

K-12 And Beyond: Tennessee's Businesses Evaluate The State's Educational System

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ABSTRACT

A survey of Tennessee's business leaders was conducted to determine their perceptions of the state's educational system. Respondents indicated that lower grades were performing average or above, other grades and institutions must improve.

INTRODUCTION

Extant research focusing on issues of concern at the national and state levels has found that one of the major problems facing the United States involves the public education system and the quality of students produced. In question, is the efficacy of all phases of education, from pre-kindergarten through college, in achieving appropriate educational goals and imparting necessary skills for the future? In response to this question, the purpose of this study was to explore the opinions of business leaders in Tennessee concerning the performance of the state's public educational system (i.e., pre-K through college) and identify future directions (i.e., academic emphases) for all levels of the state's public education system.

EDUCATION IN TENNESSEE

Research findings indicate that the public continues to see education as a national priority, an important investment for the future, and a major issue in upcoming elections (Lau 2004). At the regional level, and in the South specifically, a report by Greene, Guillory, Lipsitz, and Rubin (2004) notes that if public education continues on its present course, many young people will be left behind, leaving the South with too few competent workers, a less informed citizenry, more alienation, and increased poverty.

Like several other states, Tennessee has taken steps toward providing funding to expand state-funded programs for early childhood education. However, in order to close the achievement gap that exists between advantaged and disadvantaged students, and to increase the capabilities of all children to successfully compete for future jobs in the global economy, a more cohesive national plan recognizing the role of early childhood education is required (Christina and Nicholson-Goodman 2005).

While Tennessee's funding for pre-kindergarten and kindergarten students is exemplary, Tennessee's performance at the elementary and middle school levels is more questionable. The 2002 National Assessment of Educational Progress (NAEP) included Tennessee's public-school students at grades 4 and 8. In that study, reading was assessed for four different years at the state level (at grade 4 in 1992 and 1994, and at both grades 4 and 8 in 1998 and 2002). Tennessee participated in all of these assessments at grades 4 and 8 and met the criteria for reporting public-school results for both grades. Key findings for grade 4 indicated the average scale score for students in Tennessee was 214, which was not found to differ significantly from that of 1992 (212) nor 1998 (212). Key findings for grade 8 included an average scale score of 260 for students in Tennessee, which was not significantly different from that in 1998 (258). In short, very little improvement was recorded over a ten year period (Jerry and Lutkus 2003).

At the high school level, recent reports from national education organizations are mostly in agreement about the poor state of American high schools. Moreover, they cite the need for more rigor and student support in high school education (Perkins-Gough 2005). Further, two new studies have highlighted the shortcomings of high schools. The national studies, conducted by Public Agenda and by Achieve Inc., point to difficulties faced by many students after high school. They suggest the need for improved academic preparation and guidance at the high school level (Viadero 2005)

With respect to higher education in Tennessee, the master plan for public higher education that has been developed outlines the goals and general objectives that respond to the state's postsecondary education needs. The plan's goals and objectives include: (1) elevate the educational attainment levels of Tennesseans; (2) clarify all institutional missions and present programs, services, and resources aligned to support the mission; (3) strive to be among the national leaders in the development and assessment of quality instructional programs based on student outcomes; (4) strive to be recognized as a national leader for quality research and public service; (5) strive for a sustained level of funding that will allow Tennessee citizens to reach their educational objectives (6) assure that public higher education will play a major role in the economic development of Tennessee; (7) implement an efficient, high quality information system; (8) offer relevant educational programs in partnership with business, government, and other educational agencies to address economic, intellectual, and social problems; and (9) communicate the values, strengths, and needs of higher education to the public and the branches of state government (THEC 2000).

RESEARCH METHODOLOGY

In order to gain a better understanding of the business community's perception of education in the state, a survey was designed and conducted in which respondents were asked to evaluate the performance of Tennessee's educational system at all levels and to identify the level of emphasis which should be directed toward several areas of study in the future. While respondents typically were corporate executives or administrators and may not be academically qualified to judge the operational aspects of the state's educational system, they do have the unique opportunity to judge the product of the system, as it relates to their particular needs. Data compiled from respondents' responses reflect the opinions of experienced business leaders, which are of great significance, as their companies ultimately provide jobs for thousands of Tennessee residents.

Initially, respondents were asked to rate the performance of Tennessee's educational system in preparing students for further education and/or employment. Respondents rated each educational level on a five-point scale, ranging from far below average to far above average. Section two of the survey asked respondents to indicate the extent to which several basic subject areas taught in grades 1-12 should be emphasized in the future. In section three of the survey, respondents assessed the level of emphasis which they felt the state's junior colleges and vocational-technical schools should place on several general and specific skill areas. The final section of the survey focused on the state's colleges and universities. Respondents were asked to evaluate several basic areas of study and suggest changes which could be made in higher education to improve it and/or its degree programs.

FINDINGS

Table 1 summarizes the responses according to the rating given the various levels of education. More of the respondents gave a lower rating to junior high and high schools than to any other level of the educational system. Approximately 55-65% of the respondents rated the performance of these schools as below or far below average. It is interesting to note that while a limited number of respondents did rate the performance of junior high and high schools above average (i.e., less than 2%), none of the respondents rated the performance of grades 7-12 far above average.

In evaluating the performance of the pre-kindergarten, kindergarten, and primary (grades 1-3) and secondary (grades 4-6) levels, the executives provided ratings of average and above average (65-70%). Pre-kindergarten and kindergarten received the highest ratings of any level (i.e., approximately 30% above or far above average).

The state's vocational-technical schools, junior colleges, and colleges and universities received generally average ratings. However, while junior colleges and vocational-technical schools were rated as average by

approximately half of the executives, they also received above average ratings by a third of respondents. In contrast, Tennessee’s junior colleges and state universities were rated as average by over half of the respondents, but having room for improvement as indicated by almost 30% of the respondents who rated these programs below average. Only 1.6% of respondents perceived these institutions as being far above average.

With respect to future curriculum needs for grades 1-12, more than 80 percent of respondents indicated that they would like to see greater or much greater emphasis placed on English, Math, and Science (Table 2). None of the respondents suggested that less emphasis be placed on these three subject areas; however, more than half of the executives recommended that the emphasis on social studies should remain about the same.

Table 1
Respondents’ Ratings of Tennessee’s Educational System

Educational Level	Far Below Average	Below Average	Average	Above Average	Far Above Average
Preschool-Kindergarten	8.0	16.1	43.1	22.8	10.0
Primary (Grades 1-3)	6.7	15.8	46.4	22.2	8.9
Secondary (Grades 4-6)	6.7	24.5	54.5	14.3	---
Junior High (Grades 7-9)	19.0	35.0	44.9	1.1	---
High School(Grades 10-12)	19.7	45.2	33.7	1.4	---
Vocational Technical Schools	4.4	13.8	48.8	25.9	7.1
Junior Colleges	12.5	16.0	56.9	13.0	1.6
Colleges-Universities	12.5	14.7	57.4	13.8	1.6

Table 2
Emphasis Respondents Would Place on Select Subject Areas in Grades 1-12

Subject Areas	Much Less Emphasis	Less Emphasis	About the Same Emphasis	Greater Emphasis	Much Greater Emphasis
English-Grammar	---	---	11.8	49.7	38.5
Math	---	---	3.8	26.9	69.3
Science	---	---	16.4	34.5	49.1
Social Studies	2.7	21.4	48.3	16.5	11.1

Table 3
Emphasis Respondents Would Place on General Skill Areas at the VT/JC Level

General Skill Areas	Much Less Emphasis	Less Emphasis	About the Same Emphasis	Greater Emphasis	Much Greater Emphasis
Technical Skills	---	0.8	19.8	35.0	44.4
Communications Skills	---	---	13.4	39.0	47.6
Interpersonal Skills	3.8	6.2	49.6	24.9	15.5
Managerial Skills	4.8	8.4	45.4	36.0	5.4

At the Junior College level, respondents recommended that greater or much greater emphasis be placed on all skill areas studied with the greatest amount of emphasis directed toward technical and communications skills. Receiving some support for increased emphasis (approximately 40%) were interpersonal and managerial skills (see Table 3). These findings are consistent with recent reports touting the upcoming shortage of technically skilled workers within the manufacturing sector (Tumulty 2005).

At a more specific level, respondents indicated that Tennessee's junior colleges and vocational-technical schools should place significantly more emphasis on the areas of electronics, computer science, data processing, robotics, electrical skills, and allied health. As shown in Table 4, a large majority of the executives recommended placing greater emphasis on these specific skill areas in the future. Other specific skill areas found to be in need of greater emphasis were in the basic trade areas of carpentry, plumbing, and refrigeration. While support was found for

increased emphasis in all specific skill areas, respondents indicated that all remaining specific skill areas should be emphasized about the same as at present.

Table 4
Emphasis Respondents Would Place on Specific Skill Areas at the VT/JC Level

Specific Skill Areas	Much Less Emphasis	Less Emphasis	About the Same Emphasis	Greater Emphasis	Much Greater Emphasis
Electronics	---	---	8.4	38.8	52.8
Metal Trades	1.0	13.7	61.1	18.0	6.2
Carpentry	1.0	3.3	58.0	24.8	12.9
Welding	2.0	4.5	53.0	36.8	3.7
Mechanics	---	3.5	59.6	28.0	8.9
Electrical	---	1.5	28.5	33.8	36.2
Robotics	---	1.0	32.6	33.6	32.8
Plumbing	1.0	3.7	44.8	32.6	17.9
Tool & Die	1.0	13.7	54.2	22.9	8.2
Design (CAD)	1.0	3.7	63.1	25.0	7.2
Refrigeration	2.0	1.0	40.3	44.6	12.1
Allied Health	---	---	22.6	34.4	43.0
Data Process	---	1.0	11.3	44.4	43.3
CompSci	---	1.0	29.6	33.4	36.0

Concerning Tennessee’s four-year colleges and universities, respondents were first asked to suggest changes which could be made in higher education to improve it and/or its degree programs and then evaluate several basic areas of study. The most frequently cited areas of improvement involved pedagogies and course offerings. The executives felt that Tennessee’s colleges and universities could improve their degree programs by employing more diverse pedagogies (e.g., internships, guest speakers, case studies, etc.) and revamping the curriculum to include more “applied” coursework. Other recommendations included hiring instructors with business experience and providing experiential training for students. Respondents suggested that future course offerings (see Table 5) focus on teaching basic skills, while being pragmatic in their approach and purpose. In addition, respondents recommended expanding course offerings, particularly in the high-tech and global areas.

Table 5
Emphasis Respondents Would Place on Basic Skill Areas at the University Level

General Skill Areas	Much Less Emphasis	Less Emphasis	About the Same Emphasis	Greater Emphasis	Much Greater Emphasis
Quantitative Skills	---	22.8	49.8	25.0	2.4
Communications Skills	---	---	13.4	39.0	47.6
Marketing Skills	3.8	6.2	29.6	34.9	25.5
Managerial Skills	4.8	8.4	35.4	36.0	15.4

CONCLUSIONS

The findings of this survey reveal that education in Tennessee has substantial room for improvement at all levels. Those responding to the survey generally indicated a desire for education to refocus on the basic subject areas, as well as on courses designed to prepare the student for tomorrow’s jobs. While these findings are not surprising, given the presence of other studies which offer similar conclusions, these findings do raise questions as to past and present actions of the state’s educational governing bodies.

With respect to specific grade levels and their respective performance, both present and future, by funding pre-kindergarten programs, educators address the "root" of many problems. Many children have not yet been exposed to oral reading and basic readiness skills that are now necessary for children entering kindergarten. When they start school and are not prepared, they start out a step behind. In many cases these children never catch up and do not achieve appropriate educational goals.

Children are not always exposed to the basic educational building blocks which include: building with blocks; imaginative play; pretend reading and writing, which are the first steps in these areas; problem solving with peers; assuming responsibilities for their actions; oral reading; and physical exercise. In pre-kindergarten these skills are introduced through play in a relaxed setting, on the child's level; making their first experience with school pleasant and successful. These children enter kindergarten functioning at a level which makes meeting educational goals much more attainable.

At the middle school level, these students must build upon the momentum being achieved in the lower grades and be challenged to continue that academic growth. This can be achieved by refocusing the curriculum on those topics that will further enhance the foundation for success in higher grades. Students, parents, and faculty can and should work together to enact such an initiative.

The "No Child Left Behind" initiative enacted during President George W. Bush's administration has had a positive impact on improving achievement at the high school level. This is due in part to teachers being given national course guidelines and benchmarks, and the requirement for students to individually meet a standardized competency level in certain academic subjects in order to meet graduation requirements. However, high schools are also required to improve graduation rates on an annual basis. The schools and school systems have motivation to improve academic success, much of which is tied to federal funding. A dilemma is created when individual students and parents lack the initiative to improve their station in life, therefore are not motivated to succeed academically under "NCLB" than they were before. Seeking ways to motivate these students and parents to develop higher goals and standards continues to confound high schools and businesses seeking productive workers as well.

In particular, except for significant improvement respondents perceive to have taken place at the pre-kindergarten and kindergarten levels, respondents do not appear to feel that the state's educational system at all other levels has progressed as it should and that substantial the state's future workforce needs are being met.

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NOTES