Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee

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Support for Higher Education: Perceptions of Selected University Administrators and Legislators in 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

Deidre L. Yowell

December 2012

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Keywords: state funding, Tennessee higher education, state legislator perceptions, university administrator perceptions, levels of support, higher education
ABSTRACT

Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee

by

Deidre L. Yowell

This quantitative study examined the perceptions of selected university administrators and legislators concerning levels of support for Tennessee public higher education. The purpose of the study was to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. The population targeted for this study was comprised of 132 members of the Tennessee General Assembly, the Executive Director of the Tennessee Higher Education Commission (THEC), the Chancellor of the Tennessee Board of Regents (TBR), the President of the University of Tennessee System, and 36 Chief Administrators at 9 state-supported universities. The principal investigator used a web-based survey development company to design, collect, and store survey responses.

Results obtained from the study were examined using independent samples t tests, one-way ANOVAs, and a Pearson correlation coefficient. From these tests, 8 out of 13 research questions had statistically significant findings. Analysis of the data revealed that legislators and higher education administrators in the State of Tennessee perceived funding for higher education differently. There were significant differences between the 2 groups concerning
use of higher education reserves during weak economic times, the explanation for tuition
rises, how much costs students should incur for higher education, level of importance
placed on state appropriations for funding higher education, and how they perceived
priority of higher education in the state budget. There was a significant difference between
one’s political party affiliation and perception of access to higher education being an issue.
Democratic participants tended to perceive access to higher education as more of an issue
than Republican participants. A significant difference was also found between one’s
education level and ranking of higher education in the state budget. Participants having
earned a graduate degree tended to prioritize higher education with significantly greater
regard in the state budget than the participants with no graduate degree.
DEDICATION

To Dr. Richard A. Manahan

Thank you for supporting me throughout my graduate career. You are an exceptional leader and mentor. The graduate assistantship in University Advancement provided me the chance to further my education as well as gain experience working on projects I would not have otherwise had the opportunity. Thank you for your belief in me and for keeping me focused on completing this research! Your persistent encouragement has played a vital role in my reaching this stage. Thank you for the example you have set!

To my family: Greg, Roberta, & Lorelei Yowell

Thank you for your “never give up” attitude and infinite support. You have played a significant financial and emotional role in my educational pursuits. I am certain you are just as pleased as I am that graduation is in sight! Since high school I have asked you to review my work: “does it make sense, do the sentences flow, what were your impressions, did you learn anything?” Thank you for listening to my ideas and being a sounding board when feeling the pressure. Without your patience and reassurance, achieving this level of education would have been extremely difficult.
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This study could not have been completed without the support and assistance of numerous individuals. My family, friends, and dissertation committee supported me throughout the process of researching and writing this study. I want to express how great of an impact your words of encouragement had on me getting to this stage. Discussing my research with each of you helped to narrow down what it was exactly that I wanted to learn from the study.

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CHAPTER 1
INTRODUCTION

The large degree of uncertainty of the national and global economy has brought increasing concern to the state of higher education, specifically, the financial position (Baum & Ma, 2010). Enduring a financial environment that is constantly changing is difficult for organizations such as colleges and universities that are driven by consensus decisions. Alexander, Harnisch, Hurley, and Moran (2010) puts into perspective the shifts in higher education funding from states to students during the economic crisis. The reduction in state appropriations for higher education in the United States has become increasingly problematic with the rapid growth in student enrollments occurring nationwide (Baum & Ma, 2010).

This study was conducted to examine the perceptions of legislative members in the State of Tennessee and select chief administrators for institutions of higher education regarding the strategies used to influence levels of funding for postsecondary institutions. Nine universities in Tennessee were targeted for the study: Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, University of Memphis, University of Tennessee- Chattanooga, University of Tennessee- Knoxville, and University of Tennessee-Martin. The reason for selecting these universities was for their membership in the Tennessee Board of Regents and University of Tennessee systems. Senators and Members of the House of Representatives in the Tennessee General Assembly were included in the study for their role in state budgeting for higher education.
Statement of the Problem

The problem of this study was three-fold: (a) to determine the strategies used by chief administrators to influence levels of financial support for higher education, (b) to describe the perceptions of legislative members about how they are influenced to give financial support to higher education, and (c) to determine if a pattern of consensus existed among research participants.

The purpose of the study was to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. Bound and Turner (2007) suggested there had been a national decline in higher education and in order for leaders in higher education to respond to the decline, they must understand the perceptions of legislators with regard to public higher education funding.

The last few years have been marked with financial uncertainty and as a result state budgets have experienced large cuts in spending (Baum & Ma, 2010). Often, state appropriations to public higher education are considered discretionary and therefore the first item to be cut from the budget and last to recover (Russell, 2008). State legislators often rationalize higher education as a discretionary item: “colleges and universities can find other sources of income to compensate for reduced state support” (Russell, 2008, p. 1). In the interest of the stakeholders involved, there is an increasing need to improve communication and relations between leaders of higher education institutions and those in state government. The flow of information in both directions involves more than a simple recognition of need because there is regular disagreement between the university and legislative members about state controls, appropriations, the nature of information that should be exchanged, and the independence of higher education (Weerts & Ronca, 2006).
Weerts and Ronca (2006) suggested the university-government relationship as symbiotic, that one depends on the other. “Public higher education institutions play an important role in creating an educated citizenry and improving state and local economies, while states bear the primary responsibility of funding postsecondary education” (p. 935). Institutions of higher education must communicate with the general public as well as the state legislature in order to dispel skepticism of higher education’s mission (Desrochers, Lenihan, & Wellman, 2010). Immerwahr, Johnson, Ott, and Rochkind (2010) discussed why Americans have reservations about the system of higher education. The data revealed people felt universities were more concerned with the bottom line than with the educational experience for students because tuition rates continued to rise.

Desrochers et al. (2010) identified patterns during 1998-2008 that help to explain the increase in public doubt in higher education spending. From 2001-2005 a change in financing of public higher education shifted more costs onto students. Taking into consideration recent trends, it was no surprise the loss of confidence the public experienced in higher education’s objectives (Desrochers et al., 2010). Immerwahr et al. (2010) found there to be rising public skepticism due to escalating costs of tuition and fees and the lack of control institutions of higher education seemed to possess over keeping education affordable and accessible.

Financing higher education has experienced some unprecedented changes in the last 3 decades. Baum and Ma (2010) indicated an increase of 140% in tuition rates of public institutions since 1980. Also, the source of support from state funds decreased 7% (31% to 24%) and the share of funding coming from tuition and fees increased 13% (23% to 36%). Despite the dips in state support and hikes in student expenses, Desrochers et al.
(2010) emphasized state spending remained approximately the same per student (on an inflation basis) throughout this 30-year time frame.

In future years of economic recovery, Boyd (2009) hypothesized higher education institutions would be unlikely to receive any increases in state funding. In the competition for scarce state funds, higher education appropriations must compete with other priorities of the state such as healthcare, K-12 education, the criminal justice system, and welfare (Altbach, Berdahl, & Gumport, 1999; Bound & Turner, 2007; Kallison & Cohen, 2010; Locker, 2012; McLendon, Hearn, & Mokher, 2009; Russell, 2008). Boyd (2009) predicted considerable demands from other sources competing for state funding would cause even greater tax increases or cuts in public higher education budgets during an economic crisis and recovery. With this in mind, university leaders have to rely on alternative funding sources because current levels of state funding may not be guaranteed, and in most circumstances, a best case scenario in the future (Bound & Turner, 2007).

Significance of the Study

The significance of this study was to determine ways in which university administrators could increase support from state government legislative members. The role of the governor and state legislature has evolved over time to be key players in budget planning and for the public investment in postsecondary education (Weerts & Ronca, 2006). Canfield-Davis and Jain (2010) explained the process of how education-related bills pass through a legislature are explained and which factors have influence on voting decisions. Through their observations, five strategies were recommended to education leaders for improving the likelihood an education-related bill to pass in the legislature.
(Canfield-Davis & Jain, 2010). Understanding the bill process could be helpful in the interactions between leaders of public higher education and government leaders when petitioning for increased levels of financial support institutions receive in the future.

Historically, when members of the state legislature have demonstrated doubt in the value of academic programs while many administrators of public postsecondary institutions have expressed need of a constructive relationship with state representatives concerning the state capital (Collins, 1996; England, 2000; Manahan, 1975; Stinson, 2003; Williams, 2005). Archibald and Feldman (2006) explore in their research whether institutions have influence over policy outcomes, particularly tax revolt institutions. Policy outcomes are found to be driven by voter preferences, if politicians know preferences proposals are aligned to suit the median voter (Archibald & Feldman, 2006). Developing new channels of coordination, cooperation, and communication has the potential to improve the relationship between leaders of higher education institutions and state legislatures (Dougherty, Natow, Hare, Jones, & Vega, 2011).

Recent examination in political matters indicates that higher education is becoming more of a partisan issue in federal policymaking (Doyle, 2010). Doyle discovered there is rarely agreement between the liberal and conservative parties with regard to higher education. The discord between the two parties was seen as a pattern resulting from an increasingly partisan group of elected officials at the federal level. McLendon et al. (2006) found states with a greater Republican influence tended to adopt more performance funding policies. In 2009, McLendon et al. supplemented their previous findings by adding state governments with a greater Democratic representation are likely to afford higher education more state appropriations.
Costs of higher education over time have begun to surpass state appropriations (Toutkoushian & Shafiq, 2008). The Tennessee Higher Education Commission (2010) illustrates students at 4-year public institutions from 2009-2010 paid on average 81% more tuition than 10 years previous, even after adjusting for inflation. The decline in state financial support for public institutions of higher education has several explanations, but Weerts and Ronca (2006) established economic recessions over the last 30 years as culprits for the national decline. Zumeta (2009) rationalized sudden decreases in state finances affecting higher education being due to states not having a safeguard or emergency fund to protect institutions during declines in the economy. Historically, students bear the burden of steep tuition and fees in order to compensate for dwindling state support in a bust economy (Zumeta, 2010). Nationwide, public postsecondary institutions have adopted to increase private fundraising to combat budget cuts in order to remain competitive in a market against other nonprofits (Cook & Lasher, 1996).

In previous studies financing of higher education was deemed a nonpartisan issue; however, Doyle (2010) states “little research has documented whether legislators differ systematically in how they vote on higher education” (p. 620). The evidence from Doyle’s (2010) study demonstrated that higher education has progressively converted into a partisan issue in the U.S. Senate; the topic of higher education has become more controversial in the last few years. McLendon et al. (2009) defended this notion by finding lower appropriations for higher education have a tendency to be associated with a stronger Republican influence in state legislatures. The conclusions from these recent studies may help shape stakeholder perspectives on issues surrounding levels of financial support for higher education.
Research in the politics of higher education has been limited to what the state institutions of higher education have done, as well as what they should do, to contribute to the state. Research has been inadequate in determining whether a consensus exists between university administrators and state legislators concerning their views on how higher education should be financially managed. Also, because implementation of Complete College Tennessee Act of 2010, there has been no study on how legislators and administrators perceive the efficiency of the new performance funding strategy for public higher education. The purpose of this study was to provide insight on the tendency, or lack of, the agreement in perceptions concerning financial levels of support for higher education among university administrators and legislative members in the State of Tennessee. Results from studying leaders’ opinions on financing may be useful in improving communications and cooperation between leaders in higher education and state government.

Research Questions

The purpose of this study was to determine if perceptions of legislative members and chief administrators of universities in the State of Tennessee were in agreement regarding levels of financial support for higher education. Examined in this research were the decision-making issues considered important in to Tennessee’s legislators and university administrators with regard to levels of funding for higher education. The following research questions were developed:
1. Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican)?

2. Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other)?

3. Is there a significant correlation between research participants’ length of service in leadership position and how they rank the priority of higher education in the state budget?

4. Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree?

5. Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee)?

6. Is there a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget?

7. Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree)?

8. Is there a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education?
9. Is there a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times?

10. Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations?

11. Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders?

12. Is there a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education?

13. Is there a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education?

Limitations and Delimitations of the Study

The study is limited to perceptions of higher education administrators and legislative members in the State of Tennessee, views on funding higher education will not be applicable to other states. Results from this study will not help to establish a universal standard for improving relationships between universities and state government; however, data analysis and recommendations will be presented concerning the state government-higher education relationship in Tennessee at the time of the study. Conclusions made
based on the findings will be limited to the 4-year, state-supported universities in Tennessee from which the data were drawn. The nine universities to be included in the study are: Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, University of Memphis, University of Tennessee- Chattanooga, University of Tennessee-Knoxville, and University of Tennessee-Martin.

The research is limited to the willingness of those being surveyed. Honesty of responses has also been considered a limitation of the study. For instance, there was no way to confirm intended participants were the ones who actually completed the survey.

Additionally, the research design contributed to the study’s limitations. Measuring people’s perceptions using a quantitative research methodology required participants to select a response that was most applicable. There was no opportunity for interpretation or explanation of participants’ responses in the quantitative method of analysis.

Funding for public higher education in the State of Tennessee has been an ongoing debate among legislators and administrators of higher education. Therefore, limitations concerning the political nature of this research may have also been a factor in the results. Survey participants may have responded to questions in a way that did not fully commit them to a certain position in case their responses were somehow connected to them and made public.

The timing of the study may have also been a limitation. The survey was administered in the month of September 2012; a time when universities had just begun the fall semester and amid an election period for the Tennessee General Assembly. Participation in the study may have been influenced by the timing.
Definitions of Terms

The following definitions are provided to establish clarity of key terms throughout the study.

**Access** - acceptance of students who have met the minimum requirements to enroll in any public institution of higher education (Altbach, Berdahl, & Gumport, 1999).

**Accountability** - a broad term associated with institutions reporting their activities, accepting responsibility of outcomes, and disclosing such information those supporting them in a way that is understandable and shows outcomes are worth the costs (Altbach et al. 1999).

**Campus-based financial aid** - funds administered directly by the institution’s financial aid office and awarded to students according to federal guidelines. Three programs are included: The Federal Perkins Loan, Federal Supplemental Educational Opportunity Grant, and the Federal Work-Study (College Pays, 2012).

**Carnegie Classification of Institutions of Higher Education** - a framework used to distinguish institutions in the United States for the purpose of educational research and analysis (Tennessee Higher Education, 2010a). Classifications are derived from empirical institutional data for the purpose of studying higher education (Carnegie Foundation for the Advancement of Teaching, n.d.).

**Chief administrators** - the principal university and college administrators of individual 4-year institutions who work primarily with the legislative members in matters concerning higher education. Chief administrators for the purpose of this study include the university president or chancellor, chief academic officer, chief student service officer, and the chief financial officer.
**Direct PLUS loans** - Federal loan program, Parent Loans for Undergraduate Students, which enables parents of dependent students to apply for a loan to help pay their child’s education expenses as long as certain eligibility requirements are met. Graduate and professional students may apply for PLUS loans for their own expenses up to the full cost of education minus other financial aid (Cunningham & Kienzl, 2011).

**Effective** - successful in producing a desired or intended result.

**Federal Direct Loan Program** - low-interest loans for eligible students to help cover the cost of higher education at a 4-year college or university; community college; or trade, career, or technical school. Eligible students borrow directly from the U.S. Department of Education through participating schools. The program includes Stafford Loans and PLUS loans (Cunningham & Kienzl, 2011).

**Funding** - any means of financing public higher education, including state appropriations, student fees, grants, or any other type of financial payment to public higher education.

**Formula Funding (enrollment based)** - the allocation of funds to institutions based on the number of student enrollment.

**Full Time Equivalent (FTE) Enrollment** - as defined for undergraduate and graduate students by the Tennessee Higher Education Commission (2010d). Undergraduate are considered FTE when the total number of credits attempted divided by 15. FTE for graduate students is the total number of credits attempted divided by 12.

**Grant** - a financial aid award that requires no repayment (College Pays, 2012).
Indicators (performance)- standards used to provide data on institutional performance in areas such as student diversity, faculty workload, number of accredited programs, access for undergraduates, job placement (Burke & Associates, 2002).

Legislative committees- boards within the Tennessee General Assembly that have say in the funding process of higher education. These committees include the Senate Committee on Finance, Ways and Means; the Senate Committee on Education; the House Committee on Finance, Ways and Means; and the House Committee on Education.

Legislative members/legislator- members of both the state of Tennessee House of Representatives and the State of Tennessee Senate. The state of Tennessee is divided into 99 districts; one representative is elected per district. There are 33 senatorial districts from each of which a senator is elected (Tennessee General Assembly, n.d.).

Loan- financial award made to a student with a formal agreement for repayment plus interest (College Pays, 2012).

Mandatory fees- fees required to be paid by all students attending a particular college or university. Application, course specific, program specific, and credit hour fees are a few examples of mandatory fees.

Matriculation- the admittance and enrollment of students to a college or university.

Need-based financial aid- funding intended to help students pay educational expenses such as tuition and fees, room and board, books, and supplies. Need-based financial aid is awarded on the basis of financial situation of the student (Kallison & Cohen, 2010; Kim, 2010).

Nontraditional student- an undergraduate student enrolled in higher education who is 25 years of age or more (National Center for Education Statistics, 2011a).
Pattern of consensus- agreement among perceptions of chief administrators and legislative members (Manahan, 1975).

Performance funding- a budget supplement process to allocate state appropriations to fund institutions of higher education based on an evaluation of outputs mechanism is used to monitor the quality, efficiency, and effectiveness of public institutions (Williams, 2005). An institution receives a specific amount of performance money based on the achievement of a set target on a designated indicator. Goals or programs have measurable outcomes that are regularly evaluated and reported back to the funding authority. These results are used to support further funding or to terminate funding (Burkes & Associates, 2002, p. 21).

Public higher education- institutions of education, often referred to as colleges and universities that are funded in part by the state’s taxpayer. Public higher education institutions examined in the State of Tennessee for the purpose of this study include: Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, University of Memphis, University of Tennessee- Chattanooga, University of Tennessee- Knoxville, and University of Tennessee- Martin.

Reserves- are nest assets maintained by not-for-profit organizations and include restricted and unrestricted funds.

Scholarship- a form of financial assistance awarded based upon criteria established by the donor. A scholarship does not require repayment.

Southern Regional Education Board (SREB)- an interstate compact for higher education. States included: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky,
Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia (Southern Regional Education Board, 2012). The 2010-2011 Tennessee Higher Education Fact Book defines the SREB as “a coalition of government officials, educators, and civic leaders interested in advancing knowledge and improving the social and economic life of the South” (p. 88).

**Stakeholders (higher education)** - people who are affected by and/or have an interest in the activities of higher education. Stakeholders of higher education may include students, parents, institutional faculty and staff, taxpayers, state legislatures, governing and coordinating boards, etc. (Burke & Associates, 2002; Canfield-Davis & Jain, 2010; Deaton, 2010; Harnisch, 2011; Manahan, 1975).

**State appropriations** - public monies, collected through taxes and fees, allocated by the Tennessee Legislature to the various state agencies. The state appropriations for higher education include funding for medical and health programs, state-level student financial aid programs, state funds for coordinating or governing boards of public higher education, and state funds for private universities. Excluded from state appropriations are funding for capital construction and debt payments (Tennessee Higher Education, 2010).

**Tennessee Board of Regents (TBR)** - the governing board of public higher education in Tennessee that oversees the operations of six public universities, 13 public community and or technical colleges, and 27 technology centers in the state of Tennessee. The TBR was chartered April 14, 1972, by an Act of the Tennessee General Assembly. The TBR is the seventh largest system of public higher education including 46 campuses. The Board has the authority to select presidents for institutions, award tenure, and approve faculty promotion (Tennessee Board of Regents, 2012).
**Tennessee Higher Education Commission (THEC)** - the state’s coordinating board for higher education. Created in 1967 by the Tennessee General Assembly, THEC coordinates the two systems of public higher education, Tennessee Board of Regents and the University of Tennessee Board of Trustees (Tennessee Higher Education Commission, n.d.). The THEC is comprised of nine lay members serving 6-year terms and who represent congressional districts of the state, three constitutional officers serving as ex-officio voting members, two ex-officio student members serving 2-year terms, and the executive director of the State Board of Education as an ex-officio nonvoting member (Tennessee Higher Education Commission, 2010d).

**Traditional student** - an undergraduate student enrolled in higher education who is under the age of 25 (National Center for Education Statistics, 2011a).

**Tuition** - refers to any charge, fee, or financial obligation charged directly to the student for his or her education. In Tennessee, these labels may be under different labels such as incidental fees, course fees, or educational fees.

**University of Tennessee Board of Trustees (UT System)** - the governing body for the University of Tennessee system that is comprised of three universities in Tennessee, campuses at Knoxville, Chattanooga, and Martin. The Board’s purpose is to establish policies controlling the scope of the educational opportunities the university offers as well as policies determining overall operations. The authority on selection of presidents, awarding tenure, and approval of faculty promotions lies with the Board. The University of Tennessee Board of Trustees also has the authority to determine and control the activities and policies of all organizations and activities that bear the name of the University of Tennessee (University of Tennessee Board of Trustees website, 2012).
Overview of the Study

This study examined the perceptions of chief university administrators and state legislators of Tennessee regarding factors that influence funding for higher education. Each year, decisions related to the funding of higher education affect students, parents, faculty and staff of institutions, and even the citizens throughout the state. Factors such as access, accountability, state budget, financial aid, economic benefits, and general demographics of the population surveyed were explored. Structured responses were provided for respondents to assist in explaining differing levels of support for Tennessee’s higher education.

This study has been divided into five chapters, followed by supporting research materials in appendices. The first chapter introduces the research with a statement of the problem, significance of the study, research questions, limitations of the study, and definitions of terms. In Chapter 2, a review of literature relevant to the research is presented. The methods and procedures of this study are outlined in Chapter 3 along with the research design, population, survey instrument, collection of data, and null hypotheses. The results of the data collection are analyzed in Chapter 4. In Chapter 5, the findings from the data are summarized, conclusions from the study are outlined, and recommendations for future research are suggested.
CHAPTER 2
REVIEW OF LITERATURE

The amount of research on funding for higher education is vast. There is no shortage of studies, reports, or articles on how the funding of higher education affects society. This review of literature summarizes how the structure of public higher education has transformed in the last half century, higher education has fared in the last decade, issues of accountability are addressed nation and statewide, and recounts previous studies on state legislator perceptions toward higher education in the state of Tennessee.

At A Glance: History of Funding Higher Education

Prior to the 1950s American higher education closely resembled that of the private sector of present day (Stinson, 2003). In a once unregulated marketplace of service delivery, public colleges and universities competed for students, resources, and political patronage (McLendon, Hearn, & Deaton, 2007). Public higher education funding during this era was a political process dependent upon the political influence of legislators supporting individual institutions and the lobbying abilities of the presidents of these institutions (Stinson, 2003). Prior to the use of funding formulas, individual institutions presented a request for funding to the state legislature each year. This method often resulted in capstone institutions gaining greater financial support than others within the state. The subjective process of funding higher education fostered a great deal of power politics and intrigue (Ehrenberg, 2006). According to Stinson (2003) this funding scenario was referred to as “unpredictable and extremely competitive” (p. 23).
Post WWII prompted restructuring of the public higher education system in the United States (Ehrenberg, 2006). States were confronted with a significant increase in university enrollments as well as a surge in public expenditures on higher education; therefore, a need for greater order, efficiency, and planning was sought to coordinate the frenetic expansion of campus capabilities (McLendon et al., 2007). The organization of higher education established postwar endured until the 1980s, when emerging trends in higher education demanded reform of the system (Collins, 1996; Complete College America, n.d.; Ehrenberg, 2006; England, 2000; Kallison & Cohen, 2010).

State legislatures pursued a wide range of policies and programs in the last quarter of the 20th century in order to fund and encourage affordability, access, and participation in higher education (Kallison & Cohen, 2010). Between years 1985-2002 state governments considered over 100 modification strategies in the improvement of public higher education institutions’ accountability, competitiveness, program coordination, innovativeness, operating efficiency, and cost savings (Ehrenberg, 2006). A broad range of need-based and merit-based grant and loan programs were developed by the federal government for undergraduate and graduate students, including grants for those in critical research fields. In conjunction with federal aid, state governments began providing financial support to need based and merit based residents as well as funds for a significant portion of instructional and capital costs of public postsecondary institutions (Kallison & Cohen, 2010). As a result of continuous reform in higher education, taxpayers and politicians of the 1990s saw increasing value in supporting higher education for the social and economic benefits it brought to the state (Collins, 1996).
The current higher education organization evolved in response to years of population growth, increased spending on entitlements, growing budget deficits, and repeated tax-cutting. Kallison and Cohen (2010) pointed out that in the past tuition and fees at public institutions were kept low by state legislatures to encourage the development of higher education. However, to make up for reduced state funding as a percentage of instructional cost, Kallison and Cohen further observed that many governing boards and some legislatures across the United States have increased tuition considerably at public postsecondary institutions.

“Federal and state support for higher education in the form of student financial aid now covers less of a college education even though the dollars funding these programs have increased overall” (Kallison & Cohen, p. 39). The level of financial support by each state differs, and for some states, higher education is not a primary concern of the state legislature (Hossler, Lund, Ramin, Westfall, & Irish, 1997). In the competition for scarce state funds, higher education appropriations must compete with other priorities of the state such as healthcare, K-12 education, the criminal justice system, and welfare (Bound & Turner, 2007; Kallison & Cohen, 2010; Locker, 2012; McLendon et al., 2009; Russell, 2008; Zumeta, 2010). Students have been adversely affected by financial aid not keeping pace with tuition increases; for that reason student debt loans have surged. Tightening financial aid, as demonstrated by Kallison and Cohen (2010), has disproportionately affected low-income Americans, some now unable to meet the rising costs of higher education.

Access and affordability are comprehensive issues leaders in higher education and state legislatures must confront in the years ahead. "Without a college degree and, in many cases, a graduate degree, Americans will find the road to the middle class and above
increasingly different, even impossible to traverse” (Kallison & Cohen, 2010, p. 39).

President Obama’s American Recovery and Reinvestment Act of 2009 and the 2010 federal budget included provisions for making higher education more affordable and accessible (Complete College America, n.d.).

**Price Elasticity of Higher Education**

In light of an economic downturn, higher education in the United States has consistently experienced shrinking state support for operations, unpredictable financial aid commitments, academic program closures, and higher tuition levels (Harnisch, 2011; Noland, 2011). While the environment for higher education is unpredictable in a depressed economy, the demands continue to amplify as states turn to universities as a means of driving innovation and economic development. Noland (2011) presented the paradox of higher education giving more with less:

> [W]hile the pressures on academe to serve as both the great social equalizer and a vehicle for economic development have increased, the economic commitment provided to the corpus has decreased. In many states, funding for higher education has declined significantly as a result of the Great Recession, a trend that will only grow more troubling in the years to come. Current economic pressures are forcing institutions to redefine their missions and become more efficient in the delivery of their services. While the demands on higher education are increasing, the economic capacity to handle the demands is decreasing. (Noland, 2011, p. 13)

Higher education has been experiencing a period of prolonged transition with regard to public policy (American Association of State Colleges and Universities, 2012). States are no longer financially equipped to maintain their former roles as owner-operator of public higher education while the federal government also unable to keep up with the increasing costs of higher education. The contradiction of policymakers needing higher
education more while being less able to directly control systems of higher education has resulted in financing shifts drastically impacting higher education in the new millennium (Bound & Turner, 2007; Dougherty, K., Natow, R., Hare, R., & Vega, B., 2010; Goldstein, 2010; Jaschik, 2006; Kim, 2010; McLendon et. al, 2009; Noland, 2006; Noland, 2011; Pickert, 2008; Russell, 2008; Tandberg, 2008; Weerts & Ronca, 2006; Wieder, 2011; Williams, 2005; Zumeta, 2009, 2010).

Graduation Rates

Data associated with the current economic downturn suggested a gap in the level of unemployment between those who have obtained a college degree and those who have not. American Funds Investor magazine reported 9.6% of those unemployed lack a college degree (Mehagian & Piscitielli, 2012). The benefits of a college education far exceeds short-term job security, a 4-year college degree has the potential to add more than $1 million to the average American’s cumulative pay. Between 1980 and 2012 graduation rates have entered the spotlight as growing enrollments and inflation have amplified the financial strain of public higher education in addition to the shifts and cutbacks in state funding. Graduation rates of undergraduate students have garnered attention as higher education has been confronted with providing evidence of increased productivity to state legislatures. Ehrenberg’s (2006) book suggests demand for colleges and universities to rapidly increase the number of graduating instead of perpetual students stems from concerns of costs to the state and not necessarily about the education of the students.

Graduation rates have long been recognized as a tangible, comprehensive measure of institutional quality for higher education stakeholders (Deaton, 2010; Harnisch, 2011).
Although regarded as an indicator for institutional excellence, graduation rates have also reflected academic strength of enrolled students, admission standards, and the facilities devoted to student instruction and retention (Ehrenberg, 2006).

With regard to policy issues, expenditures per student are important to graduation rates when properly measured. Ehrenberg’s (2006) works supported this notion by implying state governments that ignore expenditures per student whilst calling for increased graduation rates from public higher education will not have success without increased financial support. As a result, there appears to be a tradeoff of access and graduation rates. Ehrenberg (2006) stated:

As long as public institutions continue their mission of open access, they may have to devote more resources to the educational mission if the current levels of graduation rates are to improve. If the 4-year graduation rates slide further, then age-adjusted level of human capital in a state’s workforce will decline; and the direct costs to parents, students, and states will increase...opportunity costs to society and its elements will also increase as a result of delayed entry into the workforce, deferred income tax revenues, and possible trade-offs between construction capital to expand capacity versus instructional expenditures. (Ehrenberg, 2006, pp. 77-78)

**Tuition Trends**

As mentioned before, the tuition rates of higher education in the United States have experienced steep increases in the last few years, making the opportunity for higher education unattainable for some prospective students. Altbach et al. (1999) explained rising tuitions in the public sector result from withdrawals of state tax revenue and a shift in cost burden from the taxpayer to students and parents. While higher education is considered a worthwhile investment, it is no surprise costs associated with a college degree continue to rise (Mehagian & Piscitielli, 2012). Murray (2011) reports student tuition and fees comprise approximately 20% of the total annual cost of educating students
at 2-year institutions, about one third of the total annual cost at public 4-year colleges, and
one half the costs at private colleges and universities. The United States Department of
Education (2011) estimated the cost of public higher education including undergraduate
tuition, room, and board for the academic year 2009-2010 to be $12,804. From academic
years 1999-2000 to 2009-2010, the cost of public higher education rose 37% after
adjustments were made for inflation (National Center for Education Statistics, 2011a).

The situation is the same throughout the United States; legislatures are reducing
taxpayer support for public higher education, offsetting those reductions with higher
tuition and fees (Archibald & Feldman, 2006, 2008, 2011; McClellan, Stringer, & Associates,
2009; Goldstein, 2010; Hossler, Lind, Ramin, Westfall, & Irish, 1997; Martin & Gillen, 2011;
Zumeta, 2010). Ehrenberg responded to the rise in tuition of American higher education:

One reason tuition has been rising fast in public universities is that they have had to
replace revenues lost when state legislatures reacted to budget deficits by reducing
appropriations for higher education. Many have increased class sizes, postponed
faculty raises and have shifted to lower-paid, part-time faculty. (as cited in Dillon,
2005b, para. 10)

Higher education's growing dependency on revenue from tuition and fees negatively
impacts higher education access for price-sensitive or low-income students (Archibald &
Feldman, 2011; Martin & Gillen, 2011). State disinvestment in public higher education has
forced institutions to resemble admission and tuition policies of private institutions (Dillon,
2005a). Inadvertently, federal and state student aid programs including loans, grants, and
tax programs created incentive structures that discouraged states from maintaining or
improving tax support. As a result, more financial responsibility for public higher
education has shifted to students and their families (Ehrenberg, 2006). There appears to
be little to no incentive for state governments to maintain above average or high levels of
tax support to public higher education in exchange for maintaining low-tuition strategies (Archibald & Feldman, 2006).

**Enrollment**

The National Center for Education Statistics (2011a) found public higher education enrollment between academic years 1999-2000 and 2009-2010 to have increased 38%, 14.8 million to 20.4 million students. Much of the growth during this time period was a result of a 45% increase in the number of full-time students; part-time students rose 28% (National Center for Education Statistics, 2011a).

The National Center for Education Statistics (2011a) recognized the percentage of students aged 25 and older increased in recent years with the number for nontraditional students enrolling in higher education being considerably larger than the number of traditional students. Traditional student enrollment between academic years 1999-2000 to 2009-2010 rose 27% while nontraditional student enrollment rose 43%. Based on these findings, the NCES report (2011a) predicted enrollment trends to support greater increases in nontraditional enrollment between 2010 and 2019 (National Center for Education Statistics, 2011a).

DesJardins, Ahlburg, and McCall (2006) established students’ application and enrollment decisions rely heavily on the projected price of higher education and anticipated financial aid. Strategies of increasing tuition and fees without equal increases in financial aid result in decreases in enrollment as well as significant reductions in the total revenue of institutions (Kim, 2010). Higher education is a nonessential good because the education at one institution could be attained through another competing institution
offering similar services. In order to avoid potential losses in enrollment, Kim (2010) recommended educational leaders monitoring tuition and financial aid policies of counterpart institutions. Kim (2010) examined the effect financial aid had on enrollment rates and determined students' decision to enroll in higher education was influenced by changes in college prices.

Financial Aid

In the midst of increases in tuition and enrollment, financial aid policy has experienced a shift from a need-based grant approach to loans (Kim, 2010). While grants do not require reimbursement, loans bestow long-term debt obligations on students; adding to the cost of higher education (Eckwert & Zilcha, 2008). Cunningham and Kienzl (2011) found the availability of student financial aid, including grants and loans, a significant function in supporting students' access and success in postsecondary education.

Patterns of expansion in higher education, Eckwert and Zilcha (2008) found, were often plagued with fiscal pressures; therefore, financial burden shifted from public funding sources to private, namely student loans. In attempt to overcome financial barriers to enroll in and finance their postsecondary education, students and their families have become progressively more reliant upon loans to cover the costs (Mehagian & Piscitielli, 2012). Cunningham and Kienzl (2011) report federal student loans as the largest sources of financial aid available to undergraduate and graduate students.

A range of federal student loans as well as nonfederal alternatives exist for students borrowing money for education. The majority of borrowers, according to Cunningham and Kienzhl’s findings (2011), obtain loans through the federal Stafford loan
program. A number of undergraduate students seek aid through the Perkins loan program; private, state, or loans offered by the institution; and some parents of students borrow through the federal program, Parents Loans for Undergraduate Students (PLUS) (Cunningham & Kienzl, 2011). The terms and conditions generally determine which types of loans students apply.

According to Gallup (2011), parents pay the highest share (47%) of their children's postsecondary education costs, including 37% from income and savings and 10% from borrowing. Grants and scholarships were the second most significant source of funding higher education costs (23%) in the study. The remaining costs of higher education were paid by loans (14%), student income and savings (9%), and contributions from friends or relatives (7%).

Altbach et al. (1999) examined issues facing higher education during the 1990s predicted how trends might shape the following decade. The long-term impact of changes in financial aid and tuition on access to higher education were accurately foreseen:

Unless sufficient financial aid is provided, low-income students and historically underrepresented ethnic groups may be excluded from institutions of higher education. Middle-class families are also finding it more difficult to pay for college, because college costs as a percentage of family income have risen to a 20-year high. (p. 114)

Murray (2011) discussed the relationship between access to higher education and issues of affordability for students from all socioeconomic backgrounds. “Not only has a college education become more expensive, students from upper- and middle-income families receive on average larger college and university grants than students from low-income families” (Murray, 2011, p. 10). Eckwert and Zilcha (2008) concluded the
motivations behind students’ investment in postsecondary education are affected by the amount of educational loans available to them.

Kim’s (2010) review of earlier studies on price of higher education impacting enrollment behavior report various degrees of sensitivity to prices and the types of financial aid awarded to students depending on individual socioeconomic status. Students from low-income families had a positive response to availability of need-based grants versus loans for reducing the fees for higher education (Baum, 2003). Toutkoushian and Shafiq (2009) maintain that dwindling state funding for higher education in recent years has become an access barrier for low-income populations.

**Alternative Subsidies**

Many students and families are struggling to pay for college in spite of financial aid offerings (Baum & Ma, 2010). “Most undergraduate students obtain their loans through the federal Stafford loan program, which provides subsidized loans to students with financial need and unsubsidized loans regardless of need” (National Center For Education Statistics, 2011b, p. 1). However, according to Cunningham and Kienzl’s 2011 research, the propensity of students to take out a private loan in order to finance higher education was on the rise. Some students obtain private loans through banks and other lenders instead of, or in addition to, federal loans. Students likely to finance their education through loans could be grouped based on four indicators: students with a greater financial need, students who enrolled in a higher priced public institution, full-time students, and students attending private nonprofit or for-profit institutions.
National Center for Education Statistics (2011b) found the percentage of undergraduate students who took out private student loans increased from 5% in the academic year 2003-2004 to 14% in 2007-2008. The National Center for Education Statistics (2011b) reported undergraduate student borrowing increased during academic years 2003-2004 to 2007-2008, Stafford loans among undergraduates increased from 32% to 35%, and borrowing from all sources rose from 34% to 39%. The percentage of graduate students who took out private loans to cover costs of higher education during the same period rose from 7% in 2003-2004 to 11% in 2007-2008.

Students often turn to private loans when federal loan limits do not allow them to enough money to meet all higher education financial obligations (Cunningham & Kienzl, 2011). In the National Center for Education Statistics’ 2011(b) report, undergraduate private borrowing trends were simplified by stating “the higher the tuition, the higher the rate of private borrowing” (p. 7). For example, undergraduate students whose tuition was more than $10,000 per year had the highest rates of private borrowing (30%-32%), tuition costs between $5,000 to $9,999 (22%), $3,000 (14%), $1,500 to $2,999 (9%), and 4% of undergraduate students who paid less than $1,500 in tuition took out private loans (National Center For Education Statistics, 2011b).

Mehagian and Piscitielli (2012) report the average debt for those graduating with student loans exceeded $23,000. Debt this substantial has extensive repercussions and often the burden of repayment last up to 3 decades, not to mention this type of debt cannot be discharged in the event of bankruptcy (Cunningham & Kienzl, 2011).
State Appropriations

In general sources of revenue for public higher education in the United States include: (a) local, state, and federal appropriations, grants, and contracts; (b) student tuition and fees; (c) institutional revenue; and (d) private gifts including alumni contributions (Goldstein, 2005; McClellan, Stringer, & Associates, 2009). Canfield-Davis and Jain (2010) reported state appropriations for public higher education made up a significant portion of general revenues for public institutions in America. Among trends in higher education over the last 20 years, Baum and Ma (2010) found there to be a continuous decrease in state funding for higher education, a drop from 31% to 24%, as well as an increase in tuition and fees, a jump from 23% to 36%. Despite such financial changes, state spending per student (adjusted for inflation) has remained relatively unchanged since the 1980s (Desrochers et al., 2010).

During times of persistent state deficits, state legislatures are confronted with difficult decisions regarding the allocation of scarce state resources (National Conference of State Legislatures, 2011). State support for higher education often gets cut in times of economic hardship because public colleges and universities have alternative revenue sources, such as tuition and private fund-raising that help to compensate operating costs (Tandberg, 2008). Paradoxically, Tandberg also found higher education’s ability to come up with alternative forms of funding in light of a decrease in state appropriations actually hurt their likelihood of receiving additional money from the state. Tandberg concluded “the harder public higher education tries to get ahead through alternative means, the less support it receives from its primary source of revenue, the state” (p. 23). McLendon et al. (2009) found state appropriations for public higher education are influenced by economic
conditions, higher education policy conditions, demographic patterns, and political influences. Reductions in state support for higher education, specifically state appropriations, limit the flow of resources for public higher education reducing collegiate attainment and ultimately decreasing the amount of workers with a college degree (Bound & Turner, 2007).

One of the most prominent and debated issues facing higher education is state funding (Weerts & Ronca, 2006). McLendon et al. (2009) found state investment in higher education is shaped by the economic conditions of the state. Dillon (2005a) discussed the anxieties of several hundred American colleges and universities being at risk due to the continuous decrease nationwide in state funding. “At stake are institutions that carry out much of the country’s public-interest research and educate nearly 80 percent of all college students, and whose scientific and technological innovation has been crucial to America’s economic dominance” (para. 9).

Bound and Turner (2007) suggested higher education does not operate as a standard market that results in students and their families not having the power consumers have in more open markets. When cuts in the state budget are made, students and their families consequently become an alternative source of funding for higher education (Russell, 2008; Williams, 2005).

Influences

Variation exists in the amount of state appropriations provided to higher education (McLendon et al., 2009). Ehrenberg (2006) highlighted three major changes in state funding of higher education that occurred during the last quarter of the 20th century: (a)
the decline in education’s share of state budgets, (b) the decline in higher education’s share of state educational funding, and (c) the decline in the share of higher education funding that went to public higher education. A number of studies have been conducted with regard to how state appropriations influence higher education outcomes.

The relationship between public funding for higher education and educational performance at the state level has yielded inconclusive results throughout research. In 2005 Kelly and Jones studied whether a relationship existed between state funding and institutional performance in a variety of areas including graduation and participation rates. The results of Kelly and Jones’s 2005 study suggested a weak correlation between state funding and performance. However, in a study performed by Bound and Turner (2007), it was argued that financial resources affect college attainment by exploiting the exogenous variation created by cohort sizes. Results indicated large cohorts within states had relatively low baccalaureate attainment, which suggested lower public subsidies due to cohort crowding could be an explanation.

Government cuts in funding to public higher education have resulted in institutions becoming less open to expansion of access and the commitment to widening avenues of educational opportunity. “State support for public higher education impacts both student access and educational quality, yet great variation exists in the level of funding states provide for public higher education” (Tandberg, 2008, p. 2).

Zhang (2009) investigated whether reduced state funding adversely affected graduation rates, a key performance indicator. Zhang found higher education graduation rates were impacted by state appropriations: “a 10% increase in state appropriations per FTE student at 4-year public institutions is associated with approximately a 0.64
percentage point increase in graduation rates” (p. 729). The study established a decline in state appropriations, when other factors were held constant, would lead to reductions in instructional expenditures; thus, institutions cannot compensate for reductions in state support through internal resource allocation.

Budgetary Procedure

Tandberg (2008) explained the state budgetary process by dividing it into three stages. First, an agency, office, or institution makes a request to the governor, usually a percentage increase in appropriation. The organization’s request is then adjusted to fit in the governor’s budget priorities before the governor submits a final budget requests to the legislature. After legislative consideration takes place over the final state budget, the governor signs the bill for the next year’s appropriations.

Canfield-Davis and Jain’s 2010 study outlined strategies to improve the potential legislative passage of an education bill:

1. Draft the bill in a clear, concise language that reflects well-documented research and that does not create a sweeping change to the status-quo.
2. Prior to the legislative session, meet with all interested stakeholders both inside and outside of the legislature. Stakeholders inside the legislature include legislators serving on the House and Senate Education Committees, other respected and trusted legislators, the Education Committee Chairs and party leaders. Representatives from the state’s Education Association, Association of School Administrators, School Boards Association, and the State Department of Education comprise stakeholders outside the legislature. Depending upon the nature of the bill, a contact might be made with the state’s Association of Commerce and Industry. Continue to meet with the stakeholders throughout the legislative session.
3. Provide all stakeholders with complete and correct information about the bill. Point out the bill’s strengths and weaknesses, its pros and cons.
4. Build a coalition of support.
5. Identify a well-respected, highly trusted, and credible legislator to sponsor the bill. (p. 621)
Political Factors

“The legislature and governor are the ultimate players in the budget creation process and set the stage for the public investment in higher education” (Weerts & Ronca, 2006, p. 940). Tandberg (2008) ascertained the political factors that impact state appropriation process for public higher education. State financial support for higher education in the last 3 decades has continually decreased as a result of funding being cut during an economic crisis never to be restored.

Higher education funding has been more responsive to the business cycle than other state budget items, which resulted in an expectation of less funding during times of economic uncertainty (Zumeta, 2009). Trends in higher education enrollment depict an increase in student enrollment during a recession; hence, institutions must expand their services with fewer appropriations. Often, lags in state dollars are compensated partially by increasing tuition and other sources of revenue.

With continuous shifts in financing and a growing dependence on student fees to balance the decreases in state appropriations, the first 10 years of the millennium have been difficult for higher education (Noland, 2006). Zumeta (2009) found an economic downturn stimulated increases in enrollment and matriculation of students. Simultaneously, institutions of higher education are burdened by a greater demand for services and decreases in traditional state support for the funding of public institutions. Because higher education is not economically resistant to the outcomes of a recession, higher education leaders must manage resources, growth, and quality as campuses develop capacity.
Accountability in Higher Education

The issue of accountability is a prominent issue in the literature regarding higher education funding. It was reported by Burke and Associates (2002) that in the early 1990s, accountability was becoming a primary concern expressed by state legislators, higher education leaders, and stakeholders of higher education. As the condition of the national economy worsened in the years following, the pressures on higher education intensified. As state involvement in higher education has intensified, Noland (2006) suggested the concern for greater accountability has become a prevailing theme in state legislatures in the last 3 decades.

In tandem with the nation’s economic struggles, higher education has been exceedingly unstable. As a result of policymakers trying to secure better performance from higher education institutions, significant effort has been invested in designing incentives (Dougherty et al., 2011). Dougherty et al. (2011) found performance funding for higher education a prevailing strategy used by state governments in the past 3 decades. Under performance funding incentives, many states have experienced more effective and efficient public institutions, even during times when state budgets are strained and demands on higher education continue to increase (Burke, 2002; Dougherty et al., 2011, McLendon et al., 2006; Zumeta, 2009). Wieder (2011) reports 26 of the 50 states in America implemented performance funding in some variation from 1979-2007. “Performance funding isn’t a new concept in higher education...the current climate of fiscal austerity has made lawmakers more receptive to reviving the programs” (Wieder, 2011, para. 7).

Concerns for accountability in higher education have led several states to implement performance funding programs, a decades-old finance strategy linking state funding for
public institutions with performance (Dougherty et al., 2010; Harnisch, 2011; Williams, 2005). Performance funding, as described by Bogue and Johnson (2010), is “the allocation of funds based on performance criteria rather than activity or enrollment criteria” (p. 1). Performance funding in the United States has become a frequent measure of higher education accountability. Early performance funding strategies “have shown that program development, implementation and evaluation must be thoughtful and comprehensive so that college access, affordability, quality and institutional stability are maintained, if not enhanced” (Harnisch, 2011, p. 10).

One of the principal objectives in Collins’s 1996 research was to identify the perceived level of higher education accountability of both legislators and university administrators in Tennessee. Collins revealed that higher education was doing a poor job convincing legislators and the general public of their accountability for funds. Four years after Collins’s study, England’s 2000 research found Tennessee legislators perceived the major issues facing higher education were tied to accountability.

At the time of Collins’s study (1996), no measures for institutional accountability had been developed; higher educational leaders were waiting on the state legislators to express what they wanted to see, while legislators were waiting on higher education leaders to develop measurements that would reflect education outcomes.

Collins (1996) pointed out that not all legislators interviewed for the study expressed there was a lack of accountability from higher education; however, each legislator indicated it was a common perception of most legislators that there was a need for colleges and universities demonstrating accountability better. At the same time, all higher education leaders participating in Collins’s study expressed their confidence in the
institution’s accountability but were unsure of how best to communicate accountability to the General Assembly beyond financial audits. After interviews with legislators and leaders of higher education, Collins was able to identify why expectations in reporting accountability were misunderstood by university administrators, “legislators are looking for information beyond the numerical data reported in audited financial statements” (p. 128).

One of the first qualitative studies of Tennessee legislative perceptions toward higher education funding was Collins’s study in 1996. From Collins’s findings, the matters of accountability and communication as being a priority among state legislators and public higher education administrators were undeniable.

Collins (1996) identified the need for the development of an appropriate accountability system and increased communication between higher education leaders and legislators concerning funding issues. Collins suggested better communication between the two groups would help in legislators making informed funding decisions in the future. “Only through an adequate communication program designed by higher education administrators will higher education reestablish itself as a prime recipient of increased funding” (p. 144).

Measuring Performance in Tennessee

According to Bogue (as cited by Stinson, 2003) the concept of performance funding first occurred in 1974 with the W.K. Kellogg Foundation, the Ford Foundation, and an anonymous Foundation providing funding, $250,000, $64,400, and $75,000 respectively, in support of the concept’s research and development. Planning occurred between 1974 and
1976; and in 1976, 11 public colleges and universities were selected to participate in campus-based pilot projects (Collins, 1996; Dougherty et al., 2011; Stinson, 2003). After a 5-year pilot program, Tennessee legislators adopted the first performance incentive policy in the United States, linking a portion of state funding to five performance indicators (Dougherty et al., 2010; Noland, 2006; Tennessee Higher Education Commission, 2010c).

In 1979 the state of Tennessee was the first to implement performance funding for higher education (Bogue & Johnson, 2010; Collins, 1996; Dougherty et al., 2010; Dougherty et al., 2011; England, 2000; Noland, 2006). The original system enabled institutions of higher education to earn up to 2% of their annual state appropriations through achieving goals based on five criteria (Bogue & Johnson, 2010; Dougherty et al., 2010; Dougherty et al., 2011). The original performance indicators for higher education funding in the state of Tennessee were as follows:

1. Program accreditation: The proportion of eligible programs in the institution’s inventory that are accredited (20 points).
2. Student major field performance: Student performance in major field as assessed by examinations that have normative standards for state, regional, or national referent groups (20 points).
3. Student general education performance: Student performance in general education assessed by a nationally normed exam such as the ACT-COMP examination (20 points).
4. Evaluation of instructional programs: Evaluative surveys of instructional programs or services for a representative sample of current students, recent alumni, or community members of employers (20 points).
5. Evaluation of academic programs by peer review teams of scholars from institutions outside the state and/or practicing professionals in a field (20 points). (Dougherty et al., 2010, p. 11)

At its conception, performance funding in the state of Tennessee was a vehicle to address improving quality of the public higher education institutions. Supporters of the performance funding “believed it was a way to justify increased higher education
appropriations in a time when enrollments were not rising as fast as before...the policy would be a means to prevent externally imposed accountability measures” (Dougherty et al., 2010, p. 13). The research of Dougherty et al. revealed the main champions of Tennessee’s performance funding program to administrators within Tennessee Higher Education Commission.

Studies by Collins (1996) and England (2000) show a demand for greater accountability by government agencies was the basis for which the Tennessee Higher Education Commission developed the original funding proposal.

State higher education coordinating boards viewed performance funding systems that higher education itself designed as a way to secure new funds and increased legitimacy for higher education and to forestall the possibility of the imposition of unwelcome forms of performance funding by state elected officials (Dougherty et al., 2011, p. 104)

Modifications of Tennessee’s System Performance Indicators Since 1979

Changes in the 1979 System

In a period of 31 years Tennessee’s performance funding system for higher education has experienced several modifications, nine performance indicators were added and four were dropped between 1979 to 2009 (Dougherty et al., 2011). Changes focused on institutional improvement, student achievement, and standards of accountability (Tennessee State Senate, 2010). The weights assigned to performance indicators have also undergone revision. For instance, the weight given to general education assessment was reduced from 20 points to 15; graduate performance in major fields, 20 to 10; and program accreditation, 20 points to 5 (Dougherty et al., 2011; Tennessee State Senate, 2010).

In 1996 legislators in the state of Tennessee were expressing a need for changing the funding formula for higher education by placing more weight on performance factors as
opposed to enrollment numbers (Collins, 1996). In Collins’s study, a general consensus was reached by legislators and leaders of higher education regarding the funding formula for Tennessee’s higher education. The legislature agreed that “underfunding of the formula was a major issues...the formula itself needs to be revised so that it would give more weight to performance factors or outcomes of educational programs” (p. 89).

**Emergence of the 2010 System**

Dougherty et al. (2011) found that change in performance funding indicators and weights may lead to the adaptation and survival of the system; however, finding the optimal degree of change onerous. In years following the implantation of the 1979 system, there was growing criticism both inside and out of higher education with regard to the formula providing no incentive for instructional improvements, just rewarding institutions for increased enrollments (Crellin, Aaron, Mabe, & Wilk, 2011; Deaton, 2010; Harnisch, 2011). Tennessee’s funding formula for higher education was focused more on quantity of students rather than quality of outcomes (Deaton, 2010; Harnisch, 2011; Stinson, 2003). Prior to 2010, 60% of Tennessee’s appropriations for higher education were based on institutional enrollment levels (Crellin et al., 2011). Now, the trend among policymakers is to link appropriations to an institution’s ability to document educational outcomes and results rather than rely on enrollment-driven funding formulas (Dougherty et al., 2010; Noland, 2006).

In 2010 the Tennessee state legislature passed the Complete College Tennessee Act, mandating an overhaul of the performance funding system established in 1979. Though there was initial resistance to the Complete College Tennessee Act from higher education
leaders, eventually they were persuaded that a restructuring of the current system was necessary to pull the state out of an economic slump (Jones, 2011). Dennis Jones, president of the National Center for Higher Education Management Systems and a Tennessee consultant, explained why higher education leaders changed their minds in favor of the proposed legislation:

Tennessee is so far below the national average that small tweaks weren’t going to work and a big selling point was the economic impact of success. If higher education met the new graduation goals, Tennessee’s per capita income could rise 20%. That’s huge. (Jones, 2011, p. 7)

Complete College Tennessee Act, signed into law January 2010, required an overhaul of the state’s funding formula for public higher education to be one that emphasized student retention and degree completion instead of enrollment rates (Crellin et al., 2011; Dougherty et al., 2011). As of 2010 Tennessee ranked 40th in the nation for the percentage of citizens with a postsecondary degree (Fulton, 2011). Jones (2011) referenced an analysis conducted by Complete College America “only 12% of Tennessee’s ninth graders will eventually earn a four-year or two-year degree” (p. 6). By 2025 Tennessee officials expect higher education graduation rates to increase 3.5% annually, yielding 210,000 more degrees.

Complete College Tennessee Act was designed to improve the state’s higher education graduation rate (Jones, 2011). The legislation resulted from discussions on how to increase college graduation rates; only 23% of working-age Tennesseans has acquired a bachelor’s degree or higher (Locker, 2010). The primary goal of Tennessee’s public agenda for higher education is to meet the projected national average of educational attainment by the year 2025 (Tennessee Higher Education Commission, 2010d).
The primary state policy levers for addressing the state’s educational needs include promoting: (a) production and efficiency through an outcomes-based funding formula; (b) quality assurance through revised performance funding standards; (c) economic and workforce development through responses to a study of labor market supply and demand; (d) efficiency and effectiveness through purposeful reporting; (e) efficiencies through mission and sector differentiation; (f) efficiencies through inter-institutional collaboration and reduced duplication; and (g) efficiencies through incentives for external support. (p. 1)

The 2010 Complete College Act of Tennessee rewards institutions of higher education based on the accomplishment of set criteria that promote goals of educational attainment and productivity (Tennessee Higher Education Commission, 2010b). The outcomes-based formula does not use benchmarks for measuring performance; therefore, institutions are not penalized for not meeting a predetermined goal (Harnisch, 2011, Tennessee State Senate, 2010). Outcome data are collected over a period of time and then weighted to reflect the institution’s mission. Crellin et al. (2011) compare how the weights attached to data points of UT Knoxville and East Tennessee State University differ with regard to research and retention. In contrast to previous models based on enrollment, outcomes-based funding model is concentrated on productivity and provides greater stability by spreading the financial incentives across more variables (Crellin et al., 2011).

To fulfill requirements of Complete College Tennessee Act, the Tennessee higher Education Commission developed a funding formula design that would align with the state higher education master plan (TN State Senate, 2010). Persistence and graduation became the new focus of many of the new formula’s indicators (Dougherty et al., 2011). Central to the current focus of public higher education in Tennessee are degree completion, student accrual of credits, and job placement and remedial success at the community college level (Tennessee Higher Education Commission, 2011b).
Political Origins of the New Formula

In 2009 there was widespread sentiment within the Tennessee legislature that public higher education was essential to the state’s economic development and that performance measures should be changed to reflect institutions were meeting or exceeding their potential to produce college graduates (Crellin et al., 2011; Dougherty et al., 2011; Jones, 2011; Tennessee Higher Education Commission, 2010b). Complete College America, a nonprofit organization, caught the attention of Tennessee legislators in their promotion of states across the United States adopting policies aimed at increasing college completion rates (Complete College America, n.d.; Dougherty et al., 2011, Tennessee State Senate, 2010). Representatives from Complete College America discussed ideas with Tennessee legislators regarding ways in which the funding for higher education could emphasize greater completion rates. While this was in progress, an initiative through the Lumina Foundation for Education was also making in impact in Tennessee, “Making Opportunity Affordable”, which sought to improve college completion rates through grants and policies promoting graduation (Tennessee Government, n.d.). In 2009 the state of Tennessee received a Making Opportunity Affordable grant by demonstrating a commitment to tying public funding to increasing the state’s number of graduates from its public institutions of higher education (Dougherty et al., 2011). Both the Complete College America and Making Opportunity Affordable initiatives contributed to the state legislature’s creation of Complete College Tennessee Act in 2010 by demonstrating the importance of policy reform to focus on completion rates.
Current Context of the New System

Tennessee’s current funding formula for higher education accounts for an institution’s mission as reflected in its Carnegie classification (Tennessee Higher Education Commission, 2011a). Adjustments were made based on the content and weight of various measures to reflect different institutional priorities.

The 2010 Complete College Tennessee Act improved upon the previous enrollment-based model by assigning weights to outcomes aligned with each institutional mission (Deaton, 2010; Tennessee State Senate, 2010). Greater credit is awarded the larger the role it plays in the mission (Harnisch, 2011). For instance research and graduate degrees may play a more substantial role in one institutional mission than another’s. Competition is at the core of Tennessee’s outcomes-based formula. State appropriations must be earned each year, no college or university is guaranteed a minimal level of support based on performance in previous years (Deaton, 2010).

Tennessee’s outcomes-based funding formula rewards public institutions of higher education for production of outcomes furthering educational attainment (Tennessee Higher Education Commission, 2010b). At-risk and nontraditional student achievements merit extra points to encourage institutions to take them on despite their likelihood in meeting some of the outcomes such as graduation (Harnisch, 2011; Wieder, 2011). Outcomes are divided into categories of student progression, degree production, efficiency, and other significant functions of the institution. The Tennessee Higher Education Commission (2010b) details the outcomes included in the state’s 4-year formula:

- Students accumulating 24 credit hours, students accumulating 48 credit hours, students accumulating 72 credit hours, transfers out with at least 12 credit hours, bachelor and associate degrees awarded, masters and specialist degrees awarded,
doctoral and law degrees awarded, degrees per full-time employee, and 6-year graduation rate. (Tennessee Higher Education Commission, 2010b)

Total points for outcomes are calculated by multiplying points by institution-specific weights that reflect varying institutional missions based on the Carnegie Classification system. Institutions in Tennessee could earn up to 5.45% of base in supplemental financing through the performance funding approach (Dougherty et al., 2010; Tennessee Higher Education Commission, 2010c).

The overhaul in Tennessee’s higher education finance system “has led campuses to bring in extra student advisers, increase tutoring and remedial classes, fast-track majors and develop extra courses between semesters” (Harnisch, 2011, p. 4). Deaton (2010) illustrates that under the new system public higher education institutions in the state receive funding based on factors such as research funding, students reaching milestones, and graduation rates. The current model also provides a premium for the success of low-income and nontraditional students (Harnisch, 2011).

Tennessee Governor, Bill Haslam, announced July 25, 2011, that Tennessee was one of 10 states to win a $1 million, 18-month implementation grant funded by Complete College America with support from the Bill and Melinda Gates Foundation (Fulton, 2011). Tennessee’s funding for higher education was redesigned in light of education reform where higher education was considered essential to the state’s economic development. Because of its longstanding performance funding system and continuous development, Tennessee has been used as an example from which other states develop their own systems for funding higher education (Burke, 2002; Dougherty et al., 2010, 2011; McLendon et al., 2006; Noland, 2006; Weerts & Ronca, 2006; Wieder, 2011).
Major issues in higher education have been cyclical throughout its history. At the time of Manahan’s 1975 study, state government officials appeared skeptical of the value of higher education. Information was sought concerning the strategies chief administrators of public higher education institutions used in order to gain financial support from legislative members in the Illinois state government. Manahan established that there was a need for improvements in communication and relations between university administrators of higher education and members of the state government.

The flow of information in both directions involves more than a simple recognition of need, for there is often disagreement between the campus and the legislative members of government about state control, financial appropriations, the nature of information that should be exchanged and the independence of higher education. (p. 4)

A year after Manahan’s research, a similar study in the state of Tennessee was completed. Smith’s (1976) *Survey and Comparison of Attitudes Held By the Tennessee General Public and State Legislators Toward Higher Education* was one of the first studies in the state of Tennessee to study the perceptions of state legislators as they relate directly to higher education. A consistent level of agreement was found between legislators and members of the general public in Tennessee with regard to seeing an increase in funding for higher education. However, differences in opinion were expressed between legislators and the general public on how to provide for such increase in funding for higher education. The general public sought an increase in state taxes as opposed to an increase in student fees or a combination of increased state taxes and increased student fees. Tennessee legislators, on the other hand, preferred only a raise in state taxes and student fees in order to increase funds for higher education. Smith’s study was radical in comparison to others
at the time. Instead of comparing state appropriations or student matriculation efforts in
the state, Smith observed how decisions were made for higher education such as the
setting of student fees and the overall cost of higher education.

Over 30 years later the funding of higher education is still considered a major issue
in higher education across the United States. The debate of appropriate funding levels for
higher education appears throughout the literature. The main focus has been to determine
what degree of funding should come from taxes versus fee students must pay in order to
receive education (Alexander et al., 2010; Collins, 1996; Dougherty et al., 2011; Ehrenberg,
2006; Smith, 1976).

Participants in Collins’s research identified eight major issues facing higher
education as “financial issues, administrative structure and costs, quality outcomes, faculty
issues, technology, program duplication, relationship to K-12 education, and other general
issues” (p. 156). However, the most critical issue facing higher education at the time of
Collins’s study was financing. Collins discussed the financing issue by subcategories of
funding, accountability, capital expenditures, taxes, fees, and general issues of funding.
Collins anticipated higher education working hard to competitively position itself to
receive increased financial support should additional funding become available. Interviews
with legislators and leaders of higher education in Collins’s study revealed concern of who
should finance higher education. One of the university administrators interviewed on this
topic indicated that the ratio approach used to determine the fee structure is shifting more
responsibility of financing on the students than the state, 60% state and 40% student. The
financial concern in Collins’s study heightened when questions of how a decrease in state
funding for higher education would adversely affect the ability of current and potential students affording higher educational experience.

Collins’s (1996) interviews revealed a disparity in the Tennessee General Assembly’s approach to making decisions for higher education funding. Legislators and higher education administrators participating in the study agreed the previous focus had been on funding processes and measurements for K-12 education. Collins quoted one higher education administrator foreseeing the imminent shift in legislative focus from K-12 to higher education:

I think it’s our turn in the barrel. We in higher education sat back for the past 25 years and said boy look at what they’re doing to K-12, just beating them to death. And now by golly, it’s our time. And they’re going to whoop us for about six, seven, eight, nine years. (p. 155)

By analyzing higher education issues faced in the 1990s, American Higher Education in the Twenty-first Century: Social, Political, and Economic Challenges prophesized major external influences on higher education in the next decade and how institutional decisions such as tuition and the conduct of research would affect society (Altbach et al., 1999). Higher education’s social responsibility was evident throughout the issues identified “ongoing conflicts between the ideals of equality and merit, the balance between teaching and research in the university, and the expectation that higher education serve as an engine for the nation’s economic growth” (p. 109).

At the time of England’s 2000 study critical issues in Tennessee higher education included performance indicators, retention rate, and graduation rate. England had state legislators and university administrators rank issues in order of importance; thus, gaining a
top five selection from both groups. Equally important were the comments participants added to the list of issues from which they had to choose.

The top five issues perceived to be most important to higher education as reported by Tennessee higher education leaders were state appropriations, number of degrees held by citizens, retention rates, graduation rates, and increases in tuition. Tennessee legislative perceptions from England’s 2000 study were more focused on accountability. Issues of greatest importance to legislators were the number of citizens with a college degree, mismanagement of institutions, graduation rates, performance indicators, state appropriations, retention rates, and increases in tuition.

In a 2011 report the American Association of State Colleges and Universities (AASCU) predicted the year’s top 10 policy issues in higher education to consist of the following: state operating support for public higher education, states’ college completion and educational attainment agendas, college readiness, tuition prices and policy, state student aid program financing, student enrollment capacity, state data system development, economic workforce development, states’ political climate, and the states’ regulatory framework. Although several issues overlapped, the AASCU developed a revised top 10 list of policy issues for 2012. Higher education issues that remained significant from 2011’s list included: state operating support for public higher education, college readiness, and tuition prices and policy (American Association of State Colleges and Universities, 2012). Major issues in higher education for the year 2012 were predicted to be related to: productivity (the cost of providing a college education), governance restructuring and regulatory reform, college completion, performance-based funding, state student grant program funding and reform, veterans’ education, and immigration policy.
Research concerning levels of funding for public higher education has been beneficial in shaping the current system throughout the country. Though the major issues in higher education have changed over time, there remains a keen emphasis on funding. When revising the state’s performance funding, the Tennessee Higher Education Commission (2010b, 2010d) analyzed past profiles and trends of state public institutions in order to calculate the major issues for higher education and areas of improvement.

**Tennessee Higher Education Profiles and Trends**

The remainder of this chapter analyzes data collected by the Tennessee Higher Education Commission regarding student participation, student success, and academic and fiscal trends.

**Student Participation**

Complete College Tennessee Act has required public higher education to increase student participation (Tennessee State Senate, 2010). As a part of the Tennessee Higher Education Commission’s (2010d) master plan, the graduation and retention of students was stated as a 5-year goal for higher education. Student enrollment in public higher education in the state of Tennessee is analyzed in Table 1 which illustrates the matriculation of students at 10 public institutions for fall terms 2000 and 2005-2010. Table 2 illustrates the withdrawals from 10 public institutions in the state of Tennessee. Headcounts of students were performed on the 14th day of fall 2010 semester classes and the number of withdrawals by the end of the semester.
Table 1

*Public Headcount Enrollment*  
*Fall Terms 2000 and 2005-2010*

<table>
<thead>
<tr>
<th>Institution</th>
<th>2000</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Peay</td>
<td>7,121</td>
<td>8,814</td>
<td>9,207</td>
<td>9,084</td>
<td>9,401</td>
<td>10,188</td>
<td>10,744</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>11,331</td>
<td>11,894</td>
<td>12,390</td>
<td>13,118</td>
<td>13,646</td>
<td>14,421</td>
<td>14,999</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>19,121</td>
<td>22,554</td>
<td>22,863</td>
<td>23,246</td>
<td>23,866</td>
<td>25,188</td>
<td>26,654</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>8,836</td>
<td>8,880</td>
<td>9,038</td>
<td>9,065</td>
<td>8,253</td>
<td>8,824</td>
<td>8,961</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>8,409</td>
<td>9,312</td>
<td>9,733</td>
<td>10,321</td>
<td>10,793</td>
<td>10,847</td>
<td>11,528</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>19,986</td>
<td>20,465</td>
<td>20,562</td>
<td>20,376</td>
<td>20,214</td>
<td>21,420</td>
<td>22,586</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>8,319</td>
<td>8,656</td>
<td>8,923</td>
<td>9,558</td>
<td>9,807</td>
<td>10,526</td>
<td>10,726</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>25,902</td>
<td>26,294</td>
<td>26,560</td>
<td>27,385</td>
<td>27,881</td>
<td>27,221</td>
<td>27,306</td>
</tr>
<tr>
<td>UT Martin</td>
<td>5,870</td>
<td>6,478</td>
<td>6,888</td>
<td>7,171</td>
<td>7,574</td>
<td>8,096</td>
<td>8,479</td>
</tr>
<tr>
<td>UT HSC</td>
<td>2,069</td>
<td>2,260</td>
<td>2,425</td>
<td>2,655</td>
<td>2,671</td>
<td>2,837</td>
<td>2,692</td>
</tr>
<tr>
<td>University Total</td>
<td>116,964</td>
<td>125,607</td>
<td>128,589</td>
<td>131,979</td>
<td>134,106</td>
<td>139,568</td>
<td>144,675</td>
</tr>
</tbody>
</table>
Table 2

*Public Headcount Enrollment*

*Term Withdrawals Fall 2010*

<table>
<thead>
<tr>
<th>Institution</th>
<th>14th Day</th>
<th>Withdrawals</th>
<th>End of Term</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Peay</td>
<td>10,744</td>
<td>281</td>
<td>10,463</td>
<td>-2.6%</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>14,999</td>
<td>590</td>
<td>14,409</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>26,654</td>
<td>979</td>
<td>25,675</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>8,961</td>
<td>383</td>
<td>8,578</td>
<td>-4.3%</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>11,528</td>
<td>583</td>
<td>10,945</td>
<td>-5.1%</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>22,586</td>
<td>1,278</td>
<td>21,308</td>
<td>-5.7%</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>10,726</td>
<td>167</td>
<td>10,559</td>
<td>-1.6%</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>27,306</td>
<td>0</td>
<td>27,306</td>
<td>0.0%</td>
</tr>
<tr>
<td>UT Martin</td>
<td>8,479</td>
<td>240</td>
<td>8,239</td>
<td>-2.8%</td>
</tr>
<tr>
<td>UT HSC</td>
<td>2,692</td>
<td>0</td>
<td>2,692</td>
<td>0.0%</td>
</tr>
<tr>
<td>University Total</td>
<td>144,675</td>
<td>4,501</td>
<td>140,174</td>
<td>-3.1%</td>
</tr>
</tbody>
</table>
Student Success

Table 3 illustrates student retention rates of the fall 2009 freshman cohort at 10 of Tennessee's public higher education institutions. Table 4 examines student success through the 6-year graduation rates of the fall 2004 cohort.

Table 3

*Retention Rates for Public Institutions*

*Fall 2009 to Fall 2010*

<table>
<thead>
<tr>
<th>Institution</th>
<th>Fall 2009 Freshman Cohort</th>
<th># of Cohort Enrolled Fall 2010</th>
<th>Retention Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Peay</td>
<td>1,468</td>
<td>1,096</td>
<td>74.7%</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>2,039</td>
<td>1,636</td>
<td>80.2%</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>3,619</td>
<td>2,978</td>
<td>82.3%</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>1,325</td>
<td>943</td>
<td>71.2%</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>1,881</td>
<td>1,621</td>
<td>86.2%</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>2,224</td>
<td>1,856</td>
<td>83.5%</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>2,189</td>
<td>1,894</td>
<td>86.5%</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>3,705</td>
<td>3,475</td>
<td>93.8%</td>
</tr>
<tr>
<td>UT Martin</td>
<td>1,373</td>
<td>1,126</td>
<td>82.0%</td>
</tr>
<tr>
<td>University Total</td>
<td>19,823</td>
<td>16,625</td>
<td>83.9%</td>
</tr>
</tbody>
</table>
### Table 4

6-Year Graduation Rates
Fall 2004 Cohort

<table>
<thead>
<tr>
<th>Institution</th>
<th>First-Time, Full-Time Freshmen</th>
<th>Grads From Admitting Institution</th>
<th>Grads From Other Institutions</th>
<th>Total Public Higher Education Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Total</td>
<td>17,338</td>
<td>7,767</td>
<td>1,299</td>
<td>9,066</td>
</tr>
<tr>
<td>UT Martin</td>
<td>1,183</td>
<td>523</td>
<td>119</td>
<td>642</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>4,395</td>
<td>2602</td>
<td>336</td>
<td>2938</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>1,489</td>
<td>552</td>
<td>182</td>
<td>734</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>2,022</td>
<td>726</td>
<td>86</td>
<td>812</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>1,200</td>
<td>412</td>
<td>34</td>
<td>446</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>3,128</td>
<td>1428</td>
<td>228</td>
<td>1656</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>1,487</td>
<td>570</td>
<td>117</td>
<td>687</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>1,185</td>
<td>391</td>
<td>68</td>
<td>459</td>
</tr>
<tr>
<td>Austin Peay</td>
<td>1,200</td>
<td>412</td>
<td>34</td>
<td>446</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution</th>
<th>#</th>
<th>#</th>
<th>#</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Peay</td>
<td>1,185</td>
<td>391</td>
<td>68</td>
<td>459</td>
<td>38.7%</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>1,487</td>
<td>570</td>
<td>117</td>
<td>687</td>
<td>46.2%</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>3,128</td>
<td>1428</td>
<td>228</td>
<td>1656</td>
<td>52.9%</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>1,200</td>
<td>412</td>
<td>34</td>
<td>446</td>
<td>37.2%</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>1,249</td>
<td>563</td>
<td>129</td>
<td>692</td>
<td>55.4%</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>2,022</td>
<td>726</td>
<td>86</td>
<td>812</td>
<td>40.2%</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>1,489</td>
<td>552</td>
<td>182</td>
<td>734</td>
<td>49.3%</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>4,395</td>
<td>2602</td>
<td>336</td>
<td>2938</td>
<td>66.8%</td>
</tr>
<tr>
<td>UT Martin</td>
<td>1,183</td>
<td>523</td>
<td>119</td>
<td>642</td>
<td>54.3%</td>
</tr>
</tbody>
</table>

68
Academic and Fiscal Trends

Dougherty et al. (2011) found that bonus funds received by all Tennessee colleges and universities “rose fairly steadily, from an average of 0.8% of state appropriations for higher education between 1978-79 and 1981-82, to 3.0% between 1982-83 and 2001-02, and 4.2% since 2001-02” (p. 142). Dougherty et al. attribute the rise in Tennessee’s state appropriations for higher education to the fact budget problems within the system did not compare to many other states’ issues. Performance funding for higher education in Tennessee is not listed as a separate item in budget requests to the legislature (Tennessee Higher Education Commission, 2010b).

Table 5 (Tennessee Higher Education, 2010d) compares the last 3 decades on state appropriations related to higher education as a percentage of state taxes in the United States, SREB states, and Tennessee. Data from the Tennessee Higher Education report indicated Tennessee has consistently been higher than the average state appropriations related to higher education across the United States. In academic year 1989-90, the United States’ average state appropriations for higher education were at 13.8%, SREB states averaged 15.8%, and Tennessee’s appropriations to public higher education were 17.4% of the state’s taxes. Tennessee experienced a significant decrease in state appropriations in the following decade, 1999-00, from 17.4% 10 years previous to 13.7%. During this time, both the United States’s and SREB average state appropriations for higher education fell; the United States averaged state appropriations of 11.4% while SREB states averaged 13.9% of the state’s taxes. In academic year 2009-10, the average state appropriations related to higher education as a percentage of state taxes nationwide fell once again in to 10.5%. However, Tennessee and the SREB states experienced a slight increase in state
appropriations. The SREB states had a 0.2% increase in state appropriations related to higher education, averaging at 14.1% of the state’s taxes. Tennessee was also at 14.1% of state appropriations to higher education in 2009-10.

Table 5

State Appropriations Related to Higher Education as Percentage of State Taxes

<table>
<thead>
<tr>
<th></th>
<th>1989-90</th>
<th>1999-00</th>
<th>2009-10</th>
<th>National Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>13.8</td>
<td>11.4</td>
<td>10.5</td>
<td>National</td>
</tr>
<tr>
<td>SREB States</td>
<td>15.8</td>
<td>13.9</td>
<td>14.1</td>
<td>Rank</td>
</tr>
<tr>
<td>Alabama</td>
<td>21.2</td>
<td>18.2</td>
<td>17.4</td>
<td>4</td>
</tr>
<tr>
<td>Arkansas</td>
<td>14.8</td>
<td>13.1</td>
<td>12.1</td>
<td>17</td>
</tr>
<tr>
<td>Delaware</td>
<td>10.2</td>
<td>8.6</td>
<td>8.1</td>
<td>38</td>
</tr>
<tr>
<td>Florida</td>
<td>12.5</td>
<td>11.1</td>
<td>11.6</td>
<td>18</td>
</tr>
<tr>
<td>Georgia</td>
<td>13.9</td>
<td>12.5</td>
<td>18.5</td>
<td>2</td>
</tr>
<tr>
<td>Kentucky</td>
<td>13.6</td>
<td>12.6</td>
<td>12.3</td>
<td>14</td>
</tr>
<tr>
<td>Louisiana</td>
<td>13.3</td>
<td>13.6</td>
<td>14.1</td>
<td>9</td>
</tr>
<tr>
<td>Maryland</td>
<td>13.3</td>
<td>11.0</td>
<td>11.0</td>
<td>22</td>
</tr>
<tr>
<td>Mississippi</td>
<td>18.7</td>
<td>19.1</td>
<td>15.4</td>
<td>7</td>
</tr>
<tr>
<td>North Carolina</td>
<td>19.8</td>
<td>15.7</td>
<td>18.8</td>
<td>1</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>13.7</td>
<td>13.7</td>
<td>12.5</td>
<td>12</td>
</tr>
<tr>
<td>South Carolina</td>
<td>16.5</td>
<td>13.2</td>
<td>13.4</td>
<td>10</td>
</tr>
<tr>
<td>Tennessee</td>
<td>17.4</td>
<td>13.7</td>
<td>14.1</td>
<td>8</td>
</tr>
<tr>
<td>Texas</td>
<td>18.8</td>
<td>17.5</td>
<td>16.0</td>
<td>5</td>
</tr>
<tr>
<td>Virginia</td>
<td>16.5</td>
<td>12.8</td>
<td>9.7</td>
<td>30</td>
</tr>
<tr>
<td>West Virginia</td>
<td>13.2</td>
<td>11.0</td>
<td>10.5</td>
<td>24</td>
</tr>
</tbody>
</table>
Table 6 demonstrates the changes in median tuition and fees for American public university residents in academic years 1998-99, 2003-04, and 2008-09. The average rate students paid across the United States in 1998-99 was $2,929. Median full-time tuition and fees in the SREB states was $2,372 in 1998-99 while Tennessee public institutions charged an average of $2,384 at the time. Five years later in 2003-04, median full-time tuition and fees for public university residents increased. The standard tuition and fees rate across the United States increased $1,270 to $4,199. SREB states's rate increased $1,288 and Tennessee's tuition and fees jumped by $1,468 totaling $3,852 in academic year 2003-04 (Tennessee Higher Education Commission, 2010d). In academic year 2008-09 tuition and fees for full-time students at public institutions rose even more. The standard tuition and fees rate across the United States were raised to $1,606 more than what it had been 5 years previous. SREB states’s rate increased $1,729 and Tennessee’s tuition and fees jumped $1,458 between academic years 2003-04 to 2008-09.
Table 6

**Median Full-Time Tuition and Fees**  
*Public University Resident*

<table>
<thead>
<tr>
<th></th>
<th>1998-99</th>
<th>2003-04</th>
<th>2008-09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>United States</strong></td>
<td>$2,929</td>
<td>$4,199</td>
<td>$5,805</td>
</tr>
<tr>
<td><strong>SREB States</strong></td>
<td>$2,372</td>
<td>$3,660</td>
<td>$5,389</td>
</tr>
<tr>
<td><strong>Alabama</strong></td>
<td>$2,475</td>
<td>$3,842</td>
<td>$5,594</td>
</tr>
<tr>
<td><strong>Arkansas</strong></td>
<td>$2,736</td>
<td>$3,851</td>
<td>$5,835</td>
</tr>
<tr>
<td><strong>Delaware</strong></td>
<td>$3,765</td>
<td>$5,397</td>
<td>$7,564</td>
</tr>
<tr>
<td><strong>Florida</strong></td>
<td>$2,132</td>
<td>$2,908</td>
<td>$3,782</td>
</tr>
<tr>
<td><strong>Georgia</strong></td>
<td>$2,212</td>
<td>$2,784</td>
<td>$4,032</td>
</tr>
<tr>
<td><strong>Kentucky</strong></td>
<td>$2,267</td>
<td>$3,590</td>
<td>$6,304</td>
</tr>
<tr>
<td><strong>Louisiana</strong></td>
<td>$2,136</td>
<td>$2,928</td>
<td>$3,771</td>
</tr>
<tr>
<td><strong>Maryland</strong></td>
<td>$3,966</td>
<td>$5,564</td>
<td>$6,614</td>
</tr>
<tr>
<td><strong>Mississippi</strong></td>
<td>$2,687</td>
<td>$3,536</td>
<td>$4,605</td>
</tr>
<tr>
<td><strong>North Carolina</strong></td>
<td>$1,793</td>
<td>$2,927</td>
<td>$4,174</td>
</tr>
<tr>
<td><strong>Oklahoma</strong></td>
<td>$1,871</td>
<td>$2,763</td>
<td>$4,221</td>
</tr>
<tr>
<td><strong>South Carolina</strong></td>
<td>$3,350</td>
<td>$5,460</td>
<td>$8,400</td>
</tr>
<tr>
<td><strong>Tennessee</strong></td>
<td>$2,384</td>
<td>$3,852</td>
<td>$5,310</td>
</tr>
<tr>
<td><strong>Texas</strong></td>
<td>$2,407</td>
<td>$3,830</td>
<td>$5,992</td>
</tr>
<tr>
<td><strong>Virginia</strong></td>
<td>$4,219</td>
<td>$4,899</td>
<td>$6,941</td>
</tr>
<tr>
<td><strong>West Virginia</strong></td>
<td>$2,276</td>
<td>$3,168</td>
<td>$4,588</td>
</tr>
</tbody>
</table>

Table 7 summarizes changes in annual tuition and mandatory fees at nine of Tennessee’s public institutions over the last 10 years. Table 8 demonstrates a 10-year analysis of student support in the state.
### Table 7

*Annual Tuition and Mandatory Fees*

*Resident Undergraduate Student*

<table>
<thead>
<tr>
<th>Institution</th>
<th>2000-01</th>
<th>2005-06</th>
<th>2009-10</th>
<th>2010-11</th>
<th>1 Year</th>
<th>5 Year</th>
<th>10 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin Peay</td>
<td>$2,813</td>
<td>$4,635</td>
<td>$5,868</td>
<td>$6,228</td>
<td>6.1%</td>
<td>34.4%</td>
<td>121.4%</td>
</tr>
<tr>
<td>East Tennessee State University</td>
<td>$2,759</td>
<td>$4,487</td>
<td>$5,593</td>
<td>$6,004</td>
<td>7.3%</td>
<td>33.8%</td>
<td>117.6%</td>
</tr>
<tr>
<td>Middle Tennessee State University</td>
<td>$2,791</td>
<td>$4,576</td>
<td>$6,048</td>
<td>$6,478</td>
<td>7.1%</td>
<td>41.6%</td>
<td>132.1%</td>
</tr>
<tr>
<td>Tennessee State University</td>
<td>$2,651</td>
<td>$4,384</td>
<td>$5,444</td>
<td>$5,854</td>
<td>7.7%</td>
<td>33.5%</td>
<td>120.8%</td>
</tr>
<tr>
<td>Tennessee Technological University</td>
<td>$2,667</td>
<td>$4,396</td>
<td>$5,586</td>
<td>$6,036</td>
<td>8.1%</td>
<td>37.3%</td>
<td>126.3%</td>
</tr>
<tr>
<td>University of Memphis</td>
<td>$3,087</td>
<td>$5,084</td>
<td>$6,524</td>
<td>$6,990</td>
<td>7.1%</td>
<td>37.5%</td>
<td>126.4%</td>
</tr>
<tr>
<td>UT Chattanooga</td>
<td>$2,834</td>
<td>$4,500</td>
<td>$5,656</td>
<td>$6,062</td>
<td>7.2%</td>
<td>34.7%</td>
<td>113.9%</td>
</tr>
<tr>
<td>UT Knoxville</td>
<td>$3,362</td>
<td>$5,290</td>
<td>$6,850</td>
<td>$7,382</td>
<td>7.8%</td>
<td>39.5%</td>
<td>119.6%</td>
</tr>
<tr>
<td>UT Martin</td>
<td>$2,830</td>
<td>$4,493</td>
<td>$5,769</td>
<td>$6,190</td>
<td>7.3%</td>
<td>37.8%</td>
<td>118.7%</td>
</tr>
<tr>
<td>University Average</td>
<td>$2,866</td>
<td>$4,649</td>
<td>$5,926</td>
<td>$6,358</td>
<td>7.3%</td>
<td>36.7%</td>
<td>121.9%</td>
</tr>
</tbody>
</table>
Table 8

*Student Support Historical Analysis*
*Academic Years 2000-01 to 2010-11*

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>State Appropriations</th>
<th>AARA/MOE</th>
<th>Tuition &amp; Fees</th>
<th>FTE</th>
<th>Total Revenue per FTE</th>
<th>Student Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>$ 735,296,656</td>
<td>$</td>
<td>$ 555,361,841</td>
<td>96,010</td>
<td>$ 13,443</td>
<td>43.0%</td>
</tr>
<tr>
<td>2001-02</td>
<td>$ 725,169,821</td>
<td>$</td>
<td>$ 614,606,695</td>
<td>97,839</td>
<td>$ 13,694</td>
<td>45.9%</td>
</tr>
<tr>
<td>2002-03</td>
<td>$ 711,755,517</td>
<td>$</td>
<td>$ 622,989,203</td>
<td>99,673</td>
<td>$ 13,391</td>
<td>46.7%</td>
</tr>
<tr>
<td>2003-04</td>
<td>$ 681,881,651</td>
<td>$</td>
<td>$ 682,061,250</td>
<td>100,304</td>
<td>$ 13,598</td>
<td>50.0%</td>
</tr>
<tr>
<td>2004-05</td>
<td>$ 697,336,455</td>
<td>$</td>
<td>$ 711,973,103</td>
<td>102,726</td>
<td>$ 13,719</td>
<td>50.5%</td>
</tr>
<tr>
<td>2005-06</td>
<td>$ 687,487,661</td>
<td>$</td>
<td>$ 757,249,600</td>
<td>103,636</td>
<td>$ 13,940</td>
<td>52.4%</td>
</tr>
<tr>
<td>2006-07</td>
<td>$ 714,237,043</td>
<td>$</td>
<td>$ 775,387,977</td>
<td>105,500</td>
<td>$ 14,120</td>
<td>52.1%</td>
</tr>
<tr>
<td>2007-08</td>
<td>$ 741,246,900</td>
<td>$</td>
<td>$ 812,674,311</td>
<td>107,394</td>
<td>$ 14,469</td>
<td>52.3%</td>
</tr>
<tr>
<td>2008-09</td>
<td>$ 650,775,361</td>
<td>$ 60,170,708</td>
<td>$ 836,933,106</td>
<td>109,298</td>
<td>$ 14,162</td>
<td>54.1%</td>
</tr>
<tr>
<td>2009-10</td>
<td>$ 548,409,636</td>
<td>$ 162,827,872</td>
<td>$ 908,857,556</td>
<td>113,080</td>
<td>$ 14,327</td>
<td>56.1%</td>
</tr>
<tr>
<td>2010-11</td>
<td>$ 494,936,000</td>
<td>$ 194,509,000</td>
<td>$ 964,471,000</td>
<td>116,995</td>
<td>$ 14,137</td>
<td>58.3%</td>
</tr>
</tbody>
</table>

10 Year Percent Change: -32.7%  -  73.7%  21.9%  5.2%  35.6%
Summary

In this chapter, a review of literature relevant to the research was presented. It appears that rising costs of public higher education may have a significant impact on who has access. The Complete College Tennessee Act's perceived productivity thus far on public higher education needs to be addressed from both the legislative and university administrative aspects. Chapter 3 of this study details the methods and procedures, including the research design, population, survey instrument, collection of data, and null hypotheses.
CHAPTER 3
RESEARCH METHODOLOGY

This study identifies decision-making issues considered important in to Tennessee’s legislators and university administrators with regard to levels of funding for higher education. The purpose of the study was to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. It should also be noted that no studies have been published with regard to effectiveness of the changes in Tennessee’s newly redesigned approach to public higher education since the Complete College Tennessee Act passed in 2010. This chapter provides details on the methodology used to examine the perceptions of Tennessee State Legislators and university administrators toward levels of financial support higher education receive. Explanations of the population, survey instrument, data collection, research questions and null hypotheses, and data analysis are provided.

The researcher determined a quantitative methodology most appropriate for this study. The quantitative methodology provides an opportunity to define the current reality that exists and be used for future research in the subject of the funding of higher education. Using a survey design further facilitated in making comparisons between responses given by both political and academic leaders regarding funding of higher education. Wiersma (1995) advocates using quantitative methods for accomplishing two goals; providing answers and controlling for variance. Quantitative research designs apply a research model or approach that can be repeated and used to draw generalizations from sample data to a larger population. Only one methodology was deemed appropriate for this study.
because the research is not focused on the reasons behind research participants’ perceptions.

This study was an examination of the issues affecting funding of public higher education in the State of Tennessee. Chief administrators of public universities and members of Tennessee’s General Assembly were asked for their participation in an online survey. Individual perceptions regarding various issues were measured using a Likert-scale that ranked the answer choice respondents found most in line with their opinion.

The independent variables in the study were the participants, legislators and university administrators. Dependent variables in the study were the responses to the survey. The survey consisted of single-response ordinal Likert-scale prompts. The objective of the study was to determine if perceptions of legislative members and chief administrators of universities in the State of Tennessee were in agreement regarding levels of financial support for higher education.

Research Questions and Corresponding Hypotheses

Thirteen research questions were adapted from previous studies on higher education funding in the state of Tennessee for the purpose of this study. The research questions:

Political Affiliation

RQ1: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican)?
H1₁: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican).

H1₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican).

Professional Background

RQ2: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other)?

H2₁: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other).

H2₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other).

Years of Service

RQ3: Is there a significant correlation between research participants' length of service in leadership position and how they rank the priority of higher education in the state budget?
**H3₁:** There is a significant correlation between research participants’ length of service in leadership position and how they rank the priority of higher education in the state budget.

**H3₀:** There is not a significant correlation between research participants’ length of service in leadership position and how they rank the priority of higher education in the state budget.

**Parents’ Education**

**RQ4:** Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree?

**H4₁:** There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree.

**H4₀:** There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree.

**District of Residence**

**RQ5:** Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee)?
H5₁: There is a significant difference how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee).

H₅₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee).

Leadership Position

RQ6: Is there a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget?

H₆₁: There is a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget.

H₆₀: There is not a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget.

Education Level

RQ7: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree)?

H₇₁: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree).
H7₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree).

**Access**

RQ8: Is there a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education?

H8₁: There is a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education.

H8₀: There is not a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education.

**Reserves**

RQ9: Is there a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times?

H9₁: There is a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times?

H9₀: There is not a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times?
Tuition

RQ10: Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations?

H10₁: There is a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations.

H10₀: There is not a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations.

RQ11: Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders?

H11₁: There is a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders.

H11₀: There is not a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders.
Cost of Higher Education

RQ12: Is there a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education?

H12_1: There is a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education.

H12_0: There is not a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education.

State Appropriation

RQ13: Is there a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education?

H13_1: There is a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education.

H13_0: There is not a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education.
Population

The population examined in this study was comprised of 33 members of the Tennessee Senate, 99 members of the Tennessee House of Representatives, the Executive Director of the Tennessee Higher Education Commission (THEC), the Chancellor of the Tennessee Board of Regents (TBR), the President of the University of Tennessee System, and 36 Chief Administrators at nine state-supported universities. For the purpose of this study, four administrators from each university were included in the quantitative portion: university president or chancellor, vice president for finance administration, vice president for academic affairs, and the vice president for student affairs. The anticipated total for the quantitative portion of the research design was 171 participants.

The contact information of research participants was obtained by searching online databases. The researcher consulted the 2010-2011 Tennessee Higher Education Fact Book in order to gather a list of all public 4-year universities in the state of Tennessee to be included in the study. Administrator information at each university was found using the respective institution’s website. The Tennessee General Assembly’s website listed all legislator information in a convenient directory.

Instrumentation

The survey instrument for this study was designed to assess individual perceptions regarding higher education funding. Two populations exist in this particular study, so it was important for the survey instrument to be free from bias and not appear to support a hidden agenda in order to produce accurate conclusions. A web-based survey was used in this study and link to the online questionnaire was emailed to research participants.
The survey instrument for the quantitative study addressed seven criteria outlined by Schuh and Upcraft (2001): (a) establish what information is needed, (b) decide on the nature of the questions, (c) phrasing of the questions, (d) order of the questions, (e) design of the survey instrument, (f) determine the appropriate scale for measurement, (g) test the instrument before distribution.

Demographical data distinguished research participants from being either a member of the Tennessee General Assembly or an administrator of higher education, their length of time in leadership role, highest level of educational attainment, professional background, number of immediate family members attending or who have attended an institution of higher education in Tennessee, political party affiliation, and which district of the state they reside. Specific questions were asked concerning funding variables for higher education. A Likert-scale was implemented for such questions. Respondents used the Likert-scale to indicate their response on symmetric, bipolar scale for a series of statements. The final three questions of the survey were optional open-ended questions that provided context for the quantitative data. Appendix I of this dissertation contains a Word Document format of the survey.

On July 13, 2012, the study was granted an exempt approval in accordance with 45 CFR 46, 101(b)(2) by East Tennessee State University’s Institutional Review Board. A copy of this approval letter is located in Appendix A of this report. The “Notification of Informed Consent” filed with the project narrative is also included in the appendix of this report, Appendix B.
**Pretest**

Before the study was carried out, a pretest of the survey instrument was conducted. Seven people were instrumental in the testing of the survey software. The research instrument was tested using the same conditions as research participants, a web-based questionnaire. The purpose of pretesting was an important to the questionnaire construction as it ensured clarity of instructions. Participants in the pretesting were asked to look for potential difficulties participants might encounter while taking the survey. The questionnaire was in one language, English, as all research participants were fluent. There was no need to offer the survey in multiple languages. Additionally, the order of survey questions was based on the recommendations from the pretest. Two of the participants asked to participate in the testing of the questionnaire had experience in survey design and data collection. Their recommendation to scatter the demographic questions throughout the survey was heeded as well placing the more involved questions at the beginning of the survey.

**Data Collection**

In order to generate a list of research participants for this study, the researcher gathered the names and contact information using online databases available to the public. Contact information for chief university administrators of Tennessee’s public institutions was found using the respective institution’s website. Members of the Tennessee General Assembly were listed in an online directory that provided individual contact information. Gathering direct contact information enabled the principal investigator to email participants an invitation to participate in the web-based survey assessment. Participants
were provided a link to the questionnaire in the body of the email messages sent. Copies of the emails sent to research participants can be found in the Appendices portion of this report; Appendices C, E, G, and H.

A few days after initial contact with research participants, the Lieutenant Governor Ron Ramsey emailed all the members of the Tennessee General Assembly a letter of support for the study asking for his colleagues’ participation. A copy of Lieutenant Governor Ramsey’s letter is provided in the Appendices of this dissertation, Appendix D. A day after the principal investigator contacted participants for a second time, Dr. Brian Noland, the President of East Tennessee State University, emailed the selected university administrators included in the study. In his email, the Dr. Noland expressed his support of the study and encouraged his colleagues’ participation in the web-based survey. A copy of Dr. Noland’s email is included in the Appendices of this report, Appendix F. Email communication in this study was used instead of the U.S. Postal Service to elicit a quicker, more efficient response.

On July 13, 2012, the study was granted an exempt approval in accordance with 45 CFR 46, 101(b)(2) by East Tennessee State University’s Institutional Review Board. A copy of this approval letter is located in Appendix A of this report. The “Notification of Informed Consent” filed with the project narrative is also included in the appendix of this report, Appendix B. Research participants were assured by the researcher that individual responses would remain anonymous. Consent of research participants was implied by the submission of a completed survey. Due to the sensitive nature of the results, the use of a survey instrument that does not specifically identify the participants was applied. To address any resistance to participating in the research, the researcher noted participation
as voluntary and provided evidence that individual responses would not identifiable by any means. The researcher anticipated a 40% return rate for the study.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used for the analysis of collected data. Responses of the completed surveys were analyzed through a series of descriptive statistical tests (e.g. t test, one-way ANOVA, and Pearson correlation coefficient). For Research Questions 1-7, the dependent variable tested was priority ranking of higher education in the Tennessee state budget. With regard to priority ranking of higher education in the state’s budget, independent variables tested included: political party affiliation, professional background, leadership position, length of service in leadership position, parents’ educational attainment, district of residence, and level of educational attainment. Individually, the independent variables were measured on whether they had a significant effect on the dependent variable, priority ranking of higher education in the Tennessee state budget. The dependent variable in Research Question 8 was the perception of access to higher education while the independent variable was participants’ political party. Research Questions 9-13 had the same independent variable tested against the following dependent variables: use of reserves during weak economic times, increase in tuition due to poor management of higher education costs, increase in tuition due to decreases in state appropriations, who should pay cost of higher education, and perceived importance of state appropriations for higher education.
Types of Tests

For RQ1, an independent samples $t$ test was used to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican).

For RQ2, a one-way ANOVA test was used to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other).

For RQ3, a Pearson correlation coefficient was used to examine the relationship between participants’ length of service in leadership position and how they rank the priority of higher education in the state budget.

For RQ4, an independent samples $t$ test was used to compare the difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree.

For RQ5, a one-way ANOVA test was used to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee).

For RQ6, an independent samples $t$ test was used to compare the difference between how university administrators and state legislators rank the priority of higher education in the state budget.

For RQ7, an independent samples $t$ test was used to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree).
For RQ8, an independent samples t test was used to compare the difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education.

For RQ9, an independent samples t test was used to compare the difference between opinions of university administrators and state legislators regarding higher education’s use of reserves during weak economic times.

For RQ10, an independent samples t test was used to compare the difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations.

For RQ11, an independent samples t test was used to compare the difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders.

For RQ12, an independent samples t test was used to compare the difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education.

For RQ13, an independent samples t test was used to compare the difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education.
Summary

In this chapter, the study's methods and procedures were presented, including the research design, survey instrument, research questions and null hypotheses, population, collection of data, and the types of tests performed for the analysis of research questions. The study included 132 Members of the Tennessee General Assembly (33 members of the Tennessee Senate, 99 members of the Tennessee House of Representatives); Executive Director of the Tennessee Higher Education Commission (THEC); Chancellor of the Tennessee Board of Regents (TBR); President of the University of Tennessee System; and 36 Chief Administrators at nine state-supported universities (four administrators from each university: university president or chancellor, vice president for finance administration, vice president for academic affairs, and the vice president for student affairs). Data collected from the study are analyzed in Chapter 4.
CHAPTER 4

ANALYSIS OF DATA

This quantitative study examined the perceptions of selected university administrators and legislators concerning funding for Tennessee public higher education. Research participants were selected based on how their leadership position impacted higher education. The purpose of the study was to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. Tennessee legislators, university administrators, and director or chancellors of the higher education boards (i.e. Tennessee Board of Regents, Tennessee Higher Education Commission, and the University of Tennessee System) were asked to participate in this study. Senators and Members of the House of Representatives in the Tennessee General Assembly were included in the study for their role in state budgeting for higher education. University administrators were selected from nine public institutions of higher education in Tennessee. These institutions were: Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, University of Memphis, University of Tennessee- Chattanooga, University of Tennessee- Knoxville, and University of Tennessee- Martin. Reasoning for selecting these universities was due to their membership in the Tennessee Board of Regents and University of Tennessee systems.

The principal investigator used a web survey development company, Survey Monkey, to design an online survey. Survey Monkey also served as a data collect and storage tool. Once created, the web-based survey was assigned a personal link for
participants to access the survey: https://www.surveymonkey.com/s/etsu-elpa-research-yowell. The link to the online questionnaire was included in the body of each email message sent to research participants. There were 19 questions in total; the last three questions were optional. Participants were asked demographic questions and ones focusing on individual perceptions of support for public higher education. There were also opportunities for participants to comment about questions and open-ended questions which allowed for additional insight to the study.

Submission of a completed survey indicated the research participant’s consent to participate in this study. Participants were given notice that participation in the research was voluntary and that they could quit the survey at any time. If participants chose to quit or refuse to participate, the benefits or treatment to which they were otherwise entitled were not affected. The researcher also assured participants that individual responses would be held in the strictest confidence. No identifiable information was retained for this study. Due to the sensitive nature of the results, the use of a survey instrument that does not specifically identify the participants was applied.

The population targeted for this study included 132 members of the Tennessee General Assembly and 39 leaders in Tennessee public higher education. With 171 participants invited to participate in the online questionnaire, the researcher anticipated a 40% participation rate. There were 67 completed surveys submitted or a 39% rate of return from research participants. The higher education group yielded 27 useable surveys, or 69% participation. Members of the state legislature generated 40 completed surveys, 30% of this group contributing to the study.
Thirteen research questions were devised for this study based on previous studies. The results of these research questions are discussed in this chapter. In addition, open-ended responses from the online survey are discussed. Chapter 5 contains a summary of the findings from the data, conclusions from the study, and a summary of recommendations for future research.

**Research Question 1**

RQ1: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican)?

H1₁: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican).

H₁₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat or Republican).

An independent samples t test was conducted to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their political party affiliation (e.g. Democrat, Republican). Participants were asked to rank a set of budgeting priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Priorities were: Basic Education Program, Capital Projects, Children’s Services, Corrections, Health, Higher Education, Human
Services, K-12 Education, Mental Health and Mental Retardation (MHMR) Services, Tennessee Care Program, and Transportation. The budget ranking was the dependent variable and the political party was the independent variable.

The independent samples $t$ test was not significant, $t(58) = 0.97, p = 0.34$; therefore, the null hypothesis was retained. Although not significant, findings suggested the Republican participants ($M = 4.84, SD = 2.43$) ranked the priority of higher education slightly lower in importance when considering the state budget than did Democratic participants ($M = 4.27, SD = 1.72$). The 95% confidence interval for the difference in means was $-1.75$ to $0.61$. Figure 1 shows the distribution of scores for the two groups.
Figure 1. Distribution of Scores for Democratic and Republican Participants

Research Question 2

RQ2: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other)?

H21: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other).
H20: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their professional background (e.g. education, business, or other).

A one-way ANOVA test was applied for Research Question 2 which sought to determine if any significance could be found between variables. The researcher wanted to verify if professional backgrounds of participants (e.g. education, business, or other) effected how participants ranked the priority of higher education in the state budget.

Participants were asked to rank a set of budgeting priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Priorities were: Basic Education Program, Capital Projects, Children’s Services, Corrections, Health, Higher Education, Human Services, K-12 Education, Mental Health and Mental Retardation (MHMR) Services, Tennessee Care Program, and Transportation. The independent variable, professional background, included three different categories: education, business, and other. The dependent variable was the ranking of higher education in terms of priority in the state budget.

There was no significant findings from the ANOVA, $F(2, 64) = 1.25, p = 0.29$. Therefore, the null hypothesis was retained. The means and standard deviations were as follows for the types of professional backgrounds: Education (M = 4.05, SD =2.40), Business (M = 5.04, SD =2.41), and Other M = 4.32, SD =1.83). As assessed by $\eta^2$, the strength of the relationship between professional background and ranking was small (0.04). In other words, only 4% of the variance in participants’ ranking the priority of higher education in
the state budget was affected by professional background. The means and standard deviations for the three professional backgrounds are reported in Table 9.

Table 9
Mean and Standard Deviations for Professional Backgrounds

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>21</td>
<td>4.05</td>
<td>2.40</td>
</tr>
<tr>
<td>Business</td>
<td>27</td>
<td>5.04</td>
<td>2.41</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>4.32</td>
<td>1.83</td>
</tr>
</tbody>
</table>

Research Question 3

RQ3: Is there a significant correlation between research participants' length of service in leadership position and how they rank the priority of higher education in the state budget?

H₃₁: There is a significant correlation between research participants' length of service in leadership position and how they rank the priority of higher education in the state budget.

H₃₀: There is not a significant correlation between research participants' length of service in leadership position and how they rank the priority of higher education in the state budget.
For the third research question, the principal investigator sought to determine if a correlation existed between participants’ time in their current leadership role and how they ranked higher education’s priority in the state budget. A Pearson correlation coefficient was used to test the hypothesis. The results of the analysis revealed no relationship between years of service (M = 8.63, SD = 7.53) and budget ranking (M = 4.52, SD = 2.27) scores. No significant correlation existed \[ r(67) = 0.11, p = 0.39 \]; therefore, the null hypothesis was retained. Figure 2 displays the results of the test.

*Figure 2. Scatterplot between Years of Service and Ranking*
Research Question 4

RQ4: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree?

H₄₁: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree.

H₄₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree.

An independent samples t test was conducted to compare the difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those who have not earned a college degree. Participants were asked to rank a set of budgeting priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Priorities were: Basic Education Program, Capital Projects, Children’s Services, Corrections, Health, Higher Education, Human Services, K-12 Education, Mental Health and Mental Retardation (MHMR) Services, Tennessee Care Program, and Transportation. The budget ranking was the dependent variable and the political party was the independent variable.

The test was not significant, $t(65) = 0.45, p = 0.65$; therefore, the null hypothesis was retained. Although not significant, participants whose parents had not earned a college degree ($M = 4.40, SD = 2.18$) tended to rank the priority of higher education in the state's
budget slightly higher in importance than those whose parents had earned a college degree (M = 4.65, SD = 2.37). The slight difference between groups in this study suggests first generation college graduates consider higher education a greater priority. The 95% confidence interval for the difference in means was -1.37 to 0.86. Figure 3 shows the distributions of the two groups.

![Figure 3. Distribution of Scores for Parents' Education](image)

Figure 3. Distribution of Scores for Parents' Education
Research Question 5

RQ5: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee)?

H$_{51}$: There is a significant difference how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee).

H$_{50}$: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence (e.g. East, Middle, or West Tennessee).

A one-way ANOVA test was conducted to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their district of residence. The dependent variable was budget ranking and the independent variable was the participants’ district of residence. Districts were East, Middle, and West. The ANOVA was not significant, $F(2, 64) = 1.39$, $p = 0.26$. Therefore the null hypothesis was retained. The means and standard deviations were as follows for each of the districts: East (M = 3.90, SD = 1.97), Middle (M = 5.52, SD = 2.48), and West (M = 4.20, SD = 2.04). As assessed by $\eta^2$, the strength of the relationship between district of residence and ranking of higher education in the state budget was small (0.11). In other words, only 11% of the variance in ranking the priority of higher education in the state budget was affected by participant’s district of residence. The means and standard deviations for the three districts are reported in Table 10.
Table 10

*Means and Standard Deviations for Three Districts*

<table>
<thead>
<tr>
<th>District of Residence</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>29</td>
<td>3.90</td>
<td>1.97</td>
</tr>
<tr>
<td>Middle</td>
<td>23</td>
<td>5.52</td>
<td>2.48</td>
</tr>
<tr>
<td>West</td>
<td>15</td>
<td>4.20</td>
<td>2.27</td>
</tr>
</tbody>
</table>

**Research Question 6**

RQ6: Is there a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget?

H6₁: There is a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget.

H6₀: There is not a significant difference between how university administrators and state legislators rank the priority of higher education in the state budget.

An independent samples *t* test was conducted to compare the difference between how university administrators and state legislators rank the priority of higher education in the state budget. Participants were asked to rank a set of budgeting priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Priorities were: Basic Education Program, Capital Projects, Children’s Services, Corrections, Health, Higher Education, Human Services, K-12 Education, Mental Health and Mental Retardation (MHMR) Services, Tennessee Care Program, and Transportation. The budget
ranking of higher education was the dependent variable and the independent variable was leadership position.

The test was significant, \( t(65) = 2.28, p = 0.03 \). Therefore, the null hypothesis was rejected. Participants holding a leadership position in higher education (\( M = 3.78, SD = 2.10 \)) tended to rank the priority of higher education higher in the state budget than members of the Tennessee General Assembly (\( M = 5.03, SD = 2.26 \)). The 95% confidence interval for the difference in means was -2.34 to -0.15. Figure 4 shows the distribution of scores between the two groups.
Research Question 7

RQ7: Is there a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree)?

H7: There is a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree).
H7₀: There is not a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree).

An independent samples t test was conducted to compare the difference between how participants rank the priority of higher education in the state budget as categorized by their level of educational attainment (e.g. graduate degree versus no graduate degree). Participants were asked to rank a set of budgeting priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Priorities were: Basic Education Program, Capital Projects, Children’s Services, Corrections, Health, Higher Education, Human Services, K-12 Education, Mental Health and Mental Retardation (MHMR) Services, Tennessee Care Program, and Transportation. The budget ranking was the dependent variable and the independent variable was educational attainment level.

The test was significant, $t(65) = 2.81, p < 0.01$. Therefore, the null hypothesis was rejected. Participants having earned a graduate degree ($M = 3.95, SD = 2.13$) tended to rank the priority of higher education higher than participants with no graduate degree ($M = 5.48, SD = 2.20$). The 95% confidence interval for the difference in means was 0.44 to 2.62. Figure 5 shows the distributions of the two groups.
Figure 5. Distribution of Scores for Education Level

Research Question 8

RQ8: Is there a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education?

H08: There is a significant difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education.
H8: There is not a significant difference between participants' political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education.

An independent samples t test was conducted to compare the difference between participants’ political party affiliation (e.g. Democrat or Republican) and how they perceive access to higher education. The perception of access was the dependent variable and the independent variable was political party. This research question was based on one of the survey questions which required a “Yes” or “No” response: “Do you perceive there to be a problem of access to higher education in the state of Tennessee?” In SPSS, “Yes” answers were assigned a value of 1 while “No” answers were assigned a value of 2. The test was significant, $t(58) = 2.68, p = 0.01$. Therefore, the null hypothesis was rejected. Democratic participants ($M = 1.50, SD = 0.51$) tended to perceive access to higher education as more of an issue than Republican participants ($M = 1.82, SD = 0.39$). The 95% confidence interval for the difference in means was -0.55 to -0.08. Figure 6 shows the distributions for the two groups.
Figure 6. Distribution of Scores between Political Parties

Research Question 9

RQ9: Is there a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times?

H9: There is a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times.
H₉₀: There is not a significant difference in opinion between university administrators and state legislators regarding higher education’s use of reserves during weak economic times.

An independent samples t test was conducted to compare the difference between opinions of university administrators and state legislators regarding higher education’s use of reserves during weak economic times. The use of reserves was the dependent variable and the independent variable was leadership position. Using a five-point Likert-scale scale, participants selected their agreement with a statement: 1 representing strongly agree, 2 agree, 3 neutral, 4 disagree, and 5 strongly disagree.

The test was significant, \( t(65) = 2.65, p = 0.01 \). Therefore, the null hypothesis was rejected. Members of the Tennessee General Assembly (\( M = 2.80, \text{SD} = 1.36 \)) tended to agree more that higher education should use their reserves to avoid increases in tuition during weak economic times while Higher Education (\( M = 3.63, \text{SD} = 1.08 \)) leaders tended to disagree with that strategy. The 95% confidence interval for the difference in means was 0.20 to 1.45. Figure 7 shows the distributions for the two groups.
Figure 7. Distribution of Scores for Use of Reserves in Weak Economic Times

Research Question 10

RQ10: Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations?

H10: There is a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations.
H10: There is not a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations.

An independent samples $t$ test was conducted to compare the difference between how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations. Poor management was the dependent variable and the independent variable was leadership position. Using a five-point Likert-scale, participants selected their agreement with a statement: 1 representing strongly agree, 2 agree, 3 neutral, 4 disagree, and 5 strongly disagree.

The test was significant, $t(65) = 5.18, p < 0.001$. Therefore, the null hypothesis was rejected. Members of the Tennessee General Assembly ($M = 3.05, SD = 1.34$) tended to agree more that increases in tuition were associated with poor management of higher education costs, not changes in state appropriations while leaders of Higher Education ($M = 4.56, SD = 0.85$) tended to disagree more with that statement. The 95% confidence interval for the difference in means was 0.92 to 2.09. Figure 8 shows the distributions for the two groups.
Figure 8. Distribution of Scores for Tuition Increases Due to Poor Management of Higher Education Costs

Research Question 11

RQ11: Is there a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders?
H11₁: There is a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders.

H11₀: There is not a significant difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders.

An independent samples t test was conducted to compare the difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders. Leadership position was the independent variable while the dependent variable was decreases in state appropriations. Using a five-point Likert scale, participants selected their agreement with a statement: 1 representing strongly agree, 2 agree, 3 neutral, 4 disagree, and 5 strongly disagree.

The test was significant, $t(65) = 6.89, p < 0.001$. Therefore, the null hypothesis was rejected. Leaders of Higher Education ($M = 1.59, SD = 0.50$) tended to agree more than members of the Tennessee General Assembly ($M = 3.15, SD = 1.10$) that increases in tuition being associated with decreases in state appropriations, not management of higher education leaders. The 95% confidence interval for the difference in means was -2.01 to -1.11. Figure 9 shows the distributions for the two groups.
Figure 9. Distribution of Decreases in State Appropriation Scores for Leaders in Higher Education and the Tennessee General Assembly

Research Question 12

RQ12: Is there a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education?
H12₁: There is a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education.

H12₀: There is not a significant difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education.

An independent samples $t$ test was conducted to compare the difference in opinion between administrators of higher education and state legislators in Tennessee concerning who should be responsible for paying the cost of higher education. Leadership position was the independent variable while the dependent variable was student pay. Using a five-point Likert-scale, participants selected their agreement with a statement: 1 representing strongly agree, 2 agree, 3 neutral, 4 disagree, and 5 strongly disagree.

The test was significant, $t(65) = 2.95, p = 0.004$. Therefore, the null hypothesis was rejected. The leaders in the Tennessee General Assembly ($M = 2.58, SD = 1.08$) tended to agree more than leaders in Higher Education ($M = 3.37 SD = 1.08$) that the cost of Tennessee higher education should be largely paid for by the students. The 95% confidence interval for the difference in means was 0.25 to 1.33. Figure 10 shows the distributions for the two groups.
Figure 10. Distribution of Scores for Students Incurring Costs of Higher Education

Research Question 13

RQ13: Is there a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education?

H13: There is a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education.
H13$_0$: There is not a significant difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education.

An independent samples $t$ test was conducted to compare the difference between how leaders in Tennessee public higher education and the state legislature perceive the importance of state appropriations for higher education. Leadership position was the independent variable while the dependent variable was importance of state appropriations. Using a five-point Likert-scale, participants selected the level of importance state appropriations have as an issue of higher education: 1 representing most important, 2 very important, 3 moderately important, 4 slightly important, and 5 least important.

The test was significant, $t(65) = 3.95$, $p < 0.001$. Therefore, the null hypothesis was rejected. The leaders in Higher Education ($M = 1.67, SD = 0.78$) tended to consider the impact of state appropriations for higher education of greater importance than respondents from the Tennessee General Assembly ($M = 2.48, SD = 0.85$). The 95% confidence interval for the difference in means was $-1.22$ to $-0.40$. Figure 11 shows the distributions for the two groups.
Figure 11. Distribution of State Appropriation Importance Scores between Leaders

Open-Ended Responses

Though a quantitative design research participants had the opportunity to comment and answer in their own words on a few of the survey questions. On the fourth question participants were able to react to the series of statements providing greater context to their answers. The last three questions of the survey were optional for research participants. In order to learn from the research participants, their responses are presented in this section as they appeared in the individual responses.
Question 4 Comments

The questionnaire provided participants the opportunity to react to Question 4. This section of the survey asked for participants to select their agreement with a series of statements concerning the financial position of higher education. Comments obtained from the individual surveys are provided as they appeared in the individual responses. There were six comments in reaction to this question, four from legislators and two from higher education administrators. A respondent was concerned about high school graduates not being fully prepared for entering higher education, “Small high schools should not be so limited with course offerings. I can’t emphasize enough that better preparedness for college needs to be number one for higher education.” One research participant had concerns about the structure of higher education systems asking, “Do you need TBR and THEC? Private institutions do not have this ‘overhead.’ They run institutions independently.” Another participant had similar concerns and commented:

Are the TBR and THEC really necessary? The private institutions run well enough without the governing boards. I don’t really see how they are serving a purpose in today’s environment.

Question 17

There were 46 responses to Question 17, “In your opinion, what are the top three issues of funding for public higher education?” There were 22 responses from legislators and 24 from higher education administrators. Of the responses from the legislative group, the following issues were listed more than once: accreditation of programs, retention and graduation rates, college preparedness, articulation with high schools, tuition increases,
funding management, efficiency, higher education governance, and organizational structure of public higher education (antiquated structure).

Four responses from the legislative group to Question 17, as they appeared in the questionnaire, are provided for additional context. One legislator wrote “more efficient management, one umbrella for all state higher education, and more cooperation with private institutions” were the top issues facing higher education. Another legislator stated “having a well-rounded system that meets the variety of needs in the workforce (from physicists to welders), increasing our graduation rate, and having various types of institutions with different specialties and price points” were major concerns of higher education. A third legislator proposed the top issues higher education faced were “one higher education system for the entire state, cooperation between public and private institutions’ offerings...competing interests, more efficient management of the universities.”

In response to listing the top issues facing higher education, a legislator wrote:

Allow students to pay for the services they desire and receive, maintain some financial investment requirements for students - it’s much easier to disregard something for which you are not paying, and educational institutions in the state must recognize that full funding does not equal full education of students. Education is the goal, not further funding. Management of these institutions on leaner budgets will be the new norm.

In response to Question 17, participants holding leadership positions in higher education listed more than once the following concerns: reductions in state funding or lack of state support (reoccurring theme amongst responses), stability of funding, retention and graduation, fee structure, capital maintenance projects, college preparedness, individual management of institutions, increase need-based aid, cost and student debt, higher education operating under one system instead of two, capital dollars for capital projects,
competitive salaries for faculty and staff recognizing achievements at various levels, and the new funding formula's link to institutional goals.

Four responses from the higher education administrators to Question 17, as they appeared in the questionnaire, are provided for additional context. An administrator of higher education wrote “reduction in state funding, too much focus on single large institution, and maintaining poor performing institutions” as his or her top three observed issues facing higher education. Another leader in higher education offered that “too much focus on one university system (UT), reductions in state funding, improving upon institutional performance indicators” as the top issues of higher education. “State funding reductions, Potential loss of solvency for Lottery program, Expectations for 120 credit hour universities based on 9 month technical programs at the Tech Centers,” were considered to be top issues higher education faced at the time of the survey from the perspective of a higher education leader. One participant from the higher education group answered “education isn’t sufficiently valued, education is viewed as a cost instead of investment, and Tennessee is unwilling to tax itself for issues involving public good rather than private benefit” for Question 17. A fourth administrator’s reaction suggested competition among universities was of great concern for higher education:

   Competition among intuitions for a dwindling pie (i.e. state appropriations), Even if there are additional dollars available to allocate, your funding can decrease, even as your performance metrics increase -- if the metrics of your competitors increase more than yours, No value is given to non-degree-seeking. If I need four classes to sit for the CPA exam, for example, my enrollment hurts rather than helps the school’s appropriation.
Question 18

There were 46 responses to Question 18: “Has your view changed since the new funding formula has been implemented?” There were 22 responses from legislators and 24 from higher education administrators. Observations of the new funding formula varied between legislators and administrators as well as within groups.

A few responses from the Tennessee General Assembly suggested the formula needed evaluation in order for them to know if it was an effective tool. Four separate responses provided additional context to legislative perceptions of the funding for Tennessee public higher education.

The formula emphasizes that graduation and retention of students is the goal. It is important that students who are not cut out for higher education will need guidance in this area...looking to technological career centers instead. Too much emphasis in the past placed on students graduating high school and going straight to college.

I don’t see how the funding formula rewards institutions fairly. For instance, centers of excellence were not rewarded based on new measures for funding...the formula should install a minimum achievement upon increasing of funds.

The funding formula rewards excellence for those who were underachieving. Those institutions that were successful were actually penalized for being centers of excellence prior to the formula. The formula should have had a minimum achievement before increasing funding.

Yes, graduation and retention is the goal. As the goal, students must be directed to other forms of education that do not possess the traits of a successful student. This is of utmost importance; not all students are compatible with a 4 year program and some never recognize this without guidance.

The responses provided by higher education leaders were equally revealing concerning perceptions of the new funding formula. Some respondents expressed that the formula should be re-examined with its regard to public perception and or willingness to support education. Four responses from higher education leaders provided additional
context to perceptions of the funding for Tennessee public higher education. One administrator reacted to Question 18 by stating the new funding formula “provides greater public accountability and rewarding positive outcomes with additional revenue is a powerful incentive.” Another research participant added, “I believe higher education is struggling with becoming a greater priority in the government and public’s perspective: Government attitude/priorities versus public perception/willingness to support higher education.” A third remark from the higher education group explained “the focus on college completion is significant, but the cost issue and declines in appropriations have not been effectively addressed” when addressing the question about Tennessee’s new funding formula for higher education. A fourth higher education leader postulated that “schools can focus on quality by encouraging students to complete their courses and graduate. In time funding will increase because performance is key!”

**Question 19**

Question 19 of the web-based survey asked research participants “What concerns/details not addressed in this questionnaire do you have regarding funding for higher education in Tennessee?” There were 36 responses to question 19; 22 responses came from legislators and 12 from higher education administrators.

Seven reactions from legislative participants to Question 19 of the survey are presented in this section. “Educational facilities do not include sports complexes. The State should pay for educational space and all other capital projects should be subject to other funding sources” was one legislator’s reaction to the last question of the survey. Another legislator responded “other countries have surpassed our educational standards are we
debate issues while we lag behind even further.” “Governance of higher education should be examined...this may help with greater recognition for higher education making it more of a priority in public’s eye” wrote another leader of the Tennessee General Assembly in response to Question 19 of the survey. Another comment from the legislature was “institutions should be run independently like a business...we should give them a structure to operate under with minimal interference.” “Public universities would do better to raise their own funds and function more like a business than under the current infrastructure” was another opinion shared from the Tennessee legislature. The next two comments were longer in response to Question 19 of the survey:

Public universities could be run as independent of THEC or TBR. A structure should be implemented which allows for minimal interference. Not all the institutions in the state are the same, nor should they operate as such.

We need better advisement to the family of the student concerning what is involved in paying for higher education. Students are in debt and not completing higher education due to number of requirements. There are excessive requirements in order to qualify for some degrees. Also, some students lack the maturity/ambition for higher education...with this in mind, high schools could do more to prepare students for university or technical paths.

Reactions from higher education participants to Question 19 of the survey are presented. It should be noted that there were multiple comments about the structure of higher education from those holding leadership positions in higher education. One higher education leader commented “THEC has outlived its usefulness and should be abolished” while another wrote: “Structure matters. The state overly regulates higher education and institutions should be provided with flexibility and local boards to manage their operations.” One higher education administrator perceived there to be inequality between
the two systems of higher education in the state of Tennessee: “I am very concerned regarding the many ways in which the funding formula has been created specifically to benefit UT Knoxville above all other institutions.” Question 19 revealed several more concerns from higher education leaders:

Our tax structure does not provide a sufficient base for funding the infrastructure needs in the state - until that is addressed; TN will continue to lag behind in many areas.

The state does not use this model for K-12. The former governor used the analogy along the lines of a storekeeper being paid for SALES, not SHOPPERS. Any storeowner knows, however, that not every shopper is going to buy, despite his/her best efforts. It's not a great model, but it has caught everyone's attention. We will spend millions more in retention initiatives to keep our same appropriation.

Require high schools to provide remedial education to their students who do not meet college entrance standards. Lowering standards will not produce more graduates, just more dropouts. Allowing TBR universities to be more autonomous, entrepreneurial and creative in meeting these challenges instead of a "one size fits all" approach.

States have to do what they do to balance the budget during difficult economic times. HE is an easy target because it is on the discretionary spending side of the state's budget, leaving HE to increase fees. 70-80% of HE budget are salaries and benefits with the largest portion being faculty salaries. Major cuts to HE will eventually erode the funds available for FT faculty and increase the reliance on adjuncts and part-time faculty.

There needs to be a comprehensive strategy to financing Tennessee's higher education aspirations that considers state, student, federal and private funds and the role each should play. Included in this discussion should be financial aid policies to align student financial aid with the state's educational attainment needs.

**Summary**

Responses from the questionnaire were analyzed in this chapter. Each research question was discussed along with responses from the open-ended questions of the survey. Results obtained from the study were examined using independent samples $t$ tests, one-way ANOVAs, and a Pearson correlation coefficient. From these tests, 8 out of 13 research
questions had statistically significant findings. A summary of the study’s findings is presented in the next chapter along with conclusions and recommendations for future studies.
CHAPTER 5  
SUMMARY OF FINDINGS, KEY FINDINGS, RECOMMENDATIONS, AND CONCLUSIONS

Included in this chapter are the summary of findings, conclusions, and recommendation for further research. The purpose of the study was to gain a greater understanding among the various constituents as to the needs and restraints facing public higher education funding in Tennessee. Data collected from a web-based survey was used to test 13 research questions in this study. The population of this study included two groups of leaders. Senators and Representatives from the Tennessee General Assembly made up the legislative group, 132 potential research participants. The higher education group consisted of 39 potential research participants for the study. Making up this group were 36 selected administrators from nine of Tennessee’s institutions of higher education as well as the Executive Director of the Tennessee Higher Education Commission (THEC), the Chancellor of the Tennessee Board of Regents (TBR), the President of the University of Tennessee System.

Summary of Findings

In Chapter 1 of this report 13 research questions are presented as the basis for statistical analyses. The 13 questions are again reported in Chapter 3 along with the corresponding hypotheses. A Pearson correlation was used to analyze Research Question 3. An independent samples $t$ test was used to analyze Research Questions 1, 4, 6, 8, 9, 10, 11, 12, and 13. A one-way ANOVA was used to analyze Research Questions 2 and 5. The level of significance applied in the statistical analysis was set at the 0.05 level.
Results obtained from the study were examined using independent samples t tests, one-way ANOVAs, and a Pearson correlation coefficient. From these tests, 8 of 13 research questions had statistically significant findings. Analysis of the data revealed that legislators and higher education administrators in the State of Tennessee perceived funding for higher education differently. There were significant differences between the two groups concerning: use of higher education reserves during weak economic times, the explanation for tuition rises, how much costs students should incur for higher education, level importance placed on state appropriations for funding higher education, and how they perceived priority of higher education in the state budget. There was a significant difference between individual political party affiliation and perception of access to higher education being an issue. A significant difference was also found between one’s education level and ranking of higher education in the state budget.

Five research questions related to participants’ budget ranking were found to have no significance based on the responses. Independent variables in Research Questions 1, 2, 3, 4, and 5 were found to have no impact on how participants prioritized higher education in the state budget. The independent variables analyzed in these questions having no significance were: political party affiliation, professional background, length of service in leadership position, parents’ education, and district of residence.

Key Findings

A quantitative study was conducted to determine if leaders of higher education and legislature in Tennessee differ in how they perceive funding for higher education. Out of 13 research questions, 8 were found to yield statistically significant results. Also, the open-
ended questions of the survey disclosed additional insight to the study. The findings of the study are not generalizable to other populations based on the following limitations:

1. The response rate was approximately 39% of the targeted population for the study
2. The study only tested legislators and university administrators in Tennessee
3. This study is limited to the time period in which it was administered

**Research Question 1**

For Research Question 1, the principal investigator sought to determine if one’s political party influenced how he or she ranked the priority of higher education in the state budget. Previous research suggested public higher education in the United States is becoming more of a partisan issue (Doyle, 2010; McLendon et al., 2006, 2009). However, an independent samples t test revealed that no significant difference existed between participants’ ranking and their political party affiliation. Although not significant, findings suggested the Democratic participants prioritized higher education slightly but not significantly higher in the state budget than Republican participant. This discrepancy is supported by findings of McLendon et al. (2009). The response rate for this study may have been too low for a significant difference to be evident when testing for differences between political party and perceived priority of higher education.

**Research Question 4**

Research Question 4 asked if there was a significant difference between how participants rank the priority of higher education in the state budget as categorized by those whose parents have earned a college degree and those whose parents have not
earned a college degree. An independent samples t test revealed no significant findings. However, it was observed that participants whose parents had not earned a college degree (M = 4.40, SD = 2.18) tended to rank the priority of higher education in the state's budget slightly but not significantly higher in importance than those whose parents had earned a college degree (M = 4.65, SD = 2.37). One possible explanation for the higher ranking from first generation college graduates may be in their valuing a college education more since they were first in their family to earn a college degree; however, no studies have been found to support this suggestion.

**Research Question 6**

The sixth research question sought to establish if a significant difference existed between how university administrators and state legislators in Tennessee ranked the priority of higher education in the state budget. An independent samples t test revealed higher education administrators tended to rank higher education as more of a priority in the Tennessee's budget than members of the Tennessee General Assembly. Previous research supports this finding (Canfield-Davis & Jain, 2008; Hossler et al., 1997; Manahan, 1975; Russell, 2008; Weerts & Ronca, 2006).

**Research Question 7**

Significant findings were found in testing whether participants' educational attainment (e.g. a graduate degree versus no graduate degree) had any influence on their ranking of higher education in terms of priority in the state budget. An independent t test revealed a significant difference between variables, t(65) = 2.81, p < 0.01. Therefore, the
null hypothesis was rejected. In this study there was a significant difference between how participants rank the priority of higher education in the state budget as categorized by their level of education. Participants having earned a graduate degree tended to prioritize higher education with significantly greater regard in the state budget than the participants with no graduate degree. Although only 39% of the population participated in the study, results indicate that those with a graduate degree valued higher education significantly more than those who had not earned a graduate degree.

**Research Question 8**

Research Question 8 was motivated by the review of literature related to access of higher education and yielded significant findings. This research question was actually a “Yes” or “No” question in the survey: “Do you perceive there to be a problem of access to higher education in the state of Tennessee?” In SPSS, “Yes” answers were assigned a value of 1 while “No” answers were assigned a value of 2. The researcher wanted to establish whether participants’ political party affiliation (e.g. Democrat or Republican) influenced and how they perceived access to higher education. An independent samples t test was significant, $t(58) = 2.68, p = 0.01$. Therefore, the null hypothesis was rejected. Democratic participants tended to perceive access to higher education as more of an issue than Republican participants.

**Research Question 9**

An organization’s reserve needs vary depending upon the complexity. Institutions of higher education typically require higher levels of reserves because they are used for
scholarships, overall maintenance for the campus, funding new programs, etc. With this in mind, Research Question 9 was intended to determine if a significant difference was observed between university administrators and state legislators regarding higher education’s use of reserves during weak economic times. An independent samples \( t \) test revealed \( t(65) = 2.65, p = 0.01 \); therefore, the null hypothesis was rejected. Members of the Tennessee General Assembly (\( M = 2.80, SD = 1.36 \)) tended to agree more than leaders of Higher Education (\( M = 3.63, SD = 1.08 \)) that Tennessee public colleges and universities should use reserves to avoid increases in tuition during weak economic times.

**Research Question 10**

An independent samples \( t \) test was used to compare how state legislators and higher education administrators respond to increases in tuition being associated with poor management of higher education costs, not changes in state appropriations. The test was significant, \( t(65) = 5.18, p < 0.001 \); therefore, the null hypothesis was rejected. Using a five-point Likert-scale, participants selected their agreement with a statement: 1 representing strongly agree, 2 agree, 3 neutral, 4 disagree, and 5 strongly disagree. Leaders of Higher Education (\( M = 4.56, SD = 0.85 \)) tended to disagree significantly more than members of the Tennessee General Assembly (\( M = 3.05, SD = 1.34 \)) that increases in tuition being associated with poor management of higher education costs, rather than changes in state appropriations.
Research Question 11

Significance was found in Research Question 11. An independent samples t test was used to compare the difference between how state legislators and higher education administrators respond to increases in tuition being associated with decreases in state appropriations, not management of higher education leaders. The null hypothesis was rejected on the premises that the test was significant, $t(65) = 6.89, p < 0.001$. It was observed that Higher Education ($M = 1.59, SD = 0.50$) leaders tended to agree more strongly that increases in tuition being associated with decreases in state appropriations, not management of higher education, while legislators from the Tennessee General Assembly ($M = 3.15, SD = 1.10$) tended to be more neutral in their responses.

Research Question 12

Research Question 12 had significant findings. The independent samples t test was significant, $t(65) = 2.95, p = 0.004$. Therefore, the null hypothesis was rejected. The leaders in the Tennessee General Assembly ($M = 2.58, SD = 1.08$) tended to agree more than leaders in Higher Education ($M = 3.37 SD = 1.08$) that the cost of Tennessee higher education should be largely paid for by the students.

Research Question 13

An independent samples t test was also used for Research 13 and revealed significant findings. There was a significant difference between how leaders in Tennessee public higher education and the state legislature perceived the importance of state appropriations for higher education. Leadership position was the independent variable
while the dependent variable was importance of state appropriations. The null hypothesis was rejected, \( t(65) = 3.95, p < 0.001 \). The leaders in Higher Education (\( M = 1.67, SD = 0.78 \)) tended to consider the impact of state appropriations for higher education of greater importance than those from the Tennessee General Assembly (\( M = 2.48, SD = 0.85 \)) whose answers averaged between important and moderately important.

**Recommendations for Further Research**

This quantitative study was conducted within the limitations outlined in Chapter 1. Several recommendations for expanding this study include, but are not limited to:

1. Conduct studies involving the Tennessee General Assembly when it is not in an election year.
2. A study using a mixed method design, both quantitative and qualitative methods, may reveal greater understanding to the issues contributing to decreases in state appropriations for public higher education.
3. Evaluating of Tennessee’s outcome-based funding formula for public higher education since its introduction in 2010.
4. Reproducing this study in other states as funding for higher education is of great concern nationwide.
5. A study should be conducted on the organizational structure for higher education. Quite a few comments were made suggesting the higher education system was “antiquated” or needing an overhaul.
6. This research focused on opinions from chief administrators at nine of Tennessee’s public institutions of higher education and legislators in the Tennessee General
Assembly. Additional research is needed on the governing boards in order to create a more complete representation of public funding for higher education in Tennessee.

7. It may be beneficial to determine the impact of inflation and increased cost of higher education.

8. A study evaluating Complete College Tennessee Act. How does the legislation measure up to previous decades in terms of improvements for higher education?

9. A study examining the relationship between boards of trustees and state politics in higher education.

10. Comments provided from the open-ended responses could provide a basis for future research questions. Specifically, how to improve the public higher education structure in Tennessee.

Conclusion

In Chapter 2, three issues impacting public higher education in America were identified as access, cost, and quality. None of these can be resolved in isolation and share a common obstacle to policy changes, funding. It is unlikely that new forms of funding for higher education will be available; therefore, feasible policies must work within the constructs of the current funding systems in place. The future of funding for public higher education relies on the available research as to the needs and restraints. Although findings from this study only pertain specifically to public higher education in Tennessee and at the time the study was conducted, it is conceivable that the material presented could be used by both groups (legislators and higher education administrators) for the future
development of public higher education. The differences in opinion between leaders in higher education and the state government in this study confirm greater communication must take place in order for any higher education reform to be constructive.
REFERENCES


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Mehagian, D., & Piscitielli, P. (2012, Spring/Summer). College planning: Lower the debt, increase the opportunity. *American Funds Investor, 4*.


APPENDICES

APPENDIX A

IRB Approval- Initial Exempt

IRB APPROVAL – Initial Exempt

July 17, 2012

Deidre Yowell
University Advancement, Box 70712
Johnson City, TN 37604

RE: Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee
IRB#: 0712.9e
ORSPA#: 

On **July 13, 2012**, an exempt approval was granted in accordance with 45 CFR 46, 101(b)(2). It is understood this project will be conducted in full accordance with all applicable sections of the IRB Policies. No continuing review is required. The exempt approval will be reported to the convened board on the next agenda.

- form 103, assurance statement, narrative (7/6/2012), potential conflict of interest (none identified), CV, survey, informed consent letter

Projects involving Mountain States Health Alliance must also be approved by MSHA following IRB approval prior to initiating the study.

Unanticipated Problems Involving Risks to Subjects or Others must be reported to the IRB (and VA R&D if applicable) within 10 working days.

Proposed changes in approved research cannot be initiated without IRB review and approval. The only exception to this rule is that a change can be made prior to IRB approval when necessary to eliminate apparent immediate hazards to the research subjects [21 CFR 56.108 (a)(4)]. In such a case, the IRB must be promptly informed of the change following its implementation (within 10 working days) on Form 109 (www.etsu.edu/irb). The IRB will review the change to determine that it is consistent with ensuring the subject’s continued welfare.

Sincerely,
Chris Ayres, Chair
ETSU Campus IRB

Cc: Don Good
APPENDIX B

Notification of Informed Consent

PRINCIPAL INVESTIGATOR: Deidre L. Yowell


OBJECTIVE: This is a quantitative study examining the perceptions of selected university administrators and legislators concerning levels of support for Tennessee higher education. The purpose of the study is to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. Tennessee legislators, university administrators, and director/chancellors of the higher education boards (i.e. Tennessee Board of Regents, Tennessee Higher Education Commission, and the University of Tennessee System) will be asked to participate in this study.

DURATION: The online survey will take approximately 15 minutes to complete. The survey will only be active for 7 days in order to collect the data in a timely manner.

TYPES OF QUESTIONS: Participants will be asked demographic questions and ones focusing on individual perceptions of support for public higher education. There are also open-ended questions which allow for additional insight to the study.

POSSIBLE BENEFITS: There will be no direct benefits to research participants. However, knowledge gained from the study may contribute to understanding factors affecting funding for Tennessee public higher education. Results from this survey may be helpful in the evaluation of the outcome-based funding formula for public higher education. This study may also serve as a snapshot of the position of higher education in 2012 for future comparisons to be made.

VOLUNTARY PARTICIPATION: Submission of the following survey will indicate the research participant’s consent to participate in this study. Participation in this research experiment is voluntary. Participants may quit the survey at any time. If you quit or refuse to participate, the benefits or treatment to which you are otherwise entitled will not be affected.

CONFIDENTIALITY: Please be assured that individual responses will be held in the strictest confidence. No identifiable information will be retained for this study. Due to the sensitive nature of the results, the use of a survey instrument that does not specifically identify the participants will be applied. If the results of this study were to be written for publication, no identifying information will be used.

CONTACT FOR QUESTIONS: For research-related questions or problems, you may contact me, the principal investigator, at 423-967-5034 or deidre_yowell@yahoo.com. I am
working on this project under the supervision of Dr. Donald W. Good, faculty adviser. Dr. Good may be reached at 423-439-7621 or gooddw@etsu.edu. Also, the chairperson of the Institutional Review Board at East Tennessee State University is available at 423-439-6054 if you have questions about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you cannot reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002.

I would greatly appreciate your participation in this survey. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. During the survey, respondents will be able to update their responses until the survey is finished or until they have exited the survey. Once the survey has been submitted (i.e. the respondent selects "Done"), the respondent will not be able to re-enter the survey. I sincerely hope that you will be able to participate in this study.

Best regards,
Deidre L. Yowell
ETSU Educational Leadership Policy Analysis, Doctoral Candidate
Dear Higher Education Administrator,

I am a graduate student pursuing a doctoral degree in Educational Leadership Policy Analysis from East Tennessee State University. In order fulfill all program requirements; I must complete a major research project in the form of a dissertation. I am writing you in hopes that you will consent to participate in a survey for my study.

The title of my research study is “Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee.” This is a quantitative study examining perceptions regarding appropriation of funding for higher education. The purpose of the study is to gain a greater understanding among the various constituents as to perceptions of needs and restraints facing higher education funding. The population for this study includes Tennessee legislators, selected university administrators at nine of the state's public universities, and director/chancellors of the higher education boards.

The survey for this study will take approximately 15 minutes to complete. In order to collect the data in a timely manner, the survey will only be active for 14 days. The survey will be administered online, accessible through the following link: https://www.surveymonkey.com/s/etsu-elpa-research-yowell. Participants will be asked demographic questions and ones focusing on individual perceptions of support for public higher education. There are also open-ended questions which allow for additional insight to the study.

I would greatly appreciate your participation in this survey. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. I sincerely hope that you will be able to participate.

Thank you for your time and consideration!

Best regards,
Deidre Yowell
ETSU Educational Leadership Policy Analysis Doctoral Candidate
https://www.surveymonkey.com/s/etsu-elpa-research-yowell
Dear Tennessee Legislator,

I am a graduate student pursing a doctoral degree in Educational Leadership Policy Analysis from East Tennessee State University. In order fulfill all program requirements; I must complete a major research project in the form of a dissertation. I am writing you in hopes that you will consent to participate in a survey for my study.

The title of my research study is “Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee.” This is a quantitative study examining perceptions regarding appropriation of funding for higher education. The purpose of the study is to gain a greater understanding among the various constituents as to perceptions of needs and restraints facing higher education funding. The population for this study includes Tennessee legislators, selected university administrators at nine of the state’s public universities, and director/chancellors of the higher education boards.

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I would greatly appreciate your participation in this survey. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. I sincerely hope that you will be able to participate.

Thank you for your time and consideration!

Best regards,
Deidre Yowell
ETSU Educational Leadership Policy Analysis Doctoral Candidate
https://www.surveymonkey.com/s/etsu-elpa-research-yowell
September 7, 2012

Dear Colleague:

Subject: A Study of Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee

Mindful of the great demands of your time, I would appreciate your participation in a survey that was e-mailed to you by Daire Yowell, a doctoral student at East Tennessee State University. Recognizing that new knowledge, principles and techniques can be effectively developed through graduate research, I support the research study in the belief that in the long run this research project might lead to significant improvements in our legislative relations with the public universities and colleges in our state.

The online questionnaire is provided through www.surveymonkey.com/s/college-research-yowell which is part of a graduate research project. While I have read it and believe the questions to be inclusive and pertinent, in the final analysis, the content must remain the responsibility of the researcher and not the undersigned or any member of the Legislature.

Please be assured that responses will be held in the strictest confidence. No identifiable information is to be retained for this study. Due to the sensitive nature of the results, the use of a survey instrument that does not specifically identify the participants will be applied. If the results of this study are to be written for publication, no identifying information will be used.

With this in mind, I hope you will take the time to contribute to the professional field by completing the questionnaire and submitting it promptly.

Thank you for your time and consideration in this matter.

Best regards,

[Signature]

Ronald L. Ramsey
Lieutenant Governor
Dear Higher Education Administrator,

Regarding the ETSU research study "Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee"

I would first like to thank those of you who have already participated in this study. Your participation in the survey is appreciated and your input is greatly valued!

I would like to extend the opportunity to those of who have not yet participated in this study to do so using the following link: https://www.surveymonkey.com/s/etsu-elpa-research-yowell

This is a quantitative study for a doctoral dissertation. You have been asked to participate in this research based on your leadership position and expert knowledge in the area of funding for higher education in Tennessee. Your response to the survey will provide greater insight to understanding factors that influence funding for higher education.

I value your input and thank you in advance for your time in completing the survey.

Sincerest regards,
Deidre Yowell
ETSU Educational Leadership Policy Analysis Doctoral Candidate
https://www.surveymonkey.com/s/etsu-elpa-research-yowell
Dear Tennessee Legislator,

Regarding the ETSU research study "Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee"

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Sincerest regards,
Deidre Yowell
ETSU Educational Leadership Policy Analysis Doctoral Candidate
https://www.surveymonkey.com/s/etsu-elpa-research-yowell
From: Office of the President
Sent: Tuesday, September 11, 2012 7:37 AM
Subject: A Study of Support for Higher Education: Perceptions of Selected University
Administrators and Legislators in Tennessee

Dear Colleague:

Mindful of the great demands of your time, I would appreciate your participation in a survey
emailed to you by Deidre Yowell, a doctoral student at East Tennessee State University.
Recognizing that new knowledge, principles, and techniques can be effectively developed
through graduate research, I support the research study in the belief that in the long run this
project could lead to significant improvements in our legislative relations with the public
universities and colleges in our state.

On September 5, 2012, you were emailed an invitation to participate in an online questionnaire
through www.surveymonkey.com that is part of a graduate research project. While I have read it
and believe the questions to be incisive and pertinent, in the final analysis, the content must
remain the responsibility of the researcher and not the undersigned or any member of the
Legislature.

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completing the questionnaire and submitting it promptly. https://www.surveymonkey.com/s/etsu-
elpa-research-yowell

Thank you for your time and consideration in this matter.

Best regards,
Brian Noland, President
East Tennessee State University
Dear Higher Education Administrator,

Subject: ETSU research study “Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee”

Thank you to those who have already submitted their responses. I have been really impressed with the insight given thus far!

If you have not had the opportunity to submit your answers, I encourage you to do so. This study may serve as a snapshot of the position of Tennessee public higher education in 2012 for future comparisons to be made.

I appreciate your schedule lends little time to completing an online survey. To make participation more manageable, I have attached a printable version of the survey which includes questions and answer choices as a worksheet prior to submitting the survey: https://www.surveymonkey.com/s/etsu-elpa-research-yowell

Although participation is voluntary, it is also critical to the validity of the results. In attempts to gain a higher response rate, I have extended the data collection period to Friday, September 21, 2012.

Thank you in advance for your time and support of my research!

Sincerely,
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ETSU Educational Leadership Policy Analysis Doctoral Candidate
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Dear Higher Education Administrator,

This is just a reminder that the ETSU research study “Support for Higher Education: Perceptions of Selected University Administrators and Legislators in Tennessee” will be closed this Friday, September 21, 2012 at 11:59pm.

If you have not taken part in this study, I strongly encourage you to do so. In order to understand factors affecting funding in our state, greater participation is needed. Results from this survey may be helpful in the evaluation of the outcome-based funding formula for public higher education.

I sincerely hope you will take this opportunity to share your expertise in this area. Your responses have the potential to influence future generations. https://www.surveymonkey.com/s/etsu-elpa-research-yowell

Thank you for your time and consideration!

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APPENDIX I

Word Document Version of the Online Survey

Notification of Informed Consent

PRINCIPAL INVESTIGATOR: Deidre L. Yowell


OBJECTIVE: This is a quantitative study examining the perceptions of selected university administrators and legislators concerning levels of support for Tennessee higher education. The purpose of the study is to gain a greater understanding among the various constituents as to the needs and restraints facing higher education funding. Tennessee legislators, university administrators, and director/chancellors of the higher education boards (i.e. Tennessee Board of Regents, Tennessee Higher Education Commission, and the University of Tennessee System) will be asked to participate in this study.

DURATION: The online survey will take approximately 15 minutes to complete. The survey will only be active for 7 days in order to collect the data in a timely manner.

TYPES OF QUESTIONS: Participants will be asked demographic questions and ones focusing on individual perceptions of support for public higher education. There are also open-ended questions which allow for additional insight to the study.

POSSIBLE BENEFITS: There will be no direct benefits to research participants. However, knowledge gained from the study may contribute to understanding factors affecting funding for Tennessee public higher education. Results from this survey may be helpful in the evaluation of the outcome-based funding formula for public higher education. This study may also serve as a snapshot of the position of higher education in 2012 for future comparisons to be made.

VOLUNTARY PARTICIPATION: Submission of the following survey will indicate the research participant's consent to participate in this study. Participation in this research experiment is voluntary. Participants may quit the survey at any time. If you quit or refuse to participate, the benefits or treatment to which you are otherwise entitled will not be affected.

CONFIDENTIALITY: Please be assured that individual responses will be held in the strictest confidence. No identifiable information will be retained for this study. Due to the sensitive nature of the results, the use of a survey instrument that does not specifically identify the participants will be applied. If the results of this study were to be written for publication, no identifying information will be used.

CONTACT FOR QUESTIONS: For research-related questions or problems, you may contact me, the principal investigator, at 423-967-5034 or deidre_yowell@yahoo.com. I am working on this project under the supervision of Dr. Donald W. Good, faculty adviser. Dr. Good may be reached at 423-439-7621 or gooddw@etsu.edu. Also, the chairperson of the Institutional Review Board at East Tennessee State University
is available at 423-439-6054 if you have questions about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you cannot reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002.

I would greatly appreciate your participation in this survey. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. During the survey, respondents will be able to update their responses until the survey is finished or until they have exited the survey. Once the survey has been submitted (i.e. the respondent selects "Done"), the respondent will not be able to re-enter the survey. I sincerely hope that you will be able to participate in this study.

Best regards,
Deidre L. Yowell
ETSU Educational Leadership Policy Analysis, Doctoral Candidate

1. I hold a leadership position in:
   - [ ] Higher Education
   - [ ] Tennessee General Assembly

2. Please indicate length of service in current leadership position (in years).

3. For Tennessee citizens, what is the economic benefit of higher educational attainment? Please rate each row using the five point scale: 1 most important, 2 very important, 3 moderately important, 4 slightly important, 5 least important.

   **Higher paying jobs**

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<td>moderately important</td>
<td>slightly important</td>
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   **Economic development**

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<tr>
<td>most important</td>
<td>very important</td>
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</tbody>
</table>

   **Better educated workforce**

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</thead>
<tbody>
<tr>
<td>most important</td>
<td>very important</td>
<td>moderately important</td>
<td>slightly important</td>
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   **Lower unemployment**

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<tbody>
<tr>
<td>most important</td>
<td>very important</td>
<td>moderately important</td>
<td>slightly important</td>
<td>least important</td>
<td></td>
</tr>
</tbody>
</table>
4. Please select your agreement with each of the following statements.

**Any increases in tuition should be drawn from increases in student financial aid provided.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Complete College Tennessee Act has helped the state legislature measure accountability of public higher education.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Complete College Tennessee Act has helped improve the decision making process for funding public higher education.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Public colleges and universities should utilize reserves to avoid increases in tuition during weak economic times.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Tennessee should allocate money for higher education based on past expenditures.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Tennessee should allocate money for higher education based on institutional mission.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Tennessee should allocate money for higher education based on capital investment requests.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Tennessee should allocate money for higher education based on the recommendation of the Tennessee Higher Education Commission.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**Tennessee should allocate money for higher education based on the traditional base-plus system.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

**One-time and targeted grants are an effective way to fund capital investments for higher education.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>
Tennessee’s General Assembly should tie part of an institution’s appropriations to the graduation rates of traditionally underrepresented groups.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Student tuition and fees should not exceed the level of financial support higher education institutions provided by state appropriations.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Increases in tuition should be directly related to the state of the economy.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Increases in tuition are associated with poor management of higher education costs, not changes in state appropriations.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Increases in tuition are associated with decrease in state appropriations, not management of higher education leaders.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Costs of Tennessee higher education should be largely paid for by the students.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Students fees should be tied to the particular program of study (some programs incur higher costs).

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

5. With regard to the state budget, please rank the following priorities in order of importance, with 1 representing the highest of importance and 11 representing the lowest. Numbers should not be used more than once.

- Basic Education Program
- Capital Projects
- Children’s Services
- Corrections
- Health
- Higher Education
- Human Services
- K-12 Education
- Mental Health and Mental Retardation (MHMR) Services
- Tennessee Care Program
- Transportation

Comment (optional)
6. Do you perceive there to be a problem of access to higher education in the state of Tennessee?
   ☐ Yes  ☐ No

7. In addressing the problem of access to higher education, please rate the following actions using the five point scale: 1 most influential, 2 very influential, 3 moderately influential, 4 slightly influential, 5 least influential.

<table>
<thead>
<tr>
<th>Action</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Develop a fast track graduation plan for universities</td>
<td></td>
<td></td>
<td>moderately</td>
<td>slightly</td>
<td>least influential</td>
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<tr>
<td>Develop working relationships with high schools throughout the state of Tennessee</td>
<td></td>
<td></td>
<td>moderately</td>
<td>slightly</td>
<td>least influential</td>
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<tr>
<td>Expand distance education</td>
<td></td>
<td></td>
<td>moderately</td>
<td>slightly</td>
<td>least influential</td>
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<tr>
<td>Lower tuition</td>
<td></td>
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<td>moderately</td>
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<td>least influential</td>
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<tr>
<td>Lower admission standards</td>
<td></td>
<td></td>
<td>moderately</td>
<td>slightly</td>
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<tr>
<td>Strengthen community colleges and technical centers</td>
<td></td>
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<td>moderately</td>
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<tr>
<td>Raise financial aid for students</td>
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<td>moderately</td>
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<tr>
<td>Improve technology</td>
<td></td>
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<td>moderately</td>
<td>slightly</td>
<td>least influential</td>
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</tbody>
</table>
8. What is the highest level of education you have completed?
   □ High School/G.E.D.
   □ Technical/Trade School
   □ 2-Year College Degree (Associates)
   □ 4-Year Undergraduate Degree (BA, BS)
   □ Master's Degree
   □ Doctoral Degree
   □ Professional Degree (JD, MD)

9. What is the highest level of education your parents completed?
   □ Less than High School
   □ High School/G.E.D.
   □ Some Postsecondary
   □ 2-Year College Degree (Associates)
   □ 4-Year Undergraduate Degree (BA, BS)
   □ Master's Degree
   □ Doctoral Degree
   □ Professional Degree (JD, MD)

10. Please indicate number of immediate family members who have attended or are presently attending an institution of higher education in Tennessee.
    □ 0
    □ 1
    □ 2
    □ 3
    □ 4
    □ 5
    □ More Than 5

11. Using the five point scale, please indicate the impact of each of the following higher education issues: 1 most important, 2 very important, 3 moderately important, 4 slightly important, 5 least important.

   **Accreditation for institutions of higher education**
   
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   **Graduation rate**
   
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   **Tuition increase**
   
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### Retention rate

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### Number of citizens with a degree in higher education

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### State appropriations for higher education

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### Mission and vision statements for higher education

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### Performance indicators

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### Governance arrangements

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### Institutional alignment and programs

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<td>important</td>
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</table>

### Migration of students (students going out-of-state) for higher education

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### Non-traditional students

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**Losing faculty**

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**Poorly prepared students entering higher education system**

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**Management of institutions**

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</table>

**Additional concerns (optional):**

12. How might the concerns in the previous question be improved? Using the five point scale, please indicate effectiveness of each option: 1 most effective, 2 very effective, 3 moderately effective, 4 slightly effective, 5 least effective.

**Increase retention rate**

<table>
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<tr>
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</table>

**Increase graduation rate**

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</table>

**Raise state appropriation for higher education**

<table>
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**Change the funding formula**

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</table>

**Increase research and chairs of excellence**

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### Uniform mission statement for higher education

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<tbody>
<tr>
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<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
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</table>

### Adjust tuition fees

<table>
<thead>
<tr>
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<tbody>
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<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
<td>least effective</td>
</tr>
</tbody>
</table>

### Offer developmental courses to prepare students prior to entering higher education system

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>most effective</td>
<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
<td>least effective</td>
</tr>
</tbody>
</table>

### Reorganize governance of higher education

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
<td>least effective</td>
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</tbody>
</table>

### Improve performance indicators

<table>
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<tr>
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<th>2</th>
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<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>most effective</td>
<td>very effective</td>
<td>moderately effective</td>
<td>slightly effective</td>
<td>least effective</td>
</tr>
</tbody>
</table>

13. What is your professional background?
- [ ] Accounting
- [ ] Agriculture
- [ ] Economics
- [ ] Education
- [ ] Entrepreneur
- [ ] Finance
- [ ] Law
- [ ] Management
- [ ] Marketing
- [ ] Self-Employed
- [ ] Technology
- [ ] Other (please specify) ____________________________

14. Which district in Tennessee do you reside?
- [ ] East, Districts 1-33
- [ ] Middle, Districts 34-66
- [ ] West, Districts 67-99
15. The Tennessee District I represent is best described as:
   □ Urban
   □ Suburban
   □ Rural

16. What is your political party affiliation?
   □ Democrat
   □ Republican
   □ Other

17. In your opinion, what are the top three issues of funding for public higher education? (optional)

18. Has your view changed since the new funding formula has been implemented? (optional)

19. What concerns/details not addressed in this questionnaire do you have regarding funding for higher education in the state of Tennessee? (optional)
APPENDIX J

Summary of Results

Perceptions of Selected University Administrators and Legislators in Tennessee

1. I hold a leadership position in:

<table>
<thead>
<tr>
<th>Position</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Education</td>
<td>40.3%</td>
<td>27</td>
</tr>
<tr>
<td>Tennessee General Assembly</td>
<td>59.7%</td>
<td>40</td>
</tr>
</tbody>
</table>

Total answered question 67
Total skipped question 0

2. Please indicate length of service in current leadership position (in years).

<table>
<thead>
<tr>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>67</td>
</tr>
</tbody>
</table>

Total answered question 67
Total skipped question 0
3. For Tennessee citizens, what is the economic benefit of higher educational attainment? Please rate each row using the five point scale: 1 most important, 2 very important, 3 moderately important, 4 slightly important, 5 least important.

<table>
<thead>
<tr>
<th></th>
<th>1 most important</th>
<th>2 very important</th>
<th>3 moderately important</th>
<th>4 slightly important</th>
<th>5 least important</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher paying jobs</td>
<td>38.9% (26)</td>
<td>52.2% (35)</td>
<td>9.0% (6)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Economic development</td>
<td>49.3% (33)</td>
<td>48.3% (31)</td>
<td>4.5% (3)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Better educated workforce</td>
<td>65.7% (44)</td>
<td>28.4% (19)</td>
<td>4.5% (3)</td>
<td>1.5% (1)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Lower unemployment</td>
<td>31.3% (21)</td>
<td>46.3% (31)</td>
<td>14.9% (10)</td>
<td>6.0% (4)</td>
<td>1.5% (1)</td>
<td>67</td>
</tr>
<tr>
<td>Increase in state sales tax revenue</td>
<td>16.4% (11)</td>
<td>25.4% (17)</td>
<td>41.8% (28)</td>
<td>9.0% (6)</td>
<td>7.5% (5)</td>
<td>67</td>
</tr>
</tbody>
</table>

Comment (optional)

- answered question: 67
- skipped question: 0
4. Please select your agreement with each of the following statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>strongly agree</th>
<th>agree</th>
<th>neutral</th>
<th>disagree</th>
<th>strongly disagree</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any increases in tuition should be drawn from increases in student financial aid provided.</td>
<td>0.0% (0)</td>
<td>13.4% (9)</td>
<td>34.3% (23)</td>
<td>43.3% (29)</td>
<td>6.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Complete College Tennessee Act has helped the state legislature measure accountability of public higher education.</td>
<td>13.4% (9)</td>
<td>58.2% (39)</td>
<td>22.4% (15)</td>
<td>4.5% (3)</td>
<td>1.5% (1)</td>
<td>67</td>
</tr>
<tr>
<td>Complete College Tennessee Act has helped improve the decision making process for funding public higher education.</td>
<td>6.0% (4)</td>
<td>59.7% (40)</td>
<td>19.4% (13)</td>
<td>10.4% (7)</td>
<td>4.5% (3)</td>
<td>67</td>
</tr>
<tr>
<td>Public colleges and universities should utilize reserves to avoid increases in tuition during weak economic times.</td>
<td>10.4% (7)</td>
<td>29.9% (20)</td>
<td>13.4% (9)</td>
<td>28.4% (19)</td>
<td>17.9% (12)</td>
<td>67</td>
</tr>
<tr>
<td>Tennessee should allocate money for higher education based on past expenditures.</td>
<td>6.0% (4)</td>
<td>14.9% (10)</td>
<td>19.4% (13)</td>
<td>46.3% (31)</td>
<td>13.4% (9)</td>
<td>67</td>
</tr>
<tr>
<td>Tennessee should allocate money for higher education based on institutional mission.</td>
<td>7.5% (5)</td>
<td>59.7% (40)</td>
<td>22.4% (15)</td>
<td>9.0% (6)</td>
<td>1.5% (1)</td>
<td>67</td>
</tr>
<tr>
<td>Tennessee should allocate money for higher education based on capital investment requests.</td>
<td>1.5% (1)</td>
<td>38.8% (26)</td>
<td>23.9% (16)</td>
<td>31.3% (21)</td>
<td>4.5% (3)</td>
<td>67</td>
</tr>
<tr>
<td>Tennessee should allocate money for higher education based on the recommendation of the Tennessee Higher Education Commission.</td>
<td>6.0% (4)</td>
<td>29.9% (20)</td>
<td>31.3% (21)</td>
<td>22.4% (15)</td>
<td>10.4% (7)</td>
<td>67</td>
</tr>
<tr>
<td>Tennessee should allocate money for higher education based on the traditional base-plus system.</td>
<td>3.0% (2)</td>
<td>18.4% (11)</td>
<td>40.3% (27)</td>
<td>35.8% (24)</td>
<td>4.5% (3)</td>
<td>67</td>
</tr>
<tr>
<td>One-time and targeted grants are an effective way to fund capital investments for higher education.</td>
<td>19.4% (13)</td>
<td>53.7% (36)</td>
<td>10.4% (7)</td>
<td>16.4% (11)</td>
<td>0.0% (0)</td>
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<tr>
<td>Tennessee's General Assembly</td>
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<td></td>
<td></td>
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<tr>
<td>Suggestion</td>
<td>Agree (%)</td>
<td>Strongly Agree (%)</td>
<td>Neutral (%)</td>
<td>Disagree (%)</td>
<td>Strongly Disagree (%)</td>
<td>Responded</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------</td>
<td>--------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Should tie part of an institution’s appropriations to graduation rates of traditionally underrepresented groups.</td>
<td>1.5% (1)</td>
<td>43.3% (20)</td>
<td>17.0% (12)</td>
<td>34.3% (23)</td>
<td>0.0% (2)</td>
<td>67</td>
</tr>
<tr>
<td>Student tuition and fees should not exceed the level of financial support provided by higher education institutions.</td>
<td>4.5% (3)</td>
<td>22.4% (15)</td>
<td>19.4% (13)</td>
<td>43.3% (29)</td>
<td>10.4% (7)</td>
<td>67</td>
</tr>
<tr>
<td>Increases in tuition should be directly related to the state of the economy.</td>
<td>4.5% (3)</td>
<td>17.0% (12)</td>
<td>10.4% (7)</td>
<td>58.2% (39)</td>
<td>0.0% (6)</td>
<td>67</td>
</tr>
<tr>
<td>Increases in tuition are associated with poor management of higher education costs, not charges in state appropriations.</td>
<td>7.5% (5)</td>
<td>22.4% (15)</td>
<td>4.5% (3)</td>
<td>28.4% (19)</td>
<td>37.3% (25)</td>
<td>67</td>
</tr>
<tr>
<td>Increases in tuition are associated with decrease in state appropriations, not management of higher education costs.</td>
<td>16.4% (11)</td>
<td>43.3% (29)</td>
<td>6.0% (4)</td>
<td>34.3% (23)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Costs of Tennessee higher education should be largely paid for by the students.</td>
<td>0.0% (6)</td>
<td>32.8% (22)</td>
<td>20.0% (14)</td>
<td>31.3% (21)</td>
<td>6.0% (4)</td>
<td>67</td>
</tr>
<tr>
<td>Students fees should be tied to the particular program of study (some programs incur higher costs).</td>
<td>13.4% (9)</td>
<td>62.7% (42)</td>
<td>7.5% (5)</td>
<td>10.4% (7)</td>
<td>6.0% (4)</td>
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</table>

answered question 67

skipped question 0
5. With regard to the state budget, please rank the following priorities in order of importance, representing the highest of importance and 11 representing the lowest. Numbers should not be greater than once.

<table>
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<th>Priority</th>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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</thead>
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<tr>
<td>Basic Education Program</td>
<td>34.3%</td>
<td>9.0%</td>
<td>7.5%</td>
<td>11.9%</td>
<td>10.4%</td>
<td>1.5%</td>
<td>10.4%</td>
<td>3.0%</td>
<td>4.5%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Capital Projects</td>
<td>0.0%</td>
<td>3.0%</td>
<td>4.5%</td>
<td>0.0%</td>
<td>10.4%</td>
<td>10.4%</td>
<td>7.5%</td>
<td>10.4%</td>
<td>6.0%</td>
<td>28.4%</td>
</tr>
<tr>
<td>Children's Services</td>
<td>1.5%</td>
<td>9.0%</td>
<td>10.4%</td>
<td>17.9%</td>
<td>9.0%</td>
<td>20.9%</td>
<td>14.9%</td>
<td>8.0%</td>
<td>9.0%</td>
<td>0.0%</td>
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<tr>
<td>Corrections</td>
<td>0.0%</td>
<td>6.0%</td>
<td>11.9%</td>
<td>7.5%</td>
<td>10.4%</td>
<td>0.0%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>11.0%</td>
<td>22.4%</td>
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<td>Health</td>
<td>9.0%</td>
<td>11.9%</td>
<td>13.4%</td>
<td>17.9%</td>
<td>4.5%</td>
<td>11.9%</td>
<td>13.4%</td>
<td>11.9%</td>
<td>3.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>3.0%</td>
<td>19.4%</td>
<td>19.4%</td>
<td>14.9%</td>
<td>9.0%</td>
<td>13.4%</td>
<td>6.0%</td>
<td>9.0%</td>
<td>6.0%</td>
<td>0.0%</td>
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<tr>
<td>Human Services</td>
<td>1.5%</td>
<td>1.5%</td>
<td>7.5%</td>
<td>9.0%</td>
<td>9.0%</td>
<td>13.4%</td>
<td>13.4%</td>
<td>14.9%</td>
<td>10.4%</td>
<td>10.4%</td>
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<tr>
<td>K-12 Education</td>
<td>41.8%</td>
<td>29.9%</td>
<td>9.0%</td>
<td>6.0%</td>
<td>9.0%</td>
<td>1.5%</td>
<td>0.0%</td>
<td>3.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Mental Health and Mental Retardation (MHRM) Services</td>
<td>1.5%</td>
<td>1.5%</td>
<td>9.0%</td>
<td>6.0%</td>
<td>16.4%</td>
<td>11.9%</td>
<td>11.9%</td>
<td>16.4%</td>
<td>10.4%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Tennessee Care Program</td>
<td>4.5%</td>
<td>1.5%</td>
<td>4.5%</td>
<td>1.5%</td>
<td>8.0%</td>
<td>13.4%</td>
<td>17.9%</td>
<td>14.9%</td>
<td>17.9%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Transportation</td>
<td>3.0%</td>
<td>7.5%</td>
<td>3.0%</td>
<td>7.5%</td>
<td>8.0%</td>
<td>6.0%</td>
<td>3.0%</td>
<td>10.4%</td>
<td>16.4%</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

Comment: 

Answered: 

Skipped: 

5 of 14
6. Do you perceive there to be a problem of access to higher education in the state of Tennessee?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>31.3%</td>
<td>68.7%</td>
</tr>
<tr>
<td>21</td>
<td>46</td>
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</tbody>
</table>

7. In addressing the problem of access to higher education, please rate the following actions using the five point scale: 1 most influential, 2 very influential, 3 moderately influential, 4 slightly influential, 5 least influential.

<table>
<thead>
<tr>
<th>Action</th>
<th>1 most influential</th>
<th>2 very influential</th>
<th>3 moderately influential</th>
<th>4 slightly influential</th>
<th>5 least influential</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a fast track graduation plan for universities</td>
<td>17.9% (12)</td>
<td>23.9% (16)</td>
<td>37.3% (25)</td>
<td>11.9% (8)</td>
<td>6.0% (6)</td>
<td>67</td>
</tr>
<tr>
<td>Develop working relationships with high schools throughout the state of Tennessee</td>
<td>26.9% (18)</td>
<td>50.7% (34)</td>
<td>13.4% (9)</td>
<td>7.5% (5)</td>
<td>1.5% (1)</td>
<td>67</td>
</tr>
<tr>
<td>Expand distance education</td>
<td>7.5% (5)</td>
<td>41.8% (28)</td>
<td>31.3% (21)</td>
<td>13.4% (9)</td>
<td>6.0% (4)</td>
<td>67</td>
</tr>
<tr>
<td>Lower tuition</td>
<td>14.3% (10)</td>
<td>12.4% (13)</td>
<td>38.8% (26)</td>
<td>11.9% (8)</td>
<td>14.9% (10)</td>
<td>67</td>
</tr>
<tr>
<td>Lower admission standards</td>
<td>0.0% (0)</td>
<td>3.0% (2)</td>
<td>6.0% (4)</td>
<td>20.0% (14)</td>
<td>76.1% (47)</td>
<td>67</td>
</tr>
<tr>
<td>Strengthen community colleges and technical centers</td>
<td>28.4% (19)</td>
<td>38.8% (26)</td>
<td>22.4% (15)</td>
<td>7.5% (5)</td>
<td>3.0% (2)</td>
<td>67</td>
</tr>
<tr>
<td>Raise financial aid for students</td>
<td>17.9% (12)</td>
<td>32.8% (22)</td>
<td>19.4% (13)</td>
<td>6.0% (4)</td>
<td>23.9% (18)</td>
<td>67</td>
</tr>
<tr>
<td>Improve technology</td>
<td>20.9% (14)</td>
<td>28.4% (19)</td>
<td>31.3% (21)</td>
<td>13.4% (9)</td>
<td>6.0% (4)</td>
<td>67</td>
</tr>
</tbody>
</table>

answered question 67
skipped question 0
### 8. What is the highest level of education you have completed?

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School/G.E.D.</td>
<td>1.5%</td>
<td>1</td>
</tr>
<tr>
<td>Technical/Trade School</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>2-year College Degree (Associates)</td>
<td>3.0%</td>
<td>2</td>
</tr>
<tr>
<td>4-year Undergraduate Degree (BA, BS)</td>
<td>31.3%</td>
<td>21</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>22.4%</td>
<td>15</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>25.4%</td>
<td>17</td>
</tr>
<tr>
<td>Professional Degree (JD, MD)</td>
<td>18.4%</td>
<td>11</td>
</tr>
</tbody>
</table>

Answered question: 67

Skipped question: 0
<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than High School</td>
<td>11.9%</td>
<td>8</td>
</tr>
<tr>
<td>High School/G.E.D.</td>
<td>31.3%</td>
<td>21</td>
</tr>
<tr>
<td>Some Postsecondary</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>2-year College Degree (Associates)</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>4-year Undergraduate Degree (BA, BS)</td>
<td>29.9%</td>
<td>20</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>7.5%</td>
<td>5</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>3.0%</td>
<td>2</td>
</tr>
<tr>
<td>Professional Degree (JD, MD)</td>
<td>10.4%</td>
<td>7</td>
</tr>
</tbody>
</table>

answered question 67
skipped question 0
10. Please indicate number of immediate family members who have attended or are presently attending an institution of higher education in Tennessee.

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11.9%</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>35.8%</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>16.4%</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>11.9%</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>More Than 5</td>
<td>11.9%</td>
<td>8</td>
</tr>
</tbody>
</table>

answered question 67
skipped question 0
11. Using the five point scale, please indicate the impact of each of the following higher education issues: 1 most important, 2 very important, 3 moderately important, 4 slightly important, 5 least important.

<table>
<thead>
<tr>
<th>Issue</th>
<th>1 most important</th>
<th>2 very important</th>
<th>3 moderately important</th>
<th>4 slightly important</th>
<th>5 least important</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation for institutions of higher education</td>
<td>36.9% (24)</td>
<td>38.8% (26)</td>
<td>19.4% (13)</td>
<td>6.0% (4)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Graduation rate</td>
<td>43.3% (26)</td>
<td>47.8% (32)</td>
<td>9.0% (6)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Tuition increase</td>
<td>10.4% (7)</td>
<td>28.9% (16)</td>
<td>49.3% (33)</td>
<td>8.0% (4)</td>
<td>7.5% (5)</td>
<td>67</td>
</tr>
<tr>
<td>Retention rate</td>
<td>29.9% (20)</td>
<td>53.7% (36)</td>
<td>11.9% (8)</td>
<td>4.5% (3)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Number of citizens with a degree in higher education</td>
<td>22.4% (15)</td>
<td>62.7% (42)</td>
<td>9.0% (6)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>State appropriations for higher education</td>
<td>25.4% (17)</td>
<td>43.3% (29)</td>
<td>22.4% (15)</td>
<td>9.0% (6)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Mission and vision statements for higher education</td>
<td>13.4% (9)</td>
<td>22.4% (15)</td>
<td>37.3% (23)</td>
<td>20.8% (14)</td>
<td>0.0% (4)</td>
<td>67</td>
</tr>
<tr>
<td>Performance indicators</td>
<td>19.4% (13)</td>
<td>56.7% (38)</td>
<td>19.4% (13)</td>
<td>4.5% (3)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Governance arrangements</td>
<td>10.4% (7)</td>
<td>25.4% (17)</td>
<td>37.3% (25)</td>
<td>29.0% (18)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Institutional alignment and programs</td>
<td>16.4% (11)</td>
<td>46.3% (31)</td>
<td>29.9% (20)</td>
<td>7.5% (5)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Migration of students (students going out-of-state) for higher education</td>
<td>7.5% (5)</td>
<td>29.9% (18)</td>
<td>37.3% (25)</td>
<td>20.0% (14)</td>
<td>7.5% (5)</td>
<td>67</td>
</tr>
<tr>
<td>Non-traditional students</td>
<td>11.9% (8)</td>
<td>37.3% (25)</td>
<td>37.3% (25)</td>
<td>13.4% (9)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Losing faculty</td>
<td>4.5% (3)</td>
<td>40.3% (27)</td>
<td>32.8% (22)</td>
<td>16.4% (11)</td>
<td>6.0% (4)</td>
<td>67</td>
</tr>
<tr>
<td>Poorly prepared students entering higher education system</td>
<td>62.7% (42)</td>
<td>29.0% (16)</td>
<td>11.0% (8)</td>
<td>1.5% (1)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Management of institutions</td>
<td>32.5% (22)</td>
<td>47.8% (32)</td>
<td>16.4% (11)</td>
<td>3.0% (2)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
</tbody>
</table>

Additional concerns (optional) 6
12. How might the concerns in the previous question be improved? Using the five point scale, please indicate effectiveness of each option: 1 most effective, 2 very effective, 3 moderately effective, 4 slightly effective, 5 least effective.

<table>
<thead>
<tr>
<th>Option</th>
<th>1 most effective</th>
<th>2 very effective</th>
<th>3 moderately effective</th>
<th>4 slightly effective</th>
<th>5 least effective</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase retention rate</td>
<td>50.7% (34)</td>
<td>28.4% (19)</td>
<td>20.9% (14)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Increase graduation rate</td>
<td>46.3% (31)</td>
<td>41.8% (28)</td>
<td>11.9% (8)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>67</td>
</tr>
<tr>
<td>Raise state appropriation for higher education</td>
<td>26.9% (18)</td>
<td>26.9% (18)</td>
<td>22.4% (15)</td>
<td>19.4% (13)</td>
<td>4.5% (3)</td>
<td>67</td>
</tr>
<tr>
<td>Change the funding formula</td>
<td>4.5% (3)</td>
<td>46.3% (31)</td>
<td>28.4% (19)</td>
<td>14.0% (10)</td>
<td>6.0% (4)</td>
<td>67</td>
</tr>
<tr>
<td>Increase research and chairs of excellence</td>
<td>9.0% (6)</td>
<td>23.9% (16)</td>
<td>29.9% (20)</td>
<td>23.9% (16)</td>
<td>13.4% (9)</td>
<td>67</td>
</tr>
<tr>
<td>Uniform mission statement for higher education</td>
<td>9.0% (6)</td>
<td>10.4% (7)</td>
<td>31.3% (21)</td>
<td>23.9% (16)</td>
<td>25.4% (17)</td>
<td>67</td>
</tr>
<tr>
<td>Adjust tuition fees</td>
<td>10.4% (7)</td>
<td>28.4% (19)</td>
<td>31.3% (21)</td>
<td>20.0% (14)</td>
<td>0.0% (8)</td>
<td>67</td>
</tr>
<tr>
<td>Offer developmental courses to prepare students prior to entering higher education</td>
<td>25.4% (17)</td>
<td>37.3% (25)</td>
<td>13.4% (9)</td>
<td>14.0% (10)</td>
<td>0.0% (6)</td>
<td>67</td>
</tr>
<tr>
<td>Reorganize governance of higher education</td>
<td>29.9% (20)</td>
<td>18.4% (11)</td>
<td>37.3% (25)</td>
<td>9.0% (6)</td>
<td>7.5% (5)</td>
<td>67</td>
</tr>
<tr>
<td>Improve performance indicators</td>
<td>25.4% (17)</td>
<td>44.8% (30)</td>
<td>22.4% (15)</td>
<td>6.0% (4)</td>
<td>1.5% (1)</td>
<td>67</td>
</tr>
</tbody>
</table>
13. What is your professional background?

<table>
<thead>
<tr>
<th>Professional Background</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>11.0%</td>
<td>8</td>
</tr>
<tr>
<td>Agriculture</td>
<td>3.0%</td>
<td>2</td>
</tr>
<tr>
<td>Economics</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td>31.3%</td>
<td>21</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>Finance</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>Law</td>
<td>13.4%</td>
<td>9</td>
</tr>
<tr>
<td>Management</td>
<td>13.4%</td>
<td>9</td>
</tr>
<tr>
<td>Marketing</td>
<td>3.0%</td>
<td>2</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>6.0%</td>
<td>4</td>
</tr>
<tr>
<td>Technology</td>
<td>1.5%</td>
<td>1</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>4.5%</td>
<td>3</td>
</tr>
</tbody>
</table>

answered question 67
skipped question 0

14. Which district in Tennessee do you reside?

<table>
<thead>
<tr>
<th>District</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>East, Districts 1-33</td>
<td>43.3%</td>
<td>29</td>
</tr>
<tr>
<td>Middle, Districts 34-66</td>
<td>34.3%</td>
<td>23</td>
</tr>
<tr>
<td>West, Districts 67-99</td>
<td>22.4%</td>
<td>15</td>
</tr>
</tbody>
</table>

answered question 67
skipped question 0
15. The Tennessee District I represent is best described as:

<table>
<thead>
<tr>
<th></th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>31.3%</td>
<td>21</td>
</tr>
<tr>
<td>Suburban</td>
<td>46.3%</td>
<td>31</td>
</tr>
<tr>
<td>Rural</td>
<td>22.4%</td>
<td>15</td>
</tr>
</tbody>
</table>

answered question: 67
skipped question: 0

16. What is your political party affiliation?

<table>
<thead>
<tr>
<th></th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democrat</td>
<td>32.1%</td>
<td>22</td>
</tr>
<tr>
<td>Republican</td>
<td>56.7%</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>10.4%</td>
<td>7</td>
</tr>
</tbody>
</table>

answered question: 67
skipped question: 0

17. In your opinion, what are the top three issues of funding for public higher education?

<table>
<thead>
<tr>
<th></th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

answered question: 46
skipped question: 21
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Has your view changed since the new funding formula has been implemented?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>46</td>
</tr>
<tr>
<td>answered question</td>
<td>46</td>
</tr>
<tr>
<td>skipped question</td>
<td>21</td>
</tr>
<tr>
<td>19. What concerns/details not addressed in this questionnaire do you have regarding funding for higher education in the state of Tennessee?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36</td>
</tr>
<tr>
<td>answered question</td>
<td>36</td>
</tr>
<tr>
<td>skipped question</td>
<td>31</td>
</tr>
</tbody>
</table>
VITA
DEIDRE L. YOWELL

Personal Data: Date of Birth: September 25, 1985
Place of Birth: Johnson City, Tennessee

Education: Public Schools, Bristol, Tennessee
King College, Bristol, Tennessee; Dual Enrollment, 2002-2003
East Tennessee State University, Johnson City, Tennessee; Marketing Management, B.B.A., 2007
East Tennessee State University, Johnson City, Tennessee; M.B.A., 2009
East Tennessee State University, Johnson City, Tennessee; Educational Leadership and Policy Analysis, Ed.D., 2012

Professional Experience: Graduate Assistant, East Tennessee State University, University Advancement, 2007-2012