECODIS	61.4	10.4	56.4	11.0	50.0	11.1	52.2	13.1	2.83	0.0487	0.10	(.00, .30)	0.9874
Personnel	33.3	15.2	52.3	21.6	69.7	16.3	14.0	6.4	12.67	< .0001	0.43	(.21, .60)	0.2965

Note: Personnel (including salaries and benefits) was not a variable in the study; however, this was considered to be a category of funds budgeted for unsustainable purposes that are necessary for the provision of services to students.

Dollars budgeted for personnel including salary and benefits were included in the total for unsustainable purposes. Personnel percentage was calculated by dividing the percentage of dollars budgeted for unsustainable purposes (PBUDNSUS) by the total personnel dollars budgeted multiplied by 100. Clusters characterized by low percentage of monies budgeted for sustainable purposes also had high percentage of funds for personnel. The additional variable was investigated by using the cluster information.

Summary

In Chapter 4 seven research questions related to four main variables were statistically evaluated and their findings were reported. Significant results were found in Research Question 1 in the difference in dollars budgeted for unsustainable and sustainable purposes. No significant relationships were found among the four variables the percentage of dollars budgeted for sustainable purposes (PBUDSUS), the percentage of dollars taken in reduction in maintenance of

effort (PARMOE), the percentage of economically disadvantaged students (ECODIS), and the rural-urban index codes (RLUB). Budget patterns manifested in four clusters were found to summarize the projected use of ARRA dollars by LEAs.

CHAPTER 5

FINDINGS, RECOMMENDATIONS, AND CONCLUSION

The purpose of this study was to determine how the IDEA Part B ARRA funds were initially budgeted for sustainable or unsustainable purposes in 2009-2010 by LEAs in East Tennessee. Data were gathered from the budget applications of 50 LEAs in the area and integrated into categories including personnel, contracts with private agencies, contracted services, materials and supplies, in-service and staff development, equipment, indirect cost, and other. Funds budgeted in two categories, in-service and staff development and equipment were for sustainable purposes; the remaining categories were unsustainable. The economically disadvantaged population, reduction in maintenance of effort, and geographic demographics of the LEAs were independent variables used in the study.

The passage of ARRA legislation presented a unique opportunity for special education. In fiscal year 2009-2010 LEAs had to determine how to budget the one-time IDEA ARRA dollars and whether to reduce maintenance of effort. Guidance was provided by the federal government to states and in turn to LEAs regarding the use of these funds. A provision in the 2004 IDEA legislation permitted LEAs to reduce maintenance of effort (the amount of state and local funds that must be used for special education) if there was an increase in IDEA allocation in a subsequent year (U.S. DOE, 2009c). The substantial increase in federal funds resulting from ARRA provided the opportunity for LEAs to actually reduce maintenance of effort in fiscal year 2009-2010. Decisions regarding a reduction and the amount of such reduction varied among LEAs. This inquiry was conducted to provide insight into how the ARRA funds were initially budgeted by LEAs in East Tennessee for sustainable or unsustainable purposes. The study also was intended to determine if there was a significant relationship between geographic

demographics, the percentage of economically disadvantaged students, reduction in maintenance of effort and the budgeting of the funds. To date study of the allocation and use of IDEA ARRA dollars at the national level or in Tennessee were minimal or nonexistent.

Summary of General Findings

Research Question 1

Were the number of dollars budgeted for sustainable efforts significantly different from the number of dollars budgeted for unsustainable efforts by LEAs?

Three methods including a one-sample *t*-test, sign test, and Wilcoxon signed rank test were used to investigate the difference in the budgeting of ARRA funds for sustainable and unsustainable purposes. Each test showed a significant difference and medium effect ($d=.58$). In addition, *t*-test result was confirmed by the bootstrap approach. The mean difference in dollars for sustainable and unsustainable purposes was -\$694,580. Specifically, \$392,860 was the mean amount budgeted for sustainable purposes and \$1,087,440 was the mean for unsustainable purposes. In the study sustainable efforts were defined as nonrecurring expenses including in-service, staff development, and equipment; funds for training of staff or purchase of equipment are expected to have lasting value of more than a year and are not recurring at regular intervals such as annually. Use of ARRA funds for all other areas or budget line items such as personnel, travel, contracts for service, and material and supplies are unsustainable in that these are regularly recurring expenses that LEAs must incorporate into their annual budgets.

The population included two large and two small LEAs; these were removed and a one-sample *t*-test, sign test, and Wilcoxon signed rank test were repeated. Each test showed significant difference in dollars budgeted, even without the two largest and two smallest LEAs included in the population, and a large effect size ($d = .86$). In addition, *t*-test result was

confirmed by the bootstrap approach. The mean difference in the dollars for sustainable and unsustainable purposes was -\$509,426.

The finding of significant difference in sustainable and unsustainable dollars budgeted by LEAs with more funds for unsustainable efforts is important in view of the guidance provided by the federal government. The U.S. DOE (2009a) stressed the importance of improving student achievement through school improvement and careful investment of ARRA funds to minimize the potential funding cliff that could result from unsustainable obligations when the one-time temporary funding was no longer available. The budgeting of more ARRA dollars for unsustainable efforts may expose LEAs to the funding cliff in subsequent years. This may be especially problematic as LEAs must secure funding for salaries and benefits for personnel necessary for providing a free appropriate education to students with disabilities.

Research Questions 2 and 3

Research Question 2. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars budgeted for sustainable purposes by LEAs?

Research Question 3. Is there a significant relationship between the percentage of economically disadvantaged students and the percentage of dollars taken in reduction of maintenance of effort by LEAs?

The statistical analysis of data indicated that the percentage of economically disadvantaged students in LEAs (ECODIS) was not significantly related to the percentage of dollars budgeted for sustainable purposes (PBUDSUS) or the percentage of dollars taken in reduction in maintenance of effort (PARMOE). Literature related to ARRA funds made no mention of influence of economically disadvantaged students on LEA budget plans. A guiding

principle from the U.S. DOE (2009a, pp. 1-2) advised careful consideration in the use of ARRA funds in order to minimize the potential for financial issues when the short-time funding ended. As documented in the literature review in Chapter 2, ARRA provided a ready source of funds that could be used to fill budget gaps in LEAs especially with the opportunity to reduce the amount of local and state monies heretofore necessary for receiving federal funds. Therefore, it was expected that the percentage of economically disadvantaged students would not likely be a significant factor in planned use of ARRA funds or the permissible reduction in maintenance of effort in LEAs.

Research Questions 4 and 5

Research Question 4. Is there a significant relationship between the rural-urban index codes and the percentage of sustainable dollars budgeted by LEAs?

Research Question 5. Is there a significant relationship between the rural-urban index codes and the percentage of dollars taken in reduction of maintenance of effort by LEAs?

The statistical analysis of data indicated that significant relationships did not exist between the rural-urban index codes and the percentage of dollars budgeted for sustainable purposes (PBUDSUS) or the percentage of the reduction in maintenance of effort (PARMOE). In the era of economic downturn LEAs at all levels of the rural-urban index continuum faced budget shortfalls. It was not anticipated that rural-urban index codes would have a significant influence in the budgeting of ARRA monies for sustained purposes such as equipment or staff development. Similarly the geographic demographics were not expected to be significantly related to LEAs decisions related to reduction in maintenance of effort.

Research Question 6

Is there a significant relationship between the dependent variable (a) percentage of dollars budgeted for sustainable purposes and the independent variables (b) the percentage of economically disadvantaged students and (c) the percentage of dollars taken in reduction of maintenance of effort?

Multiple regression analysis was applied to investigate the relationship between the dependent variable, percentage of dollars budgeted for sustainable purposes (PBUDSUS), and the independent variables, percentage of dollars taken in reduction in maintenance of effort (PARMOE) and the percentage of economically disadvantaged students (ECODIS). The two independent variables did not show significant effect on the dependent variable. In view of the substantial increase in federal funds available to LEAs for serving students it was reasonable to expect that funds projected for sustainable efforts such as equipment and staff development would be related to reduction in maintenance of effort and to the percentage of economically disadvantaged students. The analysis of data indicated that was not the case; the availability of ARRA funding enabled LEAs to fill budget gaps.

Research Question 7

Are there meaningful groups or clusters that summarize budget patterns (profiles) for ARRA funds in LEAs using (a) the percentage of economically disadvantaged students, (b) the percentage of dollars taken in reduction of maintenance of effort, and (c) the percentage of dollars budgeted for sustainable purposes?

According to the cluster analysis results, there were four identifiable clusters reflecting budget patterns in terms of percentage of dollars budgeted for sustainable purposes (PBUDSUS), the percentage of economically disadvantaged students (ECODIS), and the percentage of

reduction taken in maintenance of effort (PARMOE). The differences in the four clusters are clearly displayed in Figure 2 in Chapter 4. This profile also demonstrates the relatively close similarity in percentage of economically disadvantaged students among all four clusters, although statistically significant. The two remain variables, percentage of dollars budgeted for sustainable purposes and the percentage of reduction in maintenance of effort, are financial. The following Table 4 was used to demonstrate the differences in the four clusters.

Table 4

Clusters with Levels of PBUDSUS and PARMOE

CLUSTER	PBUDSUS (%)	PARMOE (%)	N (%)
C1	Low (21.3%)	Low (0.9%)	22 (44%)
C2	Low (20.9%)	Middle (61.7%)	14 (28%)
C3	Low (25.7%)	High (96.3%)	10 (20%)
C4	High (73.7%)	Low (0.5%)	4 (8%)

Notes: PBUDSUS = Percentage of Budgeted Dollars for Sustainable Purposes, PARMOE = Percentage of Reduction in Maintenance of Effort.

This clearly indicates the close similarity in clusters 1, 2, and 3 in that approximately 20% to 25% of the ARRA monies were budgeted for sustainable purposes. Two of the three, clusters 2 and 3, made sizeable reductions in maintenance of effort. Clusters 1 and 4 made little to no reduction in maintenance of effort. The federal guidance provided cautioned to LEAs regarding the funding cliff. High dollars budgeted for sustainable purposes (nonrecurring expenses) in combination with low reduction in maintenance of effort are in keeping with the guidance. Only cluster 4 seems to fit this pattern. The cluster also had a low percentage of dollars budgeted for personnel. It is important to note that only 4 LEAs were in cluster 4.

It is likely that LEAs in cluster 3 characterized by low percentage of dollars budgeted for sustainable purposes (25.7%) and very high reduction in maintenance of effort (96.3%) could

encounter the greatest difficulty at the end of ARRA funding. Recurring costs that were supported by ARRA funds will have to be covered with other monies. Personnel was 69.7% of the dollars budgeted for unsustainable purposes. The necessity to maintain staff to provide services will require funds for these costs from other sources in subsequent years. Maintenance of effort may be problematic for cluster 3 when ARRA funds are no longer available to cover budget areas. Clusters 1 and 2 will likely experience similar financial challenges in the following fiscal years, but these may be on a smaller scale than cluster 3.

Recommendations for Practice

In the era of tight budgets, heightened expectations for student performance, and increased accountability for the expenditure of funds at multiple levels from local to the federal government, it is imperative that LEAs engage in careful and detailed planning. As in the case of ARRA, funds from the federal government were made available to LEAs quickly with parameters that stipulated expenditure within a rather narrow time. (U.S. DOE, 2009a) LEAs must have current plans in order to be able to spend such funds appropriately to the best advantage for students. LEAs must also heed guidance provided with any similar funds made available. The monitoring of LEA expenditure of the funds by state government will provide insight into problems that occurred with the expenditure of ARRA funds. The sharing of the overall results of such monitoring may be beneficial in the case of future similar one-time funds.

Valuable lessons for the federal and state governments can also be drawn from the allocations and use of ARRA funds in LEAs. The guiding principles surrounding ARRA funds were given to state government and were passed down to LEAs; however, these were somewhat fluid and unenforceable. After thoughtful examination of the federal guidance, it is rather clear that the direction to LEAs was conflicted. The suggestions to spend ARRA funds quickly and,

improve student outcomes did not allow time or require strategic planning by LEAs. Similarly, federal guidance suggesting quick expenditure of ARRA funds to save or create jobs (U.S. DOE, 2009a) could be seen as in conflict with the caution about the potential funding cliff. Careful investment of funds to avoid the effects of the impending substantial decrease in federal funds at the end of ARRA was not the immediate priority in 2009-2010. As the funds became available LEAs needed to balance the budget; therefore, ARRA funds were used for unsustainable purposes including personnel salaries and benefits. The use of ARRA funds in states and LEAs discussed by Mead et al. (2010) was similar to the budgeting of the funds in East Tennessee. Among their observations were the use of ARRA to fill budget gaps and the decisive influence of local priorities over federal suggestion. Mead et al. also suggested that budget issues would likely continue, especially when ARRA funding ended. (p. 25)

Recommendation for Future Study

The study occurred at the midpoint or approximately 1 year into the 27 months that ARRA funds were available to LEAs. Data reflecting the initial budgeting of ARRA funds were available at that time. The study encompassed LEAs in one grand division of the state. In order to fully understand the use and the issues associated with the expenditure of ARRA funds, the following further study of the topic is recommended.

1. A study of the actual expenditure of ARRA dollars should be conducted after ARRA funding ends on September 30, 2011, and expenditures reports, which are due by December 30, 2011, are submitted. ARRA funds were available to LEAs for 27 months and were reflected in an initial budget for 2009-2010 and in a carryover budget in 2010-2011. In addition, changes in budgets occurred through the process of amendments and

would be reflected in the study. A study of the actual expenditure of ARRA funds by LEAs across after all funds are expended is appropriate and necessary.

2. A qualitative study designed to look beyond budget numbers to investigate the benefits and problems related to the budgeting and expenditure of ARRA funds in a representative sample of LEAs across the state is suggested. A study of this nature should involve key individuals in the selected LEA population in addition to State Department of Education staff. LEAs ranging from very small to very large in size and from urban and rural settings should be included. An interesting component of the qualitative study might also address personnel, specifically the employment status of ARRA funded personnel during and subsequent to the availability of ARRA funds. This could yield valuable information in light of guidance from the federal government regarding creating or saving jobs. Subsequent changes in the level of maintenance of effort in LEAs that chose to reduce the state and local funds for special education in 2009-2010 would also be included in a study.

Conclusion

The passage of ARRA at a time of economic downturn in the nation effectively doubled IDEA funding for special education. This enabled LEAs to balance their budgets and provided funds for areas and items that were not otherwise available. The study indicated that dollars budgeted for unsustainable purposes exceeded those for sustainable efforts. Significant relationships between budgeted funds and economically disadvantaged students, geographic demographics, and reduction in state and local monies for maintenance of efforts were not evident. With the end of ARRA funds comes the stark reality that many of the same needs requiring financial support remain. Some of these are annually recurring and others are not. The

effects of ARRA funds will likely be evident for some time both in terms of benefit from the purchasing power of the short-term monies and the sharp reduction in available IDEA funds. In addition, LEAs that reduced maintenance of effort in 2009-2010 and budgeted ARRA funds to cover those areas may now need to find state and local monies to increase maintenance of effort. LEAs must continue to provide a free appropriate public education to special education students with fewer available funds than in the previous 2 fiscal years. As efforts continue to reform education and increase student achievement, LEAs must make careful and sound decisions in budgeting available funds. It is important that lessons learned from ARRA funds be applied in any future short-term funding.

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