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# Relationship between High School Theatre Participation and the Development of Workplace Competencies

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# THE RELATIONSHIP BETWEEN HIGH SCHOOL THEATRE PARTICIPATION AND THE DEVELOPMENT OF WORKPLACE COMPETENCIES

by

DEAN CHARLES SLUSSER

(Under the Direction of Barbara J. Mallory)

## ABSTRACT

In an age of educational accountability, high school theatre sponsors often have to defend the presence of, and funding for, their programs. The purpose of this study was to identify the perceptions of Georgia Thespian Sponsors concerning (1) the importance of certain workplace competencies, (2) the presence of opportunities for students to acquire or develop those competencies through participation in theatre, (3) the relationship between these two factors, and (4) the role of perceptions concerning administrative support in the presence of opportunities to acquire or develop workplace skills through theatre participation.

The researcher developed and distributed an original instrument addressing 27 specific workplace skills found in the United States Department of Labor's SCANS report (1992). These skills fell into five categories of competency: resource management, interpersonal skills, use of information, understanding systems, and use of technology. Respondents were asked to indicate the extent of their agreement concerning the importance of each skill, and the presence of opportunities to acquire or develop each skill in their theatre

programs. Respondents also provided demographic information, asked to indicate their perception concerning administrative support for their programs.

The researcher found that high school theatre sponsors agreed that the workplace competencies defined by the SCANS report (1992) were important. They also agreed, with the exception of one competency area, that opportunities exist for theatre students to acquire or develop workplace competencies through high school theatre programs. However, high school theatre sponsors do not believe that theatre programs offer the opportunity for students to acquire or develop skills in the use of technology.

There is a relationship between administrative support and the presence of opportunities to acquire or develop workplace skills in theatre in the areas of understanding systems and use of technology.

Based on his findings, the researcher concluded that Georgia Thespian sponsors:

- recognize the importance of workplace skills;
- teach many workplace skills and competencies through their theatre programs;
- believe that their ability to provide students with opportunities to develop competency in the understanding of how social, organizational and technological systems work is at least in part dependent upon administrative support; and

- believe that their ability to provide students with opportunities to develop skills in the use of technology is at least in part dependent upon administrative support.

The researcher further concluded that

- High school theatre programs serve a vital role in preparing students for the workplace, and
- Curriculum policy in Georgia's high schools should be supportive of high school theatre because it serves as a means to help students develop skills needed in the workforce

INDEX WORDS: High school Thespians, Workplace skills, Workplace competencies, Administrative support, High school theatre sponsors, Theatre participation, Perceptions of sponsors, Resource management, Interpersonal skills

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## DEDICATION

This work is dedicated to those individuals who, on the course of my journey, supported my vision and my dream, and demonstrated belief in me and my ability to complete it.

To Stan DeHart, for his support of my vision for what arts education can be, and his belief in my ability to complete this program;

To Rachel Baldwin, who encouraged me to “do something that matters,” and first introduced me to the SCANS report;

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To our children, Stephanie, Phillip, and Gabe, who lived a substantial portion of their lives wondering whether their father loved his work more than them (he doesn't); and

To the memory of my mother, Virgilene Slusser, who knew long before I did that I was capable of such a massive undertaking,

I hereby dedicate this dissertation.



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# CHAPTER 1

## INTRODUCTION

“Oh, had I but followed the arts.” (Shakespeare)

In William Shakespeare’s Twelfth Night, Sir Andrew Aguecheek expressed his despair that he had not applied himself to learning with dedication equal to that with which he applied himself in the pursuit of sport, game, and earthly pleasures. The arts in their various disciplines have been part of the rhetoric of learning since the dawn of western civilization, as evidenced through writings from Plato (Dukore, 1974) to Brockett (1984) and beyond. Dewey (1934) suggested that “art is a quality that permeates an experience; it is not, save by a figure of speech, the experience itself” (p. 326). Wakeford suggested that for the past two centuries, defenders of arts education in America have served as the “evangels of the arts, but also the keepers of education’s broader commitment to foster students’ capacity to learn in productive and meaningful ways” (Rabkin & Redmond, 2004, p. 81).

The value of the arts and their role in society has been the focus of scholarly and political discourse throughout the ages. In recent years, with the advent of high stakes testing and educational accountability, the dialogue concerning the value of the arts has taken on new questions, including questions about the role of the arts in workforce preparation. High school thespian sponsors encourage young people to participate in theatre in their schools, provide them with performance opportunities and recognize them for their



achievements. By providing arts education, high schools offer opportunities for students to have experiences that promote their growth and development.

The purpose and the value of the arts and art education have been a catalyst for conflict since the classical era when Plato suggested that his Republic should let “censors receive any tale of fiction which is good, and reject the bad; and we will desire mothers and nurses to tell the authorized ones only” (Dukore, 1974, p. 13). Throughout the centuries the arts have had their opponents such as Plato, and their advocates, beginning as early as Aristotle who argued that poetry came as a result of man’s instincts for imitation and for harmony (Dukore, 1974). While the language has changed over the centuries, the core principles on both sides are strikingly similar now to what they were long ago. A debate between opposing forces in the United States Congress over continued funding of the National Endowment for the Arts is not so very different from a dialogue between Aristotle and Plato concerning the value of art to an ideal society.

The purpose of this study was to identify the relationship between high school theatre participation and the development of workplace competencies. The researcher also sought specifically to identify the relationship between administrative support and the presence of opportunities to acquire or develop workplace skills through theatre participation.

### Background of the Study

A look at the history of arts education must begin with a look at rhetoric in the arts. Theory and criticism of the arts in western civilization began in ancient

Greece with Plato, who suggested that his Republic should be without artists on the grounds that they are twice removed from truth. He believed that art should be censored in order to promote only the best of virtues in the people. Aristotle, Plato's brightest and most famous student, argued in contrast, that the theatre provided an opportunity to arouse and purge the soul of pity and fear (Dukore, 1974).

Adler (n.d.) suggested that Plato and Aristotle, as others in antiquity, were discussing the distinction between the liberal and the servile arts; the former producing intellectual products, the latter used to transform raw materials. Society continued to show support for the arts throughout the age of enlightenment, though it occasionally suffered setbacks from Puritan efforts such as Oliver Cromwell's Protectorate. During this era of Puritan rule of the British Commonwealth theatre in England was against the law for nearly a decade (Cohen, 1981). As civilization moved westward across the Atlantic, the utilitarian philosophy that was necessarily prevalent in the colonization of the new world renewed and advanced the distinction between the fine and the useful arts. According to Brockett (1984), the development of the terms "useful" and "fine" with respect to art came in the eighteenth century.

Into the latter category were placed literature, painting, sculpture, architecture, music and dance. At the same time, the idea arose that while the useful arts may be easily taught and mastered, the fine arts, as products of genius, cannot be reduced to rules or principals that, if learned, will equip everyone to create significant works of art. (p. 8)

This distinction, in one sense, marked a reduction in status for the “fine” arts, for the very introduction of the term “useful arts” to make reference to trades and crafts implied the notion that those arts that remained were perhaps “less than useful.” Pioneers who toiled in the labors of settling a new land had little use for the frills of artistic endeavors, as evidenced by the reference to “useful arts” in the United States Constitution (1789). The founders, in writing the document, made no reference to “fine arts.” Still, even in the American colonies there were at least a handful of individuals who recognized the importance of the arts in the role of education, among them Benjamin Franklin who suggested that “they [students of an academy] learn those things that are to be most useful and most ornamental” (Kirby, 1927, p. 1).

#### Drama and Theatre Education

Mersand (1969) suggested that drama in American public schools has the vaguest history of all the “fine arts,” citing Professor Brainerd Kellogg’s Plan of Study for ‘Perfect Possession’ of Shakespeare’s *Tempest*, published in 1882, as a possible first printed guide for the teaching of a dramatic piece in the United States. Kellogg, like other authors, including Blakely (1908) and Thomas (1910 and 1917), tended to focus on the classics—primarily Shakespeare, and tended to address the teaching of drama as literature rather than as theatre. Thomas (1917) in his second book, The Teaching of English in the Secondary School, may have been the first author to publish a complete chapter dedicated to the teaching of drama (Mersand, 1969).

Fleming (1994) presented a snapshot of some of the generally accepted major tenets of the history of drama education from a theatrical rather than a literary perspective:

Drama education is thought to have its origins in the work of Slade who recognised child drama as a separate art form as opposed to adult theatre. His work was characterised by respect for the creative ability of children and minimum intervention by the teacher . . . the work of Bolton and Heathcote revolutionised drama teaching in that far more attention was paid to content. (p. 24)

It appears that drama's place in arts education had begun to take root by the late twentieth century. In Theatre Education: Mandate for Tomorrow, renowned theatre historian Oscar Brockett (1985) suggests that:

. . . As we move into the computer age, the need for drama will not be lessened but increased. . . . Schools should be seeking ways to encourage the full development of human potential. . . . Drama is certainly not the only curricular element that serves humanizing goals, but it is clearly one of the most powerful. (p. 5)

#### Differing Philosophies in Arts Education

Arts education researchers engaged in an ongoing discussion as to whether advocates of arts education should pursue a defense of "art for art's sake," or develop arguments in favor of arts education as a means of improving student achievement. Bresler (1998), concluded that researchers in arts education too often address "like-minded audiences of the same circle, ignoring

the need to justify the arts to a larger society,” but warned that to try to “justify the arts on pragmatic rationale” is rarely successful (p. 12). Colwell (1998), on the other hand, expressed frustration at the lack of empirical evidence to support arts education as an important part of the academic curriculum, describing research claiming that the arts improve general education as “thin or non-existent” (p. 27). Brewer (1998), argued that arts education has been “strong in theory but weak in empirical research” (p.18). Brockett (1984), in effect dismissed the importance of the relationship between the arts and student achievement by suggesting that art “ultimately must be valued because of its capacity to improve the quality of life by increasing our sensitivity to others and our surroundings, by sharpening our perceptions, and by reshaping our values” (p. 12). Arnstine (1995) was more direct when he suggested that “The arts teach. Whether or not it was the artist’s intention, people learn from the arts” (p. 86). He and other advocates of arts education appear to support an arts infusion philosophy, where the arts become a teaching tool in all subject areas.

Promoters of the agenda for a more academic approach to arts education are challenged by research that suggests a strong recognition for the value of the arts in learning, but only limited application of the concept. Meban, Patteson, Smithrim, and Uptis (2001), reported that 98.7% of teachers surveyed reported that the arts were fundamental to quality education, but only 18.5% of the same respondents frequently used the arts as a teaching tool. Still, researchers who are making a more direct effort to tie arts experience to academic performance are beginning to appear on the horizon.

## Milestones in the Arts Education Movement

There exists in the arts education community, then, a three-fold argument over the intrinsic value of arts for arts sake, the extrinsic value of arts for promoting academic achievement in other subject areas, and the pedagogical argument that the arts themselves should be employed as a method for teaching in all subject areas. This discussion has dominated the discourse among the advocates of arts education, policymakers, and education professionals outside of the arts education community over the past ten to fifteen years. Advocates of various positions have provided data, legislation, and reports that serve as potential milestones in assessing the value of arts education to the masses. These materials include College Board statistics (1993), Goals 2000 (1994), No Child Left Behind Act (2001) and the United States Department of Labor's Report from the Secretary's Commission on Achieving Necessary Skills (1992).

### The College Board Statistics

The publication of College Board statistics in 1993 concerning involvement in arts education and SAT performance marked one of the first milestones in the development of the arts for student achievement perspective in arts education. While the College Board provided only raw data, it appeared to show a relationship between participation in the arts and higher test scores. The suggestion of such a relationship prompted many researchers to focus largely on connections between an art discipline and an academic discipline, such as the effect of music instruction on mathematics performance (Graziano, Peterson & Shaw, 1999) or the impact of drama on writing and language arts (Wagner,

1998). From studies such as these, arts advocates promoted the concept that arts instruction improved academic performance. More recently, arts advocates have introduced brain – based learning theories as part of a move to take the offensive in promoting the need for a strong arts curriculum (Jensen, 2001). The arts in education promote the development of the overall child. The arts are part of the curriculum in American schools “because they give students an indispensable educational dimension” (Fowler, 1996, p. 3).

### Legislative Initiatives

Two major pieces of legislation that proved to be strong support to the move for arts education in the United States include the Goals 2000: Educate America Act (1994) and the No Child Left Behind Act (2001). Libman (2004) listed the signing into law of the Goals 2000: Educate America Act by President Bill Clinton in 1994 and the signing into law of the No Child Left Behind Act by President George W. Bush in 2001 as milestones in arts education, because each law included the arts as part of the core curriculum. While this legislation does not provide funding for curriculum development or assessment in the arts, it mandates the inclusion of the arts as part of the core curriculum for the first time in American education history. Libman argued that under NCLB the arts are “given equal billing with reading, math, science and other disciplines” (p. 31). With this increased status comes increased accountability, in the form of testing. The National Assessment of Educational Progress (NAEP) arts assessment, developed and first administered in 1997, provides some state policymakers with a springboard to develop their own instruments for arts assessment, but Federal

testing requirements under NCLB do not include arts assessment, so progress towards broad use of the test is slow to come (NASBE, 2003).

### The SCANS Report

The final of these four potential milestones in arts education advocacy is the oldest of the four: The SCANS Report. In 1992 the United States Department of Labor (USDOL) provided an unexpected source of support for the pro-academic achievement camp of arts education researchers. The Secretary's Commission on Achieving Necessary Skills (SCANS) published Learning a Living: A Blueprint for High Performance (U.S. Department of Labor, 1992), more commonly known as the SCANS report. The commission was asked to "define the know-how needed in the workplace for the twenty-first century, and to consider how this know-how was best assessed" (p. vii). Members of the commission were asked by Labor Secretary Lynn Martin to develop an action plan for schools and workplaces that would build a high performance economy that would be competitive in tomorrow's global and ever-changing market (SCANS, 1992).

The SCANS report is based on the premise that workplace know-how consists of five competencies and a three-part division of skills and personal qualities (USDOL, 1992). The theme of the report is that, in order to succeed, workers in the 21<sup>st</sup> Century must develop competency in the use of resources, interpersonal skills, information, systems, and technology. The successful high performance worker must also develop "basic skills" such as reading, writing, arithmetic, speaking and listening; "thinking skills" such as the ability to learn, to



reason, to think creatively, to make decisions and to solve problems; and “personal qualities” such as individual responsibility, self-esteem and self management, sociability and integrity. The report’s authors concluded that “arts education naturally embraces methods that are characteristic of high performance. . . Who, more than the artist, is unwilling to be satisfied with yesterday’s performance?” (p. 37).

These four benchmarks in the development of the arts education movement, the release of College Board statistics in arts education and SAT scores (1993), the Education 2000: Educate America Act (1994), The No Child Left Behind Act (2001), and the SCANS Report (1992), provided the framework for this research project, but one other issue of importance to an effective arts education strategy is administrative support. The College Board statistics provided the researcher with initial evidence that education in the arts may have in impact on student performance. The 1994 legislation established the necessary philosophy in support of arts education. The 2001 legislation established legal precedent that the arts were part of the core curriculum, and the work of the Secretary’s Commission established the competencies that are necessary for students to be successful in the 21<sup>st</sup> century workplace.

#### Administrators’ Role Regarding Arts Education

In an ever-increasing age of educational accountability and site-based decision-making, the educational leader is given the opportunity to be a major force in advocacy for education in the arts. Fiske (1999), and the other authors of Champions of Change, suggested that there are seven reasons that the arts

change the learning experience: the arts reach students who are not otherwise being reached; the arts reach students in ways that they are not otherwise being reached; the arts connect students to themselves and each other; the arts transform the environment for learning; the arts provide learning opportunities for adults in the lives of young people; the arts provide new challenges for those students already considered successful; and the arts connect learning experiences to the world of real work. (p. ix).

The authors also observed that successful arts programs offer students direct involvement with the arts and artists, require significant staff development opportunities for teachers, support extended engagement in the artistic process, encourage self-directed learning, promote a complex learning environment, allow learners to manage their own risks, and engage community leaders and resources (Fiske, 1999).

Daniel (2000) discussed the importance of administrative support in the development of an arts-focused school, suggesting that staffing is the key issue, and that success:

begins at the top of the administration. The chief administrator of a school for the arts must have a clear vision and understanding of arts instruction. It is not necessary for the administrator to be an artist, or have an arts background, but she or he must have an understanding of the arts. . . . Support for a successful arts school must come from central administration, the superintendent, and the school board (p.35).

Administrative support is important not only in the arts-focused school, but in all schools. Clabaugh (2000), in his discussion of the role of the arts in mass schooling, suggested that part of the problem in arts education is that the arts have an almost completely intrinsic value, and that students find an arts class to be useless.

West (2000) promoted arts education as a necessary component to developing the whole child. She argued that “arts education has been recognized as a vital part of a child’s learning experience when introduced to students at a young age” (p. 177).

Numerous challenges exist in the relationship between arts educators and school administration. Glidden and Shannon (1988) reported that one of the major issues hindering the planning of long-term improvements in arts education was the “lack of energetic and visionary leadership on the part of both arts educators and school administrators” (p. 44).

DeHart (1980), in his study of administrators’ perceptions of drama and other arts curricula in Florida, reported a “general lack of knowledge, and this lack of knowledge was much greater in Drama than in Music or Art” (p. 182). He further reported that while superintendents found cost to be the greatest negative factor in an arts program, principals were more concerned with the perception that teachers of the arts appeared to be unprofessional or ill-prepared. He concluded that since in most cases the arts were frills that were among the last subjects added to the curriculum when resources were available, they would also be among the first subject areas cut when budgets got tight.

Remer (1990) wrote that in order for an arts education program to flourish in the school there must be an ongoing staff and curriculum development effort, and a sustained level of support from top and middle management in the community and the school system. He later argued that key players such as the school principal, must be involved to make arts education partnerships work (Remer, 1996). According to Goodlad (1995), one reason that arts programs face such challenges is that “school boards . . . rarely have established goals and when they do, the arts are rarely included” (p.67). Most superintendents, he argued, are not arts supporters.

The National Association of State Board of Education’s (NASBE) publication of The Complete Curriculum: Ensuring a Place for the Arts and Foreign Languages in America’s Schools (2003), authored by the organization’s “study group on the lost curriculum,” concluded that “there is a substantial body of research that highlights the benefits of including the arts and foreign languages in the curriculum” (p. 4) and that these subjects areas were not necessarily lost, but “have often been marginalized, and are increasingly at risk of being lost as part of the core curriculum” (p. 5). Among the study group’s recommendations, formally addressed to policymakers at the state level, are several suggestions that can be addressed at the local level by administrators and Boards of Education. Such recommendations included the need to provide “adequate time for high-quality professional development for staff in the arts and foreign languages” (p. 5), and the need to “incorporate arts and foreign language

learning in the early years into standards, curriculum frameworks, and course requirements” (p. 5).

#### Other Research in Arts and Theatre Education

Askew, Perskey and Sandene (1998), who studied student access to formal theatre instruction in the public school, reported that in 1996-1997 only 11% of schools in a random national sample offered some kind of theatre coursework. Carey, Kleiner and Porch (2002) reported that in the 1999-2000 school year 48% of public schools nationwide offered some kind of theatre course. Despite possible discrepancies in the reporting process between the two studies and the perception among teachers of the arts in general that arts programs lack support (Miller, 1980), these results are encouraging for arts education advocates in that they document growth in arts instruction in general, and theatre instruction more specifically.

Theatre instruction is also becoming more formalized. Askew et al. (1998) noted that in the 1996-97 school year most schools used state or district curriculum guides for their courses in art and music, but not in dance and theatre. Carey et al. (2002) reported that during the 1999-2000 school year, among schools offering theatre coursework, 75% followed a district level, written curriculum guide.

#### Statement of Problem

While teachers, administrators, and even national commissions articulate a belief in the value of the arts as an integral part of the education of children, arts programs are still among the first areas to be cut when budget constraints

are imposed. When choices need to be made within general arts programs, the presence of a larger body of research for disciplines such as art and music puts theatre educators at a further disadvantage. In the current age of accountability as manifested in high stakes testing and student academic performance, advocates of theatre education articulate the value of theatre to a variety of decision-makers, and benefit from access to a variety of resources to help them communicate such value. Research and rhetoric in arts education exists on many topics, including discipline-based arts education that promotes the impact of the arts on high stakes testing and student academic performance, the art for art's sake movement that promotes the inherent value of art, and arts infusion as a means of supporting the general academic curriculum, thus promoting the arts as means of learning rather than a subject of learning. Administrators work with arts educators in developing criteria for the evaluation of arts programs that will be recognized and accepted by outside forces that influence educational decision makers.

One research topic that is common among researchers in the general education movement but lacking in the arts education community is a body of studies that address the relationship between arts education and workforce development. Workforce development has long been identified as a purpose for schooling and arts educators and administrators often understand the contribution of arts programs towards that goal. The authors of the SCANS Report (1992) provided a potential set of criteria by which to assess the effectiveness of various arts education disciplines, theatre being among them.

Few researchers have explored the relationship between theatre education and workplace preparation. This researcher examined the perceptions of Georgia High School Thespian sponsors concerning the SCANS competencies and skills, to identify relationships between their perceptions and the development of SCANS competencies and skills through participation in theatre.

Theatre educators have long contended that theatre education is something more than an enrichment activity for students. Through such organizations as The International Thespian Society (ITS) and the Educational Theatre Association (EdTA), theatre educators mount advocacy campaigns for theatre in schools. ITS was founded in 1929 as an honorary society for outstanding high school theatre students. This organization provided the researcher with the population base from which to gather data to assess what role, if any, participation in a high school theatre program might play in the development of workplace skills. Thespian sponsors, like all theatre educators, offer anecdotes to suggest that students who participate in theatre develop stronger critical thinking skills, become better problem-solvers, and are generally more creative thinkers than students without exposure to theatre.

#### Purpose of the Study

The purpose of this study is to look for relationships between Georgia Thespian sponsors' perceptions of the importance and the acquisition of workplace competency skills in Georgia high school theatre programs. In order to fulfill this purpose, the study was guided by four sub-questions.

## Research Questions

The overarching question that guided this study was “What is the relationship between participation in a high school theatre program and the development of workplace competencies?” In an effort to answer this question, the researcher pursued responses to four sub-questions:

1. To what extent do Georgia Thespian sponsors identify the importance of designated workplace competencies in determining a student’s success in the workplace?

2. To what extent do Georgia Thespian sponsors identify that students who participate in their theatre program are afforded the opportunity to acquire or develop workplace competencies?

3. To what degree is there a relationship between Georgia Thespian Sponsors’ perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their theatre programs?

4. To what degree is there a correlation between Georgia Thespian sponsors’ perceptions of administrative support and their perceptions regarding the presence of an opportunity to acquire or develop workplace competencies within their theatre programs?

## Significance of the Study

The body of research in theatre education in the United States is extremely limited. Recent developments in brain research have helped to bolster the strength of the theatre curriculum, and its recognition as an academic



discipline, but the reality is that theatre educators are well behind the curve in developing a body of research that contributes to the discussion concerning the arts and student development and performance. It is also true that policy makers at nearly every level believe that education should play a major role in workforce development. This researcher's goal was to develop a study that would contribute to the body of research literature by seeking to examine Thespian Sponsors' perceived relationship between involvement in a theatre program and the development of workplace competencies as described in the SCANS Report.

The results of this study could be of importance to a variety of populations including Thespian sponsors, educational leaders, leaders of business and industry, local government bodies, parents, and students. Thespian sponsors may find the study to be significant for three reasons. In an age of growing accountability, the study has the potential to provide support for building the connection between the high school theatre and the real world. If a positive relationship can be established between participation in the theatre and preparation for the workplace, the results could provide increased credibility for theatre programs. A favorable outcome of the study would enhance the position of Thespian sponsors in advocating for adequate budgets for their programs. Finally, Thespian sponsors could benefit from the study simply by its existence in an otherwise limited body of literature.

The results of the study could also be of importance to educational leaders as they make decisions concerning curriculum, staffing and general support for arts education programs at the school and the district level. (Look at

implications to make sure you've addressed this importance in Chapter 5

Administrators might use the results of the study to promote the arts in their communities, as in their schools. In a similar fashion, leaders of business and industry might glean from the study a rationale for beginning, maintaining, or increasing funding and other means of support for the arts. For these populations the study might lay the groundwork for looking at theatre and other arts programs from a different perspective in terms of funding in their own communities.

Leaders of business and industry might begin to see greater value in theatre arts as a means of developing successful employees.

Parents and students who are interested in theatre opportunities being available in their schools also have the potential to benefit from the study.

Parents who advocate for the presence of theatre in schools may be able to use the results of the study to promote their position. The study might be an asset that could serve to strengthen advocacy for high school theatre programs.

The researcher in this study has been involved in theatre for nearly his entire life. From the age of seven, when he took part in a neighborhood talent show held in a friend's garage and directed by his friend's older sister, he has believed in the power of theatre. With age and wisdom, he has come to understand the role of theatre and other arts in the development of the whole person. The researcher's passion for this subject is based on his life experience with it, a life experience to which he believes he owes his success as an educator, as an artist, and as a human being.

## Procedures

The research design and procedures used for this study are those which the researcher perceived to be most beneficial in pursuing answers to the research questions listed in earlier sections of this document. The researcher also took into consideration various other concerns, such as population accessibility, feasibility of the study, political implications, and the practical use of the results of the study.

### Research Design

The researcher used a quantitative, descriptive design that allowed the researcher to assess the perceptions of high school Thespian Sponsors in Georgia concerning their perceptions of the relationship between student participation in theatre and student development of workplace competencies as described in the SCANS Report (1992). Nardi (2003) suggested that descriptive studies “are often the first steps in most research projects” (p. 9.), and the researcher envisioned this research project as a sort of “first step” in the development of meaningful, usable research in the development of high school theatre programs. Further, the researcher used a quantitative study in an effort to meet the demands of current trends in accountability. Nardi suggested that empiricism reflects the philosophy that “the only source of knowledge is experience, especially of the senses. We understand the world through observation, not just through speculative thinking or theories” (p. 7). The goals of this study, to present basic information about the respondents and to describe

the issues under study, were consistent with the goals of descriptive research design (Nardi, 2003).

#### Population/Sample

The population for this study was Georgia Thespian Sponsors who oversee active Georgia chapters of the International Thespian Society. These sponsors are theatre teachers and/or directors at public and private schools who oversee programs of various sizes. The Georgia Thespian website (n.d.), which is the official source of information for the state organization, listed 167 currently active Troupes (<http://www.gathespians.org/pages/troupes.htm>).

Participants in the study included all 167 Georgia Thespian sponsors. This group was selected because of accessibility, but also because the presence of a chapter of the Thespian Society is indicative of an active theatre program of some kind. The actual number of participants may vary slightly as established Troupes may be dissolved and new ones created prior to actually conducting the study. The researcher set a goal of 100% participation in the study. A minimum response rate of 60% was required to validate the study (Nardi, 2003).

#### Data Collection

Because the researcher was unable to locate an existing survey instrument that measured perceptions of the relationship between participation in a high school theatre program and development of the workplace competencies defined in the SCANS Report (1992), the data for the study were collected using an original survey instrument, developed by the researcher. The instrument was

distributed to and returned by the study population at the annual convention of the Georgia Thespian organization.

#### Data Analysis

The collected data were analyzed using Statistical Package for Social Sciences to create a collection of basic descriptive statistics. These statistics were used to look at Thespian sponsors' perceptions regarding the relationship between student participation in a high school theatre program and the development of workplace competencies. The analysis and resulting profile were also used to make recommendations concerning the support and administration of theatre programs in the school setting.

#### Limitations

The major limitation of this study involved the number and integrity of responses, and the use of self-reporting data. Self-reporting by participants decreases the ability to maintain objectivity in the study because each participant is responding based on his or her own perceptions. Furthermore, individual participants may have unrealistic perceptions about their own programs.

#### Delimitations

The use of the SCANS Report (1992) criteria to establish the tenets of workplace competencies was a delimitation of the study. The researcher's decision to use the SCANS Report was based on his desire to make a direct connection between theatre arts and the labor force. It was, in fact, his introduction to the SCANS Report that prompted the researcher to pursue a study that would associate participation in a theatre program with workplace

preparation. The use of this source is a delimitation to the study in that an external authority is used to establish the competencies necessary to succeed in the 21<sup>st</sup> century workplace, thus limiting the ability of participants to offer responses outside this clearly defined set of skills.

The final delimitation of this study was the varied nature of the theatre programs. The researcher had no control over the structure of theatre activities or offerings within the school day or after school, and limited ability to impose a definition as to what constituted a theatre program in a school setting. As presented in the population section of this introduction, the nature and substance of theatre in Georgia High Schools is wide and varied. In an effort to determine which schools to include and which school to exclude from the study, the presence of a chapter of the International Thespian Society was proposed as the common and unique characteristic by which a school will be accepted into the population of the study. This characteristic, while providing a sense of unity to the population, does not address factors such as program size, school size, curricular offerings, experience of the sponsor, administrative support, staffing or funding. Details concerning these traits will be collected and analyzed as part of the demographics of the population.

#### Definition of Terms

Arts for arts' sake: This phrase was used to refer to the group of arts advocates who believe that the arts should not be defended within the context of student achievement, but by the value of the arts themselves. This philosophy

promotes the inherent values and qualities of arts education, and is reflected in the work of Bresler (1998).

Arts for student achievement: This phrase was used throughout this study as an abbreviated way of making reference to the position of Colwell (1998), Brewer (1998), and other arts education advocates who promote the need for empirical research making the connection between arts instruction and student achievement.

Community of Lifelong Learners: Learning a living: A blueprint for high performance: A SCANS Report for America 2000 (United States Department of Labor, 1992) used this phrase as a means of communicating one of the major projected changes in the workplace for the 21<sup>st</sup> Century. The worker of the future will not earn a living by going to work for a single company and will not remain on that job for the next 30 years. He or she will hold multiple positions with multiple companies, and will be in a position where learning becomes a lifelong necessity (SCANS Report).

International Thespian Society (Thespian Society, ITS): An honorary society for outstanding high school theatre students and participants.

Lifelong Learner: The successful worker in the 21<sup>st</sup> Century will be required to become a lifelong learner (United States Department of Labor, 1992).

SCANS: A term used generically to refer to the combined reports from the Secretary's Commission on Achieving Necessary Skills

SCANS Skills: The skills, traits, and competencies that an individual must possess in the 21<sup>st</sup> century in order to be successful in the work place (United States Department of Labor, 1992).

SCANS Report (1991): The preliminary report from the Secretary's Commission on Achieving Necessary Skills officially titled What Works for Schools: A SCANS Report for America 2000.

SCANS Report (1992): The final report from the Secretary's Commission on Achieving Necessary Skills, officially titled Learning a Living: A Blueprint for High Performance: A SCANS report for America 2000.

Workplace Competencies: Another name for the skills, traits, and competencies that an individual must possess in the 21<sup>st</sup> century in order to be successful in the work place (United States Department of Labor, 1992).

### Summary

While the arts have been an important element in society since the beginning of western civilization, arts advocates have consistently faced skepticism and challenges to the value of the arts as a truly meaningful part of the educational process. Whether the argument involved Plato, Aristotle, the founding fathers of the United States, or the United States Congress, the rhetoric reflects the division of historical thought on the role of the arts in society. More recently, even the population of arts advocates has shown division, with some proponents for arts education expressing the importance of the inherent qualities of the arts and others promoting the importance of empirical data to support the claim that the arts in education improve student performance.



The body of research available to administrators and others who are in positions to promote and develop arts education programs within the school setting is limited in its scope and depth. In the meantime, the age of educational accountability has led to growth in the philosophy of arts for student achievement. More research is necessary to provide the educational decision-makers with a better understanding of the relationship between the arts and learning, but if researchers are to measure the value of arts education in general and theatre education specifically, a standard must be developed and used to make such measurement. The SCANS Report provides such a standard, by making connections between arts education and the workplace.

This researcher, in an effort to examine the perceived role of participation in a high school theatre program in the development of the workforce, used the workplace competencies and skills described in the SCANS Report to develop an instrument by which to measure the perceptions of High School Thespian Sponsors concerning the relationship between student participation in high school theatre programs, the development of the SCANS skills, and the role these skills play in high school theatre programs. The researcher sought to locate a survey instrument in a quantitative design that will provided empirical data for analysis. When no such instrument could be located he worked with a panel of experts to develop one that would meet his research goals.

## CHAPTER 2

### SURVEY OF LITERATURE

#### Introduction

Any attempt to examine the relationship between theatre education and the development of workplace competencies, by necessity, required the researcher to bring together a number of apparently divergent topics to meet his goal. Because of the interrelationship between the various arts disciplines, the researcher was familiar with the historic role of arts education in the individual disciplines as well as the historical context and development of theatre as a discipline. The researcher had an appreciation for how arts education, specifically theatre education, supports general education's goal of developing the workforce.

In order to look for relationships between participation in the arts and development of workplace skills, the researcher located a set of traits or characteristics that are desirable in the workforce. His specific source for these characteristics was the SCANS Report (U.S. Department of Education, 1992). With this list of characteristics, the researcher began to look for possible relationships between participation in theatre and the development of work place skills and competencies.

In this chapter, the researcher briefly examined the history of arts education in the United States in general by looking at the development of each of the four disciplines delineated in National Standards for Arts Education: What Every Young American Should Know and Do in the Arts (Blakeslee, 1994).

These disciplines (music, visual arts, dance, and theatre) were then discussed collectively in terms of current trends and common philosophies concerning arts education. This section closes with a detailed discussion of key research reports pertinent to this study, some of which are highlighted in Table 1. The role of mass education in workforce preparation was examined with a brief overview of rhetoric and a brief discussion the history of public education in America. The characteristics that make up an effective, successful worker in the 21<sup>st</sup> century were addressed in detail using definitions found in the SCANS Report (United States Department of Labor, 1992).

### Historical Perspectives

When Benjamin Franklin wrote of the necessities for education in a proper academy, he suggested that students should “learn those things that are to be most useful and most ornamental” (Kirby, 1927, p. 1). It was during his life time that the terms useful arts and fine arts came into vogue (Brockett, 1984). While the National Standards for Arts Education (Blakeslee, 1994) promoted the concept that arts education is a term referring to the collective disciplines of music, visual art, dance and theatre, the development of these disciplines in the school setting has not progressed at an even pace when compared to one another.

### Music Education

Mark and Gary (1992) reported that music education in America dates to Colonial times, but that in its early stages it was often restricted to the clergy in New England, and to the upper classes in other parts of the country. While

Psalmody occupied the minds of the musical leaders of Boston and the rest of

**Table 1**  
**Studies Related to Arts Education**

STUDY	Purpose	Participants	Design/Analysis	OUTCOMES
Burton, Horowitz & Abeles (1999)	Determine what cognitive, social and personal skills are developed through arts learning.	2,046 students in grades 4-8 in public schools in New York, Connecticut, Virginia and South Carolina	Quantitative: Survey  Qualitative: Interviews	Students in "high arts" groups: 1. Scored well on measures of creativity, fluency, originality, elaboration, and resistance to closure 2. Scored more strongly in terms of academic teachers' perceptions of their general competencies. 3. Were more likely than students in low arts groups to think of themselves as competent in academics  Teachers and administrators in "high arts" schools reported: 1. That many positive features of their school climate could be attributed to the arts 2. That supportive administrators were importance to success
	Determine what happens in learning environments outside of schools that attract young people to sustained participation, performance and productions of high quality.	30,000 young people involved in 120 youth-based activity organizations in 34 regions of the United States	Qualitative: Observation, Interview, Field notes  Quantitative: Daily logs, Survey	Students with arts backgrounds were more likely than students in the National Educational Longitudinal Study to:  1. Read for pleasure 2. Participate in youth groups 3. Perform community service 4. Have a positive self image and high self-esteem 5. Be satisfied with himself/herself

**Table 1 (continued) Studies related to arts education**

STUDY	Purpose	Participants	Design/Analysis	OUTCOMES
Minton (2000)	Explore a possible relationship between dancing and creative thinking.	286 high school students enrolled in dance and non-dance courses	Quantitative: Test	High school students who studied a variety of dance styles for a semester scored better than non-dancers on the elaboration, originality, and abstractness of titles factors of the Torrence Test of Creative Thinking.
Harland, Kinder, Lord, Stott, Schagen, Haynes, et.al. (2000)	Determine whether involvement in the arts boosts academic performance	2,269 students in 22 schools in the U.K.  Larger sample: 27,607 students from 152 schools in the U.K.	Qualitative:  Student self-reporting, questionnaires  Quantitative: Analysis of test scores	The larger sample found no evidence that the arts boost general academic performance, but individual students reported a wide range of positive effects of arts education

New England, music performance was becoming part of the lives of other regions . . . unlike the north, the south had a class society in which music was a privilege of the upper class. (p. 54)

As might be expected given the role of the city in the founding of the nation, Philadelphia, by 1780, “ranked first in music in the cities of America” (Keene, 1982, p. 69). Formal instruction had begun at least by 1730, when an advertisement in the Pennsylvania Gazette announced that a “Mr. Ball taught writing, Arithmetic . . . Likewise Singing, Play on the Spinet, Dancing, and all sorts of Needle Work are taught by his sister lately arrived from London” (p. 69). By 1785 Andrew Adgate had founded an institute for vocal music in Philadelphia (Mark & Gary, 1992).

Lowell Mason, “‘the father of singing among children’ in the United States” was instrumental in bringing about the adoption of music as a public school

subject in the early nineteenth century (Mark & Gary, 1992, p. 117). He combined forces with William Channing Woodbridge to bring the principles of Johann Heinrich Pestalozzi to American music education. These principles served as the framework for the first national system of music education, adopted first by the German state of Prussia (Mark & Gary).

Keene (1982) suggested that by the late eighteenth century music education had taken root in American schooling. The 1871-1872 catalog of the Pennsylvania State Normal School included music courses divided into four departments: vocal, theoretical, aesthetical, and instrumental. The Michigan State Normal School opened a conservatory in 1881 with a curriculum that included piano, organ, violin, violin-cello, and voice culture. "The four-year curriculum for music for the Michigan State Normal School in 1882-1883 showed an increased specialization in the last three years" (p. 207). The creation of such courses indicated a recognition of the role of music in the classroom, even if the education community had not yet moved to formal music instruction.

#### Visual Art Education

Kirby (1927) provided a brief synopsis of the beginning of art in American schools. In 1838 Henry Barnard, who later served as the first United States Commissioner of Education, advocated the importance of drawing as a common school study. Rembrandt Peale "laid the foundations for drawing in the schools of Philadelphia as early as 1842" (p. 1). William Minife of Baltimore picked up the cause in 1848, suggesting that "to get good designers we must take the proper means for educating," (p. 2) and in 1873 the Massachusetts Normal Art School

was founded. The Philadelphia Centennial in 1876 and the Chicago World's Fair in 1893 provided further stimulus to the development of art in schools (Kirby, 1927).

### Dance Education

In the early days of the colonization of America, dance education was limited by the religious attitudes that prevailed in a largely Puritan society. According to Kraus (1969) those attitudes grew less severe in the pre-revolutionary period, allowing for the development of formal dance lessons and schools. Dance instruction in the nineteenth century was linked to expansion of secondary and elementary programs as well as the development of private academies, seminaries, and colleges for women (Kraus).

Froebel (1969), best known for the introduction of the kindergarten concept, was influential in the development of the concept that "schools were responsible for physical as well as academic growth of children and that activities other than the purely academic should be included in the curriculum" (p. 123). While perhaps more extensive in settings for women, dance instruction was not exclusively for females. One of the earliest known dance requirements for men was submitted to George Washington as part of the recommended curriculum for the cadets of West Point Military Academy (Froebel).

While dance remained an important part of the landscape with respect to education, Kraus (1969) suggested that the American ideals of material accomplishment and usefulness hindered the development of dance through most of the nineteenth century. In the twentieth century dance in the public

schools often fell within the realm of physical education, and, according to Hanna (1999), was ultimately determined to help develop kinetic intelligence.

#### Drama and Theatre Education

Mersand (1969) noted that Maynard, Merrill and Company's English Classics Series of 120 titles, published in 1882, listed only twelve plays: seven by William Shakespeare, none of which were comedies and none of which are the current curriculum standards, and one each by Euripides, Sophocles, Marlowe, Milton, and Addison. Addison's Cato, written in 1713, was the most modern work on the list. Chubb's The Teaching of English in the Elementary and Secondary School (1902), offered detailed advice on the teaching of Julius Caesar. Franklin T. Baker, founder of the Department of the Teaching of English at Teachers College, Columbia University, wrote the chapter on literature in the secondary school for The Teaching of English in the Elementary and the Secondary School (1903), in which he observes that a drama is more difficult to read than a story as he laid out suggestions for the teaching of Shakespeare's Macbeth.

Fleming (1994) presented a snapshot of some of the generally accepted major tenets of the history of drama education from a theatrical rather than a literary perspective:

Drama education is thought to have its origins in the work of Slade who recognised child drama as a separate art form as opposed to adult theatre. His work was characterised by respect for the creative ability of children and minimum intervention by the teacher . . . the work of Bolton



and Heathcote revolutionized drama teaching in that far more attention was paid to content. (p. 24)

McCaslin (1990), suggested that the theatre education movement that took root in England through the work of Heathcote, Bolton and others in the 1960s has taken root in the United States much more recently. The increased growth in the interest and use of educational theatre on American soil has led to the development of many relatively new and oft-confusing terms including participation theatre, developmental drama, drama-in-education, theatre-in-education, creative drama, and numerous others. "The terminology, however, is not always clearly understood here nor, indeed, is it always used to mean the same thing" (p. 8).

#### Common Approaches to Arts Education in America

The existing body of research contains three common philosophies concerning education in the arts. These include discipline-based arts education, arts for arts' sake, and arts infusion strategies.

##### Discipline-based Arts Education

The move towards discipline-based arts education (DBAE) began in the late 1960s when Nelson Goodman and Howard Gardner founded "Project Zero" at Harvard University (Wakeford, 2004). Arts advocates involved in this movement approached the arts "as a system of knowledge akin to the sciences, with a part to play in the active processes of discovery and production of new knowledge" (p. 97). In other words, Goodman suggested that the arts were a way of knowing. This development in arts education advocacy was followed by

Coming to Our Senses: The Significance of the Arts in American Education

(Rockefeller, 1977), a watershed report that argued for the inclusion of artistic literacy as part of the basic education curriculum and a “recognition of the arts’ contributions to learning across the curriculum” (Wakeford, 2004). Gardner (1983), perhaps best known for his theory of multiple intelligences, included music, special, and body kinesthetic modes of learning. He thus furthered the trend towards a discipline-based approach. Juxtaposed to the publication of A Nation at Risk (National Commission on Excellence in Education, 1983), which was completely void of any discussion of arts education, Gardner’s work had significant implications for advocates of arts education. According to Wakeford (2004), advocates then faced “a political imperative, not just a pedagogical one, that the arts be understood as a site of learning” (p. 98).

It was in the early 1980s, under the auspices of the J. Paul Getty Trust, that the Getty Center for Education in the Arts introduced the term Discipline-based arts education (DBAE) to describe this philosophy that the arts were academic. According to the Getty Report (1985) the three critical factors in changing art education were a change in perspective concerning the value of arts education, continual advocacy and support from and within the community, and the conception, development, and maintenance of arts programs with academic rigor.

According to Wakeford (2004), leaders of the DBAE movement argued that “art education should cultivate itself as a discipline of knowledge analogous to other school subjects, and therefore as a curriculum demanding of thinking

and knowing and not mere 'doing'" (p. 98). The Getty initiative was critical of past advocates of arts education for focusing too much on the production of art and too little on the history, criticism and aesthetics of art (Getty Report, 1985).

### Arts for Arts' Sake

Allen (1997) wrote that "the doctrine of art for art's sake . . . had roots in eighteenth century philosophy" (§ 2). This concept of art for art's sake, more formally known as aestheticism (1997), "flourished with the ascendancy of political democracy and the market economy, and has yielded fruit strewn about us today" (§ 2). Rudgers (1996) suggested a sort of definition of aesthetic education as an effort to focus on experiencing art emotionally, intellectually, and attentively. He wrote, of music, that the goal of aesthetic education is "to understand music firsthand and to study music in order to live more meaningful lives" (p. 35).

Rudgers (1996) traced the rise of aestheticism in education to Bennett Reimer in general music classes, but pointed out that there are no textbooks for performance groups that are comparable to the curriculum reflected in the general music text series by Silver Burdett Music. Both teacher and student in an aesthetic setting pursued artistry as the main goal. "Artistry should be at the center whether they are performing, composing, improvising, listening, or learning about all the dimensions of music as they affect the musical experience" (p. 37).

The aesthetic education movement reflects both an interest in arts education advocacy, and some dissent concerning how the activists' goals can

be achieved. Newcomb (2000), reported in a review of 188 studies that looked for relationships between art forms and academic achievement, that some such studies included some links, but no clear evidence of a connection between arts education and higher academic achievement. She wrote, "Why should arts have to prove themselves only in relation to better math scores? . . . The arts teach discipline . . . and understanding . . . that should be enough" (2000, p. 13). In addition to supporting arts education, the "art for art's sake" movement also rebels against the major tenets of DBAE by refusing to accept academic performance as legitimate criteria for evaluating learning in the arts. ". . . Educators shouldn't ask the arts to boost bottom-line results in other subjects" (p. 13).

#### Arts Infusion

The most recent development in the arts education movement appears to be arts infusion, also known as arts integration. Rabkin and Redmond (2004) explained that arts integrated schools have been successful in closing the achievement gap by "moving the arts, perpetually on the margins of education, to the center of teaching and learning" (p. 128).

In arts integrated schools, students constantly move back and forth between different methods of inquiry and observation, symbolic languages, expressive modes, formal curriculum, and their own lives (p. 128).

Grumet (2004) warned that there was an important distinction between the arts integration approach to education and "arts experiences that are inserted

into the school day without deep connections to the core curriculum of the classroom” (p. 49). She argued that by infusing the arts into the curriculum,

. . . these arts integrations programs have rescued the arts from educational cul-de-sacs where they have been sequestered: arts for the talents and gifted, arts for precocious professionals, arts as therapy. And they have rescued the academic disciplines from their dead ends in the flat, dull routines of schooling that leave students intellectually unchallenged and emotionally disengaged. (p. 50)

An integrated approach to arts education requires collaboration and commitment on the part of teachers (both arts and academic), administrators, and other members of the learning community. Aprill (2003), listed four formal commitments involved in the Chicago Arts Partnerships in Education (CAPE) program.

1. Long term professional development of teachers and artists rather than short term provision of services to students;
2. Committed time for planning and investigating meaningful connections between arts learning and the rest of the curriculum;
3. Long-term relationships among schools, arts organizations, and community organizations to form a professional community that reflects upon and deepens the quality of instruction over time; and
4. Connecting intellectual and aesthetic assets of the community in generative relationships with each other. (p. 57)

The arts integration approach in education provides both teachers and students the “opportunity to make a connection among the discourses of mathematics, science, history and literature, and life experience, imagination, and creativity” (Grumet, 2004, p. 75). Her observations of the relationship between the arts and education are supported by a number of studies in the field, several of which are highlighted following a discussion of the rationale for determining those skills and competencies thought to be necessary for the 21<sup>st</sup> century work place. The foundation for such a discussion is the United States Department of Labor (1991, 1992) Report from the Secretary’s Commission on Achieving Necessary Skills, also known as the SCANS Report.

#### Defining Workplace Skills: The SCANS Report

In 1992 the United States Department of Labor published a Report from the Secretary's Commission on Achieving Necessary Skills, commonly known as the SCANS report. Commissioned by President George H.W. Bush, the report was the result of several months of collaborative effort led by commission members and involving educational leaders, labor representatives, and corporate executives who worked towards a consensus of what would be required of schools, of workers, and of the business community. The commissioners were charged to determine what must happen in order for the United States to raise its standard of living and keep pace with the competitive demands of a global economy.

The panelists who prepared the report went to great lengths to move away from the specific skills associated with individual employment, eventually

describing a set of benchmark competencies and basic skills that are necessary for any individual who wants to succeed in the workplace. These benchmarks, the panelists agreed, should be the foundation on which the new American school should be built. Schools in the 21st century should be community learning centers, building and nurturing a community of lifelong learners (SCANS, 1992).

## Background

SCANS commissioners, through the separate messages they offered to schools, to teachers, and to employers, provided the guiding influence for the entire report:

Our primary message to schools is this: Look beyond the school house to roles the students will play when they leave to become workers, parents and citizens.

Our primary message to teachers is this: Look beyond your discipline and your classroom to the other courses your students take, to your community, and to the lives of your students outside the school. Help your students connect what they learn in the class to the world outside.

Our message to employers is this: Look outside your company and change your view of your responsibilities for human resource development. Your old responsibilities were to select the best available applicants and to retain those you hired. Your new responsibilities must be to improve the way you organize work and to develop the human resources in your community, your firm and your nation. (SCANS, 1992, p.xiii)

The SCANS commissioners encouraged schools, students, teachers and employers to “look beyond” their traditional realm of operation, of interest and of influence. The perception of the high school diploma as a goal was replaced in the report by the concept of lifelong learning (SCANS, 1992). The diploma was seen no longer as a goal, but merely a milestone that the student acquired along the pathway of a life that was leading him or her somewhere else. In the opening narrative the commission called for “citizens who can discharge the responsibilities that go with living in a democratic society and with being parents” (SCANS, 1992, p. xiii). Commissioners emphasized early on that the “well-being of a nation . . . is *not* synonymous with economic status. (p. xiii)” Changes in society and in the world, they suggested, called for a different approach—one that steps back and looks at the bigger picture that is a global economy. Commissioners argued that the age of the unskilled worker was on its way out, and America in the 21<sup>st</sup> Century must completely revise its perception of education to correct the decline of society that had transpired over the previous forty years.

Commissioners pointed out that the percentage of American male high school graduates whose earnings were less than poverty level had steadily increased since 1969 in White, Hispanic and African American populations. These low-income earners represented 20 % of the black population in 1969, but the level had risen to 42.7% by 1989. Hispanic men saw an increase among low-income earners from 16.4% in 1964 to 35.9% in 1989, and in the same period of time, white men whose earnings fell below the poverty level rose from 8.3% to



22.6% (Learning, p. 7). The SCANS commissioners concluded that without high performance workplaces and highly trained workers, the American standard of living would continue to decline (United States Department of Labor, 1992).

The commission also cited its own survey of fifty jobs, divided into high wage and low wage jobs. Analysis of these positions provided evidence that high wage workers earned “an average weekly wage of \$513,” compared to the low-wage earner whose average weekly paycheck was \$298 –a difference of about \$11,200 per year (U.S. Department of Labor, 1992, p. 9). The problem, as perceived by the Secretary’s Commission, was that high wage positions require high performance skills—skills that are not the focus of our current system of education. SCANS pilot programs in business, industry and education led the commission to four important lessons:

1. Teaching should be offered in context. “Learning in order to know” should not be separated from “learning in order to do.”
2. Improving the match between what work requires and what students are taught requires changing how instruction is delivered and how students learn.
3. High-performance requires a new system of school administration and assessment.
4. The entire community must be involved. (U.S. Department of Labor, 1992, p. 12)

SCANS commissioners reported that education in a global economy cannot be education-as-usual—that the focus must change. The Commission’s

observations consistently seemed to suggest that educators must rethink their approach to the classroom; making a concerted effort to connect everything they do with where their students are going beyond the school experience (United States Department of Labor, 1992).

In their discussion of a high-performance future, the commissioners relied heavily on W. Edwards Deming's fourteen points in *Total Quality Management* (Winn & Green, 1998). SCANS commissioners encouraged school administrators to try to apply these concepts to their schools, gleaning two lessons in particular from Deming's work:

1. The more the quality—including human quality—you build into anything, the less, in the long run, it costs, and
  2. Leadership in any organization—be it school, company or government agency—lies primarily in developing constancy of purpose throughout.
- (U.S. Department of Labor, 1992, p. 18)

The Commissioners argued that constancy of purpose should be at the forefront of educational thought. In that regard, the SCANS commissioners recommended three foundational skills and five workplace competencies that should be the focus of American education, suggesting that these benchmark performance issues would ensure the success of a student in any discipline. A review of SCANS skills and competencies is found in Table 2. The foundational skills in the report included basic skills, thinking skills, and personal qualities.

**Table 2**  
**Scans Competencies and Foundational Skills (United States Department of Labor, 1993)**

COMPETENCIES: Effective workers can productively use:				
Resources	Interpersonal Skills	Information (Data)	Systems	Technology
Allocating Time Money Materials Space Staff	Teamwork	Acquiring & Evaluating	Understanding social organizational technological	Selecting appropriate equipment and tools
	Teaching	Organizing & Maintaining		
	Serving		Monitoring & Correcting	Applying technology to specific tasks
	Leading	Interpreting & Communicating		
	Negotiating	Processing with computers	Designing & Improving	Maintaining & trouble-shooting
Working well with a diverse population				
FOUNDATIONAL SKILLS – Competencies required:				
Basic Skills	Thinking Skills	Personal Qualities		
Reading	Thinking creatively	Individual responsibility		
Writing	Making decisions	Self-esteem		
Arithmetic & Mathematics	Solving problems	Sociability		
Speaking & Listening	Seeing things in the mind's eye	Self-management & Integrity		
	Knowing how to learn			
	Reasoning			

Workplace competencies included resources, interpersonal skills, information, systems, and technology (SCANS, p.xiv).

#### Foundational Skills

The SCANS Commissioners concluded that 21<sup>st</sup> Century workers in high performance jobs required certain foundation skills in order to be successful.

(United States Department of Labor, 1992). These foundational skills included

basic skills, thinking skills and personal skills. “Basic skills” were what traditional educators considered academics. Students must be competent in reading, writing, arithmetic and mathematics, speaking and listening. While these skills were represented in courses taught throughout our system of American education, the SCANS commissioners made a key distinction between learning to know and learning to do. The teacher who pursued SCANS recommendations to their fullest possible potential connected everything done in the classroom with goals and accomplishments that extended beyond the classroom. Class work was no longer the end in itself, but was a means to another end (U.S. Department of Labor).

“Thinking skills,” articulated in the SCANS Report (U.S. Department of Labor, 1992), included the ability to learn, to reason, to think creatively, to make decisions, and to solve problems. These traits included the traditional concepts of creative thinking, decision-making, and problem solving, but they also included a relatively new concept: developing the student’s ability to learn. Commissioners suggested that 21<sup>st</sup> century society would be a population of lifelong learners, and students must be prepared for the future by developing learning skills. This philosophy marked an enormous shift in thinking from the assembly line mentality of the industrial age.

The third area of foundation skills addressed by the SCANS Report (U.S. Department of Labor, 1992) commissioners was the development of “personal qualities”. These qualities of individual responsibility, self esteem and self-management, sociability and integrity were described by the commissioners as

desirable for students to develop. In this regard, the commissioners encouraged a concerted effort to use the educational process to influence and shape the lives and attitudes of young people.

#### Workplace Competencies

According to the SCANS commissioners, the high performance school must develop in its graduates five workplace competencies necessary for survival. The student must be competent in his or her use of resources, interpersonal skills, information, systems, and technology (U.S. Department of Labor, 1992).

#### Resources

In their initial report, a year before the final report, Commissioners found that effective workers must be able to productively use resources (U. S. Department of Labor, 1992, p. xiv). Students must be able to competently allocate time, money, materials and space, and staff. The Commissioners listed specific objectives for competency in each area.

**Allocates Time:** Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares and follows schedules.

**Allocates Money:** Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

Allocates Material and Facility Resources: Acquires, stores, and distributes materials, supplies, parts, equipment, space or final products in order to make the best use of them.

Allocates Human Resources: Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback. (U.S. Department of Labor, 1991, p 45)

### Interpersonal

Commissioners found that effective workers must be able to productively use interpersonal skills (U.S. Department of Labor, 1992, p. xiv). Students must be able to competently allocate time, money, materials and space, and staff.

Interpersonal competencies defined by the commissions include the following:

Participates as a Member of a Team: Works cooperatively with others and contributes to group with ideas, suggestions, and effort

Teaches others: Helps others to learn

Serves Clients/Customers: Works and Communicates with clients and customers to satisfy their expectations.

Exercises Leadership: Communicates thoughts, feelings, and ideas to justify a position, encourages, persuades, convinces, or otherwise motivates an individual or groups, including responsibly challenging existing procedures, policies or authority.

Negotiates: Works toward an agreement that may involve exchanging specific resources or resolving diverging interests.

Works with Cultural Diversity: Works well with men and women and with a variety of ethnic, social, and educational backgrounds. (U.S. Department of Labor, 1991, p. 45).

## Information

The SCANS Report also listed the following specific skills associated with being efficient in using information.

Acquires and Evaluates Information: Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

Organizes and Maintains Information: Organizes, processes and maintains written or computerized records and other forms of information in a systematic fashion.

Interprets and Communicates Information: Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial or multi-media methods.

Uses Computers to Process Information: Employs computers to acquire, organize, analyze and communicate information. (U.S. Department of Labor, 1991, p. 45)

## Systems

The fourth area of competency listed by the Commission as necessary for high performance schools and workplaces was competency in using systems.

According to SCANS definitions, the high performance worker:

Understands Systems: Knows how social, organizational, technological systems work and operates effectively within them.

Monitors and Corrects Performance: Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.

Improves and Designs Systems: Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems. (U.S. Department of Labor, 1991, p. 46)

## Technology

Finally, the Commissioners reported that the effective worker of the 21st century must be able to use technology. The successful employee:

Selects Technology: Judges which set of procedures, tools, or machines, including computers and their programs will produce the desired results.

Applies Technology to the Task: Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

Maintains and Troubleshoots Technology: Prevents, identifies, or solves problems in machines, computers, and other technologies. (U.S.

Department of Labor, 1991, p. 46)

SCANS commissioners suggested that three foundational skills and five competencies would lead to a more competitive, more effective workplace. They promoted the concept that a more meaningful and valuable school experience



was required in order to reach the level of competency required, but that the result would be a better standard of living for all Americans (U.S. Department of Labor, 1992).

### SCANS and a Survey of Literature

The researcher's review of literature involving SCANS research revealed that while there are numerous opportunities to read the details of the report, research on the implementation of SCANS recommendations had been scant. A thorough search of a dozen or more research databases turned up a handful of articles, only a few of which had significant value for this researcher's efforts.

Tetreault (1997), reported, "Two employability inventories have been acknowledged as the most relevant since they address several of the real needs of the contemporary workforce" (¶ 4). One of these was the SCANS inventory. Tetreault went on to describe the PRO SCANS curriculum he created, which linked the SCANS skills with project-based instruction involving groups of six to eight students in classes of eight to twenty-four. In his discussion, Tetreault quoted Ken Sheppard's 1995 description of project based instruction as having "four types of projects: information and research, survey projects, collaboration, and responsibility" (Tetreault, 1997, Project-based instruction, ¶ 1). McNabb and Mills (1995), just three years after the appearance of the final SCANS Report, discussed the inherent difficulties in implementation of the SCANS Report recommendations. The problem

concerns the failure of the SCANS Report to define in a functional manner the nature of personal qualities. Specifically, a workable definition of the

affective domain was not included in the report. (McNabb, Introduction, ¶ 2).

Donlevy and Donlevy (1995) suggested that it is surprising that “social skills are largely ignored in the academic curriculum” (Introduction section, ¶ 4). SCANS Executive Director Arnold Packer predicted the problem in assessing students’ progress in a 1992 article on how to take action on the SCANS recommendations, which included the certification of students’ performance in each of the SCANS competencies. “Standardized paper-and-pencil tests,” he wrote,

cannot be the basis for these certificates. . . . [SCANS Commissioner Lauren] Resnick describes three broad types of assessment: [(1)] examinations measuring performance of specific tasks, [(2)] reviews of portfolios of work done over time, [(3)] evaluations of projects done individually or in groups. (Packer, 1992, p. 30)

Pipho (1996) echoed the concerns about implementation of the SCANS competencies, adding,

The chief danger may be an overload of ideas and materials. How to develop a meaningful assessment program, how to convince parents that school-to-work standards are not just for blue-collar workers, how to bring academics out of their narrow disciplines, how to steer clear of turf battles, and even how to convince conservatives that this is not a national conspiracy to downgrade the role of the family. (Academic Standards section, ¶ 4)

Bloch (1996), conducted a multi-state study of public high schools and superintendents in the mid-1990s. Five years after the commission's first major report, and four years after the final report was published, Bloch discovered that principals and counselors were generally unfamiliar with national workforce preparation policies as represented by the SCANS report (1996).

Bloch assessed, among other concerns, the familiarity of school administrators with the SCANS report competencies, and the perceived importance of 14 related student outcomes for each of three student groups: (1) at risk students, (2) work-bound students, and (3) college-bound (or other postsecondary) students. Bloch mailed over 1,800 surveys that netted 919 usable responses, 72% of which held positions at the high school level. Bloch included five states that made an original commitment to the SCANS philosophy, plus Michigan, which was included in the data collection when they requested to take part in the study. The data were collected in 1994 (Bloch).

Bloch (1996), concluded that 14% of the respondents were "very familiar" with the SCANS report. Thirty-nine percent (39%) of the respondents described themselves as "not at all familiar" with the report. She further observed that there was "a general lack of correspondence between opinion and practice" when desired outcomes were compared to actual practice" (Results, ¶1) and that explanations for the difference ranged from time in the students' day and parental support (13%) to teacher time (12%) and administrator support (2%) (Results Section, ¶1).

The United States Department of Labor (1991, 1992) through the SCANS Reports, established the characteristics necessary for the 21<sup>st</sup> century worker, laying the foundation for exploring a possible relationship between development of these skills and participation in arts experiences as evidenced through existing research. Several studies, including those highlighted below, address traits that relate to SCANS skills even if they do not explicitly name them.

#### The Relationship between the Arts and Education: Selected Studies

An increase in calls for research in arts education that can be traced to the mid-1980s, shortly after the publication of A Nation At Risk (1982), led to a number of reports and studies supporting the arts in education. In 1985 the Getty Center for Education in the Arts published Beyond Creating: The Place for Art in America's Schools (1985), their first public report on arts education. Fowler (1987) shared the recommendations of the Ad Hoc National Arts Education Working Group, which included a call for “basic research, model projects and advocacy efforts.” These are “critical to establishing a consistent and compelling case for increasing the economic base of support for arts education in schools and in the community at large” (Fowler, p. 146). Towards Civilization: Overview from a Report on Arts Education (1988) was published in response to a congressional mandate. In 1985, the 99<sup>th</sup> Congress of the United States called for a “study of the state of arts education as part of the reauthorization of the National Endowment for the Arts” (p. 37). More recently, the introduction of the Goals 2000: Educate America Act (1994) and the No Child Left Behind Act (2001) provided a catalyst for research in the field of arts education. A number of

valuable studies have been published since the mid-1990s, eight of which are highlighted below.

#### Learning in and through the Arts

Minton (2000), explored a possible relationship between dancing and creative thinking. The study involved 286 high school students who were taking dance or non-dance classes. The students in dance were the experimental group while the non-dance students served as the control group. Creativity was measured by using the Torrence Test of Creative Thinking (TCCT). While some results were indicative of a correlation between creativity and dance, the results were not consistent from school to school, suggesting that either school climate, or the dance instruction itself, may have influenced the outcome.

#### Learning in and through the Arts: The Question of Transfer

Burton, Horowitz and Abeles (2000), conducted a study to determine whether students in arts-rich schools show more creativity and higher academic self-concept than students in arts-poor schools. They further wanted to determine if arts rich schools had a different climate than arts-poor schools. The relative “wealth” of each school was determined by the “quantity of arts programming” (p. 66). In this study of 2,406 fourth, fifth and eighth graders in 18 public schools, the research team concluded that students in the arts-rich school setting were scored higher by teachers on expression, risk-taking, creativity-imagination, and cooperative learning. They also scored higher than students in art-poor schools.

With regard to their second research question, Burton et al (2000), concluded that principals in the high-arts setting led their teachers to be more

innovative. Arts-rich schools scored higher from teacher ratings on affiliation, student support, professional interest, teacher innovativeness, and resource adequacy than did teacher ratings at arts-poor schools.

#### Involvement in the Arts and Success in Secondary Schools

Catterall (1998), analyzed data from 25,000 students who participated in the National Educational Longitudinal Study in 1988. Students were followed from eighth to tenth grade on a variety of academic measures. The relationship between artistic involvement and academic performance was positive at both grade levels across all socio-economic levels. High arts students earned better grades and performed better on standardized tests. They performed more community service, watched less television, and reported less boredom in school. High arts students were less likely to drop out of school and had a more positive self-concept (Catterall).

#### Involvement in the Arts and Human Development

Catterall, Chapleau and Iwanga (1999), conducted a study of high school seniors who had been involved in the arts since at least eighth grade to determine if these students performed better academically than students who were not involved in the arts. They also looked for academic achievement patterns that were associated with intensive involvement in theatre and music. Students in the study were classified according to the extent of their involvement in the arts as determined by number of classes taken, both in school and out of school, and attendance at museums. High arts students were defined as those

involved since eighth grade, and the top quartile of students was compared to the lowest quartile of students.

Catterall, Chapleua & Iwanga (1999) found that 57.4 percent of high arts-involved students scored in the top two quartiles in reading, compared to only 39.3 percent of the low arts-involved students. Similar results were present in the history/geography/citizenship test. The results were consistent across socioeconomic boundaries, where low-SES students with high arts-involvement outperformed their peers who were not involved in the arts: 33% of band and orchestra students from low-SES schools performed at the highest levels in math compared to only 15.5% of their peers who were not involved in music (Catterall, Chapleau & Iwanga).

The presence of a pattern of academic achievement proved to be even more prevalent in instrumental music than in theatre. Specifically, of low SES, high arts-involved students, 33.1 percent who were involved in band or orchestra scored at the highest levels in math, compared with only 15.5 percent of their low arts-involved counterparts (Catterall, Chapleau & Iwanga, 1999).

#### Chicago Arts Partnerships in Education

Catterall and Waldorf (1999), examined the effectiveness of the Chicago Arts Partnership in Education (CAPE) program in an effort to determine if students in low-SES public schools that integrate the arts and academics performed better on standardized tests than students in schools without arts integration. The researchers made 40 comparisons of K-8 Chicago public schools, and 12 comparisons of Chicago public high schools. In none of these

comparisons did control schools (schools without arts integration) outperform their arts-integrated counterparts. In 25 of the 40 schools in the K-8 comparison, and in 7 of the 12 high school comparisons, arts-integrated schools actually increased the difference in average scores over time (1999).

#### Arts Education in Secondary Schools: Effects and Effectiveness

Harland, Kinder, and Lord et al (2000) conducted a study to determine whether the arts in secondary schools in Britain boost general academic performance. The researchers used a qualitative study based on student self-reporting to examine five secondary schools in the United Kingdom. They studied performance on the United Kingdom's national academic exams, collected questionnaires from students at 22 schools, and interviewed a small group of administrators.

Students in the study indicated that they experienced a wide range of positive effects from their involvement in the arts. The researchers suggested that students "clearly perceive that the arts facilitate their personal and social development" (p. 76). The researchers found no clear link to indicate that the arts boost academic achievement, but both students and administrators recognized that the arts have a positive impact on the education of students and the culture of a school.

#### Community-based Youth Organizations and the Arts

Heath (1998) sought to discover if low-socioeconomic status (SES) at risk students who are intensively involved in the arts through after-school organizations perform better in school than their peers who are not involved in



after school arts organizations. The researcher conducted a longitudinal study of at-risk students involved in 120 non-school organizations in three categories: arts organizations, athletic organizations with an academic emphasis, and community service organizations. Students in the study were observed over an eleven year period, from 1987 through 1998. Students involved in arts organizations, even organizations that were not at their schools, were twice as likely to win an award for academic achievement as students involved in the other kinds of organizations. Students in arts organizations were also more likely to win school-wide attention for academic achievement, participate in a math or science fair, win an award for school attendance, read for pleasure, run and be elected to an office at school, and engage in community service (Heath, 1998). Heath's study (1998), did not prove causality, but added to the body of research that demonstrates a clear relationship between arts involvement and academic achievement.

### SCANS and the Arts

In a side bar to the Learning a Living, the United States Department of Labor (1992) SCANS commissioners included a discussion of the value of the arts in a high performance setting. The brief sidebar is important enough to the discussion that it is included in its entirety below:

SCANS know-how can be learned in the context of the arts. At a pragmatic level, high school students learning to make charts could benefit from knowing more about the visual arts. The advent of desktop publishing means that millions of workers will be publishing documents

deciding how to make them [sic] visually appealing, and in general, calling on talents that only yesterday were primarily the concern of graphic artists. The theater arts are often thought of as developing speaking, reading and listening skills. But theater people also know about another domain of SCANS know-how, managing the resources of budgets, space layout and staffing, and the interpersonal skills, such as teaching others and working as a team. Technology use is another of the SCANS competencies. Musical instruments are becoming increasingly high-tech. Some synthesized sounds come directly from sophisticated mathematical functions fed into a musical instrument digital interface. Systems, the fifth SCANS competency, can be taught in the context of orchestral composition.

Arts education naturally embraces methods that are characteristic of high-performance schools. Art departments often accept and evaluated [sic] students on the basis of portfolios and auditioned performances. Coaching and assessing progress are done continuously in the midst of practice, performance, or critiques. The arts are an especially good vehicle for teaching about improving quality. Who, more than the artist, is unwilling to be satisfied with yesterday's performance? (U. S. Department of Labor, 1992, p. 37)

The attention that the SCANS commissioners gave to the arts was of great significance and tremendous potential value to arts education advocates. For the first time commissioners for the United States Department of Labor went

on record in support of arts education and the value of the arts in preparing the workforce of the future. Arts educators, administrators, and advocates across the spectrum could use the refrain that the arts teach workplace skills, offering the Department of Labor's own publication in support of their statements. Yet, the arts advocacy position reflected in the SCANS report (1992) went relatively unnoticed—perhaps because, as Bloch (1996) implies, too many schools (and arts organizations) were still unaware of the content of the report.

The commissioners' observations about the theatre were of particular interest to the researcher. Theatre, by bringing together artists from all the disciplines, was the most collaborative of the arts disciplines. In their collaboration on the Secretary's Commission for Achieving Necessary Skills (1991), and through their subsequent publications, the commissioners offered the education community a wealth of ideas for school reform, and for helping vocational and academic circles come together in a common understanding of what every student needs in order to be successful in a global society.

The commissioners' recommendations represented a philosophical move towards meaningful changes in the educational system. The skills and competencies described by the commission have not yet been completely embraced by education systems, even in states that have officially adopted the SCANS philosophy, but one substantive connection between the arts and the SCANS philosophy was the notion of project-based learning as a teaching method that promoted the development of SCANS competencies. Project-based learning practices were also common in arts curricula.

## Scans, The Arts, and Project-based Learning

The recommendations of the SCANS commissioners were based on the notion that “necessary preparation includes not only reading, writing and computation skill, but also the competencies needed to apply them (Kendall, 1999, SCANS-trained students section, ¶ 3). Inherent in the SCANS philosophy, as described by Meredith Fellowes of the Department of Labor Technical Assistance Resource Bank, is the notion that “teachers work too hard . . . students should become producers rather than consumers” (Kendall, 1999, How Can We Teach SCANS section, ¶2). The philosophy articulated by Fellowes amounted to a call for teachers to pursue project-based learning (PBL) as a classroom strategy.

Curtis (2002), provided direct access to a layman’s understanding of the concept and practice of project-based learning. She used guidelines of University of Alberta professor Sylvia Chard, who defined PBL as “an in-depth investigation of a real-world topic worthy of children’s attention and effort” (Curtis, 2002, p. 50). The framework includes three basic steps:

First, the teacher selects a topic of study for the project on the basis of students’ interests, curriculum standards, and the availability of local resources. The teacher discusses the topic with the students to find out what they already know about it and helps them develop questions that their investigation will answer.

Next, the teacher arranges opportunities for students to do field work and speak to experts. The teacher provides resources to help

students with their investigations and suggests ways for students to carry out a variety of investigations.

In the concluding phase, the teacher arranges a culminating event through which the students share with others (for example, other classes, their parents, or the principal) what they have learned. (Curtis, pp.50-51)

Project-based learning was founded in experiential learning as promoted by Dewey and other early education reformers, but the formal development of the educational trend and method occurred within the past 25 years (Curtis).

While there is no universal definition of the term, the Buck Institute for Education (1998) defines standards-focused PBL as

a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks (<http://www.bie.org/pbl/pblhandbook/intro.php#history>)

Nancy Kraft (2002) of RMC Research Corporation described 17 criteria for authentic project-based learning. She concluded that PBL allowed for a variety of learning styles and had real world connotations. It occurred in a risk-free environment rich in positive feedback. It combined higher order thinking skills and hands-on experiences to promote an in-depth understanding, and was accessible to all learners. Project-based learning used various modes of communication. Assessment, like the instruction itself, was performance-based. Students were responsible for their own learning, and had ownership of the curriculum. Project-based learning was meaningful, utilizing real-time data for

investigation, analysis, and decision-making. PBL was multidisciplinary in nature, cutting across curricular areas. The teacher became the facilitator of the learning process, and students engaged in self-assessment. While Kraft (2002), along with others, provided an excellent list of benefits of project-based learning, most researchers made assumptions that the reader was already aware of the PBL concept. Thomas (2000), decreased the seventeen criteria to five basic criteria for project-based learning: (1) centrality, (2) driving question, (3) constructive investigations, (4) autonomy, and (5) realism (p.3). Key tenets of his discussion included:

PBL projects are central, not peripheral to the curriculum.

PBL Projects are focused on questions or problems that “drive” students to encounter (and struggle with) the central concepts and principles of a discipline.

Projects involve students in a constructive investigation.

Projects are student-driven to some significant degree.

Projects are realistic, not school-like. (Thomas 2000, pp. 3-4)

In project-based learning, students learned by doing (Curtis, 2002). They were given freedom in research design and execution. They were presented with a problem—often a “real-life” problem—that must be solved. For example, one group of elementary children at Newsome Park Elementary School in Newport News, Virginia developed the “easier squeezer” for a group member’s relative who lost an arm (Romano, 2002, ¶ 11). Marketing students at Valdosta State University gained hands-on experience and tested their knowledge of marketing

strategies through project-based learning in Marketing Management and Strategic Marketing courses (Reddy, 2003, ¶ 2). Officials at Saint Mary's Elementary School in Camden County, Georgia worked with the local Credit Union officials in the development of a student-operated credit union at the school (Camden Chamber, 2003). These and other PBL projects developed SCANS skills at the same time that they made a direct connection between the classroom and the world beyond the classroom.

Thomas (2000), described a high school-based math and science course that presented students each semester with two "ill-structured" problems and raw data relevant thereto. He listed a step-by-step process that could be adapted to a variety of subject matters.

Students were assigned specific tasks to (a) determine if a problem existed, (b) create an exact statement of the problem, (c) identify information needed to understand the problem, (d) identify sources to be used to gather information, (e) generate possible solutions, (f) analyze the solution using benefit/cost analysis and ripple-effect diagrams, and (g) write a policy statement supporting a preferred solution. (p. 11)

While research on the subject of project-based learning is available, much of it is focused on the area of science education, where the most active efforts in developing a comprehensive approach to PBL appear to be occurring. Thomas (2000), in a comprehensive discussion of research on project-based learning, concluded, "research on PBL implementation is largely limited to research on

project-based science administered by teachers with limited prior experience with PBL” (p. 34).

Railsback (2002) suggested that the benefits of project-based instruction are many and varied. In addition to the implications for lower achieving learners, the strategy helped to prepare children for the workplace, increased motivation, connected learning at school with reality, provided collaborative opportunities to construct knowledge, increased social and communication skills, increased problem solving skills, enabled students to make and see connections between disciplines, provided [children] opportunities to contribute to their school or community, increased self-esteem, allowed children to use their individual strengths and diverse approaches to learning, and provided a practical, real-world way to learn to use technology.

Some researchers, however, cited drawbacks to Project-base Learning. Railsback (2002), Harwell (1997), Moursong, Bielefeldt & Underwood (1997), and Thomas (1998) cited a number of potential pitfalls in project-based learning. Projects often took longer than expected. Projects often required extensive preparation time for teachers. Teachers sometimes felt a need to direct lessons so students learned what was required. Teachers sometimes gave students too much independence—students had less than adequate structure, guidelines, coaching, etc. Teachers without experience using technology as a cognitive tool had difficulty incorporating it into the projects. Non-traditional assessment was unfamiliar to some teachers. Involving parents and community members in the projects was not easy to arrange and was time-consuming. Intensive staff



development was required since teachers were not traditionally prepared to integrate content into real-world activities. Resources were not always readily available. Administrative support was sometimes lacking as the district focus was on covering the basics and standards in traditional curriculum methods. Aligning project goals with curriculum goals was difficult, and finally, parents were not always supportive of projects.

The list of disadvantages compiled by Railsback is consistent with much of the literature. Curtis (2002), warned that the PBL strategy presented many challenges for teachers.

Even teacher advocates of project-based learning tell the George Lucas Educational Foundation that it creates more work for them than the transitional textbook curriculum in which they know what will happen during every class period. (p. 52)

For the school administrator, the encouragement of project-based learning had implications with respect to the development of SCANS skills. The goals of the SCANS report were to make a more direct connection between classroom and real-life activities.

Teaching methods should encourage students to behave in ways that are likely to promote achievement not only in the classroom, but also in their careers and communities. (Kendall, 1999, ¶ 1)

Consistent with the goals of SCANS commissioners, PBL simulated life and work in the real world. The administrator, as the instructional leader of the school, could take the lead in bringing PBL practices into the curriculum. PBL

skills, Kendall argued, that are vitally important not just for the brightest and the best, but “are crucial for disadvantaged students, too” (Kendall, ¶ 7).

### The Relationship between SCANS, PBL and the Arts

Consideration of the SCANS approach and project-based learning as a school-wide strategy may have been a radical concept for many, but arts educators, who had for years used teaching strategies very similar to those described in project-based learning, probably saw little new in the PBL philosophy. Teachers in the arts, in effect, used project-based learning to develop SCANS skills and competencies before the SCANS report existed. The art teacher, for example, for years conducted a class that was entirely project-based, culminating in the “real-life” experiences of an exhibit or art show. The music teacher, the drama teacher, and the dance teacher all worked with project-based instruction as they prepared for the next production, concert or recital. These big events were littered with smaller, more focused projects such as scholarship auditions, solo and ensemble competitions, all-state chorus, and one act play competitions. In many settings the teacher/artist also became a business manager, handling a program-generated budget of thousands of dollars per year and having an impact on the local economy.

### Arts Education, SCANS, and PBL: Tying It all Together

At the center of this mini-economy is the arts coordinator or teacher. In many high school theatre settings, that individual is the Thespian Sponsor. Understanding project-based learning, and recognizing it as a common thread method in many high school theatre programs helps the sponsor, the teacher, or

the school administrator to better understand how the SCANS philosophy might be implemented. In Table 3, Kendall (1999) listed “Typical Student Activities and Their Relationship to SCANS Competencies.” Kendall’s table was not an instrument for measuring perceptions, but provided the researcher with the framework from which such an instrument might be developed. Kendall’s (1999) matrix provided a transition into the next step in researching and reviewing the arts education literature: studies that explore the relationship between SCANS competencies and foundational skills, and student participation in the arts. The application of arts education to workplace preparation came to the forefront of research via the Getty Education Institute for the Arts’ “Educating for the Workplace through the Arts” (1996). This 37-page supplement, which first appeared in Business Week, was among the first mass efforts to communicate the relationship between arts education and the development of SCANS skills. The authors suggested seven ways in which the arts build skills that are valued by business leaders. Arts education, they argued, encouraged high achievement, suppleness of mind, cross-disciplinary thinking, cooperation, understanding of diversity, an understanding of the value and quality of content, and technological competence. The authors suggested that these characteristics constituted the “added value” of an arts education. The characteristics also corresponded closely with the SCANS competencies and skills. While the studies available for this topic were somewhat limited, and tended to focus more on the foundational skills than on the competencies, several significant studies and reports, some of which are highlighted and summarized in Table 4, are worthy of discussion.

**Table 3**  
**SCANS Competencies Likely to be Practiced (Kendall, 1999)**

A	B	C	D	E	F
Speeches, debates	X	X	X	X	X
Team projects, group work	X	X	X	X	X
Essays, Research papers	X		X	X	X
Peer review/ Evaluations	X	X	X	X	X
Summarizing, Critiquing	X		X	X	x
Doing exercises, Problem-solving	X		X	X	X
Reading				X	
Listening to instructor's lectures				X	
Watching videos				X	

*Legend for Chart:*

*A—Student activities*

*B—SCANS competencies likely to be practiced: Resource management*

*C—SCANS competencies likely to be practiced: Social skills*

*D—SCANS competencies likely to be practiced: Information management*

*E—SCANS competencies likely to be practiced: Systems Management*

*F—SCANS competencies likely to be practiced: Technology*

Catterall and Waldorf (1999) evaluated the Chicago Arts Partnerships in Education (CAPE) program to determine whether low SES students in urban schools that integrate the arts and academics perform better on standardized tests than do students without arts-academic integration. An outcome of the study found both teachers and artists reported growth in students' use of resource-related skills such as responsibility, and use of resources. These traits provided a direct link to the SCANS skills and competencies.

**Table 4**  
**Selected Studies Related to Arts Education and Workforce Development**

STUDY	PURPOSE	PARTICIPANTS	OUTCOMES
Catterall & Waldorf (1999) Quantitative	Determine whether low SES students in urban public schools that integrate arts and academics perform better on standardized tests than do students in schools without arts-academic integration	12 clusters of Chicago schools containing 37 individual schools and representing 53 professional arts organizations and 27 community organizations	Arts students achieved higher scores on standardized tests than did "non-arts" students. Both teachers and artists reported involved in the study reported that student growth in resource related skills (responsibility, use of resources) was high to very high. Growth in responsibility was reported as medium-to-high
Hetland (2000) Meta-analysis	Determine whether active instruction in music enhances preschool and elementary students' performance in spatial tasks.	15 complete survey-based studies with specific criteria	Consistent effects were found across the studies in the first meta-analysis. "Active music instruction lasting two years or less leads to dramatic improvements in spatial-temporal reasoning."
Bostrom (2003) Meta-analysis	To develop a strategic perspective of public beliefs concerning public education	More than 100 complete surveys not more than six years old	The public believes: <ul style="list-style-type: none"> <li>- the arts assist in intellectual development</li> <li>- improve students' attitudes towards school</li> <li>- convey a variety of positive values such as cultural understanding, teamwork and discipline.</li> </ul>
Horn (1992) Qualitative	To determine how students in an urban theatre magnet school work collaboratively to conceive and write original theatre pieces.	Senior theatre class at urban magnet school for performing arts	During the course of the study students became more responsible for their own ideas. Attendance improved. Students began using libraries more. Self-perception and behavior. Students began to see themselves as leaders
Wolf (1998) Quantitative	To determine if reading comprehension, expressive fluency, and attitudes toward reading are affected by a year of periodic dramatic coaching based on texts.	17 at-risk children in a remedial third and fourth grade classroom	Children learned to argue and negotiate meaning of texts. The used background knowledge to make decisions. They improved accuracy and momentum.
Heath & Roach (1999) Quantitative	To examine how young people and professional artists in economically disadvantaged areas make learning work in community-based organizations devoted to production and performance in the arts	Community-based arts organizations and students involved therein	Students involved in after school arts programs improved: <ul style="list-style-type: none"> <li>- syntactic complexity,</li> <li>- hypothetical reasoning,</li> <li>- questioning approached,</li> <li>- theory-building and predicting,</li> <li>- translating and transforming,</li> <li>- creating analogies,</li> </ul> Reflecting and projecting, <ul style="list-style-type: none"> <li>-demonstrating, explaining, &amp; negotiating, and</li> <li>- displaying (trial and error) and assessing.</li> </ul>

Hughes & Wilson (2004) Qualitative	To examine the impact of taking part in theatre on young people's personal and social development.	12 young people from four established youth theatres.	Young people reported improvement in their ability to work on their own initiative, play a part in the wider world, play many parts. They also reported improved self-confidence, performance skills, understanding of others, and self-expression.
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Hetland (2000) conducted two meta-analyses of 15 studies to assess the impact of active music instruction on students' abilities to perform spatial tasks. The results of the first meta-analysis revealed consistent positive effects across the studies indicating that instruction lasting two years or less led to dramatic improvements. The second meta-analysis was not conclusive in demonstrating any relationship between active music instruction and student performance.

Bostrom (2003) conducted a meta-analysis of more than 100 complete studies addressing attitudes toward public education. In a section concerning arts education, she concluded that the public believed the arts are essential for intellectual development, the arts improved students' attitudes towards schools, and the arts helped students to develop a variety of positive values such as cultural understanding, teamwork, and discipline. As with other studies in this section, the values reflected in these conclusions link to SCANS skills and competencies.

Horn (1992), studied a senior theatre class in an urban magnet school for the performing arts. The purpose of her study was to determine how students in such a setting learn to work collaboratively to conceive and write original theatre works. The results of this qualitative study led her to conclude that students involved in theatre activities tended to become more responsible for the development of their own ideas. They used libraries more. They also

experienced greater sense of self-perception, better behavior. They began to perceive themselves as leaders.

Wolf (1998), reported in a study of reading comprehension, expressive fluency and attitudes toward reading over a one year period. Her study involved 17 at risk third and fourth-graders in a remedial classroom setting where reading was taught using a variety of dramatic techniques such as the staging of stories the children read. She determined that children involved in the class developed an ability to argue and negotiate the meaning of the text. They used background knowledge to make decisions. They showed improvement in accuracy and momentum. These traits, too, align with SCANS competencies.

Heath and Roach (1999), examined community-based arts organizations and the students involved in them. Their purpose was to examine how young people and professional artists in economically disadvantaged areas worked together to make learning work through production and performance of the arts. They concluded that students involved in after-school arts activities and programs improved performance on a number of indicators including syntactic complexity, hypothetical reasoning, their approach to questioning, to theory-building and predicting, their ability to translate and transform an idea into their own words, their use of analogies, their aptitude in reflecting and projecting their ideas, their abilities to demonstrate, explain and negotiate, and their assessment skills.

Hughes and Wilson (2004) studied twelve young people from four established youth theatres to examine the impact of participation in theatre on a

young person's personal and social development. Participants in the study reported an improved ability to work on their own initiative, and to play a part—even many parts—in the wider world. They also reported increased self-confidence, improved performance skills, a better understanding of others, and more effective self-expression.

### Summary

The arts, in one form or another, have been part of American education since before the founders brought the nation into form. In the last 150 years the various artistic disciplines have become established in the curriculum. Like all of the tenets of education, the purpose of education in the arts is to prepare the student to function successfully in the real world, personally, socially, academically, and economically. In the latter half of the twentieth century three major philosophies of arts education took shape: Discipline-based Arts Education (DBAE), the philosophy of the arts for art's sake, and the arts infusion or arts integration approach.

The National Standards for Arts Education, combined with the No Child Left Behind Act, provided a catalyst for a wealth of new research in arts education. Researchers demonstrated a relationship between the arts and self-esteem, personal development, and social development. A wealth of research exists to demonstrate a relationship between arts involvement and academic achievement. The economic development of students in the education system involves, among other concerns, preparation to enter the workforce, and it is this area of concern where research in arts education is most lacking.



The SCANS Report defined a set of basic skills and workplace competencies that were necessary for success in the 21<sup>st</sup> century. The broad categories of these skills and competencies included basic skills, thinking skills, personal qualities and specific workplace competencies.

Using the set of workplace skills and competencies defined by the SCANS Report, this researcher surveyed theatre educators as represented by Georgia Thespian sponsors in order to assess their perceptions of a possible relationship between the development of this skills set and involvement in their programs.

## CHAPTER 3

### METHODOLOGY

With support from legislative initiatives such as the No Child Left Behind Act (2001), Congress established the arts as part of the core curriculum. However, arts education professionals are still faced with developing a body of research that will provide the basis for the data-driven decisions that were characteristic of the educational accountability movement. The researcher's desire was to investigate a possible connection between arts education, as represented in a student's participation in high school theatre, and the development of workplace competencies, as described in the final report for the Secretary's Commission for Achieving Necessary Skills (1993). The researcher looked for a possible relationship between a students' participation in a high school theatre program and the development of workplace skills, using high school Thespian sponsors in Georgia as the population for the study.

#### Research Questions

The overarching question that guided this study was "What is the relationship between participation in a high school theatre program and the development of workplace competencies?" In an effort to answer this question, the researcher pursued responses to four sub-questions:

1. To what extent do Georgia Thespian sponsors identify the importance of designated workplace competencies in determining a student's success in the workplace?

2. To what extent do Georgia Thespian sponsors identify that students who participate in their theatre program are afforded the opportunity to acquire or develop workplace competencies?

3. To what degree is there a relationship between Georgia Thespian Sponsors' perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their theatre programs?

4. To what degree is there a correlation between Georgia Thespian sponsors' perceptions of administrative support and their perceptions regarding the presence of an opportunity to acquire or develop workplace competencies within their theatre programs?

Responses from these research questions were used to assess the sponsors' perceptions of SCANS' workplace competencies and the role of a student's participation in theatre in the development of these competencies.

### Research Design

The study involved distribution of a descriptive survey designed to assess the perceptions of Thespian sponsors concerning the relationship between participation in a high school theatre program and the development of SCANS skills. In order to look for such a relationship, the researcher asked respondents to record their perceptions concerning the importance of each SCANS skill, and to record their perception of the likelihood that development of each skill is supported through theatre participation.

## Population

The researcher arrived at the proposed population after examining the feasibility of defining and determining what were the unique characteristics of a high school theatre program. It is clear from existing literature, and discussions with theatre educators, and administrators, that a “theatre program” is defined as whatever a theatre educator or a school administrator wants it to be. A rural school in middle Georgia might have an administrator who defines a theatre program as an annual senior play production because in that school the senior play is the only theatre activity. An administrator from Camden County on the South Georgia Coast, or Gainesville High School in the North Georgia mountains, might think that a high school theatre program consists of several productions per year and a complete array of theatre courses available for grades 9-12. This perception, too, is based on the theatre activities that take place at the local school.

The issue of defining a high school theatre program is further confused by curricular versus extra-curricular theatre activities. High school theatre course offerings range from a single course in drama taught by a member of the English faculty to a full-range of beginning, intermediate and advanced theatre classes in a program with multiple theatre faculty members. Other schools may not offer any theatre coursework at all, but may provide outstanding opportunities for students to get involved in extra-curricular productions. In the effort to determine the common characteristics of a Georgia high school theatre program, it became apparent that perhaps the only common characteristic was the presence of a chapter of the International Thespian Society. Even though this characteristic

was not present in all Georgia high schools that produce or teach theatre, it did provide the researcher with a basis to determine and define the population to be studied.

The sample included a membership of approximately 162 individual sponsors of active Thespian Troupes in the state. These sponsors were from both public and private institutions. Sponsors were from schools of various sizes and means, and age and teaching experience vary widely. Some sponsors oversaw programs that offered a full range of classes and productions while other sponsors worked in programs that offered no classes and limited production opportunities. The unifying factors in this population were the presence of an active chapter of the International Thespian Society and the geographical location of the school within the state of Georgia. "Active" in this instance means that the local chapter is up-to-date on the payment of all dues at the state and international levels of the organization.

#### Data Collection

Because the researcher was unable to locate an existing survey instrument that measured perceptions of the relationship between participation in a high school theatre program and development of the workplace competencies defined in the SCANS Report (1992), the data for the study were collected using an original survey instrument, developed by the researcher. The instrument was distributed to and returned by the study population at the annual convention of the Georgia Thespian organization.

## Instrumentation

Because of his desire to contribute to the body of empirical research available to arts educators, the researcher addressed the core research questions, as described in the previous section, using a survey instrument (Nardi, 2003). When, after a thorough examination of available instrumentation, no instrument could be located that appropriately answered the research questions, the researcher developed an instrument with the help of a panel of experts (see Appendix B). The instrument (see Appendix A) included 33 items. Respondents were asked about their perceptions concerning SCANS skills, their perceptions concerning administrative support for their programs, and basic demographic information. The structure of the instrument is found in Table 5.

The largest portion of the instrument, addressing SCANS skills, included 28 specific skills that SCANS commissioners reported as being necessary for the success of the 21<sup>st</sup> century worker. Two of these skills, analyzing and improving systems, were combined into one item on the instrument at the advice of the supervising committee. Each of these skills was tied to a statement which read “The successful 21<sup>st</sup> century worker must develop skills in. . .” On the left side of the skills list respondents were asked to indicate on a Likert scale (Gay, 1996) their level of agreement that each indicated skill will be necessary for success in the workplace. On the right side of the skills list the respondents were asked to indicate on another Likert scale their level of agreement that students are likely to develop the indicated skill by participating in their theatre programs. Each of these Likert scales included four response options: Strongly Disagree (SD), Disagree (D), Agree (A), and Strongly Disagree (SD). Respondents were able to

agree or disagree with each statement by circling the appropriate response.

These 28 skills, all of which came directly from the conclusions drawn by the SCANS commissioners, fell into five broad categories, or competency areas: resource management, interpersonal skills, information handling, systems analysis, and technology.

The first six items (1-6) on the survey asked respondents to share their perceptions of the likelihood that a theatre student will develop competency in

**Table 5**  
**Summary of survey structure**

PERCEPTIONS CONCERNING SCANS COMPETENCIES	QUESTION NUMBER	SPECIFIC SKILL OR TOPIC
Resources	1	Time management
	2	Money management
	3	Budgeting
	4	Cost & Revenue Forecasting
	5	Creative use of available space
	6	Efficient use of space
	7	Managing others
Interpersonal Skills	8	Teamwork
	9	Tutoring & Teaching
	10	Meeting expectations of others
	11	Leadership
	12	Negotiating
	13	Adjusting to a multicultural setting
Information	14	Organization
	15	Retaining knowledge
	16	Interpreting knowledge
	17	Sharing knowledge with others
Systems	18	Understanding social systems
	19	Understanding organizational systems
	20	Understanding technological systems
	21	Monitoring systems
	22	Correcting systems
	23	Analyzing & improving how systems work
Technology	24	Using computers
	25	Using technology to solve problems
	26	Using technology for a multitude of tasks
	27	Troubleshooting and maintaining technology
DEMOGRAPHICS	28	Sex
	29	Years of experience
	30	High school classification
	31	Staff size
	32	Number of shows per year
Administrative Support	33	Overall program support

resource management. The resources addressed included time, money (budgeting, cost and revenue forecasting), and space. The next seven

items (7-13) were used to assess perceptions of the likelihood that a theatre student will develop interpersonal skills. Such skills include people management, team support, tutoring and teaching, meeting expectations, leadership, negotiation and being able to adjust to a multicultural environment.

The third category of skills appearing on the survey was those skills needed for handling and using information effectively. In items 14-17, respondents were asked to assess if a theatre student is likely to develop skills in organizing, retaining, interpreting and sharing knowledge. In the next six items (18-23) respondents were asked whether they believe theatre students will develop skills in understanding how systems work, monitoring their effectiveness, correcting problems and analyzing and developing ideas of improvement. Finally, in the last four items in this section of the survey (24-27) respondents addressed technology skills including computer use, troubleshooting and maintenance.

DeHart (1980), in his study of the condition of arts education in Florida schools, suggested that a variety of demographic information appeared to influence administrators' perceptions about the value and status of arts education in their schools. Using the DeHart model, the researcher included in his instrument demographic information concerning years of teaching experience, school size (classification), staff size, and number of productions attempted each year. In the final question on the survey instrument, respondents were asked to share their perceptions of administrative support for their theatre program.

To ensure that the data collected adequately addressed the research questions, the researcher developed an item analysis of the instrument to be used in the study (see Table 6).



**Table 6**  
**Item Analysis**

ITEM	SPECIFIC SKILL OR TOPIC	SOURCE FOR INCLUSION
1	Resources - Time management	Catterall & Waldorf, 1999
2	Resources - Money management	Catterall & Waldorf, 1999
3	Resources – Budgeting	Catterall & Waldorf, 1999
4	Resources - Cost & Revenue Forecasting	Catterall & Waldorf, 1999
5	Resources - Creative use of available space	Hetland, 2000
6	Resources - Efficient use of space	Hetland, 2000
7	Resources - Managing others	Bostrom, 2003
8	Interpersonal – Teamwork	Bostrom, 2003
9	Interpersonal - Tutoring & Teaching	Bostrom, 2003
10	Interpersonal - Meeting expectations of others	Burton, et. al., 2000
11	Interpersonal – Leadership	Horn, 1992
12	Interpersonal – Negotiating	Wolfe, 1998
13	Interpersonal – Adjusting/multicultural setting	Catterall,Chapleau,etc., 1999
14	Information – Organization	Heath & Roach, 1999
15	Information - Retaining knowledge	Hughes & Wilson, 2004
16	Information - Interpreting knowledge	Horn, 1992
17	Information - Sharing knowledge with others	Bostrom, 2003
18	Systems - Understanding social—	Heath & Roach, 1999
19	Systems - Understanding organizational—	Heath & Roach, 1999
20	Systems - Understanding technological—	Heath & Roach, 1999
21	Systems – Self-discipline/monitoring	Hughes & Wilson, 2004
22	Systems - Correcting	Horn, 1992
23	Systems – Analyzing & Improving	Seidel, 1996
24	Technology - Using computers	Mann, 1998
25	Technology - Using to solve problems	Mann,1998
26	Technology - Using for a multitude of tasks	Mann, 1998
27	Technology – Troubleshooting/maintaining	Mann, 1998
28	Sex	Nardi, 2003
29	Years of experience	DeHart, 1980
30	High school classification	DeHart. 1980
31	Staff size	DeHart, 1980
32	Number of shows per year	DeHart, 1980
33	Administrative Support	DeHart, 1980

### Data Collection

Upon approval from a panel of experts of the instrument's face and content validity, and after receipt of approval of the Use of Human Subjects proposal from Georgia Southern University's Institutional Review Board, the researcher distributed the survey with cover letter (see Appendix B) to the study

population at the sponsors' annual convention in February, 2007. In most cases, respondents returned their surveys at the conference. A few participants followed up by mailing them to the researcher at a later date.

### Data Analysis

The researcher used the Statistical Package for Social Sciences, 15.0, (2006), to analyze the data provided by ninety-six respondents who participated in the survey. In order to answer the first sub-question, addressing the extent to which Thespian sponsors' agreed that workplace competencies for success in the 21<sup>st</sup> Century workplace, as defined by the SCANS Report (1992) were important for students to acquire and develop, he examined the mean scores of each of the 27 indicators that made up the survey. The respondents who answered the questionnaire indicated their agreement or disagreement as to the importance of these skills on a four-point scale (strongly disagree = 1; disagree = 2; agree = 3; strongly agree = 4). After looking at individual means for each of the 27 specific SCANS skills, the researcher grouped those mean scores into the five general competency areas defined by the SCANS report (1992). These competencies included management of resources, interpersonal skills, use of information, understanding systems, and use of technology.

The researcher used a similar process to answer the second sub-question, concerning the extent to which Thespian sponsors agreed that there was the presence of an opportunity for students to acquire or develop the SCANS competencies through participation in their theatre programs. Again, he looked at mean scores for the individual indicators, and then grouped those scores according to the five SCANS competency areas. As in the responses

used to answer the first sub-question, respondents indicated their agreement or disagreement on a four-point scale (strongly disagree = 1; disagree = 2; agree = 3; strongly agree = 4). After examining the individual means for each of the 27 indicators on the survey, the researcher grouped those means according to the same five SCANS competency areas (resource management, interpersonal skills, use of information, understanding systems, use of technology).

In the third sub-question in the study, the researcher examined possible relationships between Thespian sponsors' perceptions of the importance of SCANS competencies (1992), and the presence of opportunities to acquire or develop those competencies through participation in their programs. The researcher used a series of paired sample t-tests (Best & Kahn, 1998) to determine differences between the respondents' perception of importance and the presence of opportunities to acquire or develop these competencies their programs. T-scores were used to determine the presence of any statistically significant relationship between perceptions of importance and the presence of opportunities to acquire or develop the skills for each of the 27 indicators representing SCANS skills in the survey.

The topic of the fourth research sub-question involved the extent to which a correlation existed between the presence of opportunities to develop SCANS competencies through participation in theatre, and the sponsors' perception of administrative support. To seek to answer this question, the researcher first used ANOVA, and subsequently used a Pearson Correlation (Best & Khan, 1998) to determine the presence of correlations between respondents' perceptions of support and the likelihood that students involved in a high school

theatre program would acquire or develop each skill. This test was run on each of the 27 indicators, not on the grouped means.

### Reporting Data

The results of the data analysis were presented in narrative and tabular form in Chapter 4. The chapter included a discussion of the population's demographic information, frequency of responses concerning importance and presence in their program of the SCANS workplace competencies and skills, and the presentation of data reporting on possible relationships between these two perceptions, and between the presence of an opportunity to develop the SCANS competencies and skills and their perception of administrative support.

### Summary

The researcher, in an effort to assess the relationship between a student's participation in a high school theatre program and the development of workplace skills and competencies, conducted a quantitative study. The population of the study was Georgia Thespian Sponsors. The measurement instrument was a survey developed by the researcher and approved by a panel of experts. Instruments were submitted in February, 2007. Data were collected from February through March, 2007. In a population of 167 Thespian Sponsors in Georgia, the researcher established a goal of a 100% response rate, with the understanding that a response rate of at least 60% is required in order for the study to be valid (Nardi, 2003).

The researcher used the Statistical Package for Social Sciences, 15.0 (2006) to analyze the data. Using these results, he reported on respondents' perceptions of the importance of SCANS competencies and skills, the presence

of opportunities to acquire or develop those skills in theatre programs, the relationships between perceived importance and presence in programs, and possible correlations between presence in programs and perceptions of administrative support.

## CHAPTER 4

### REPORT OF DATA AND DATA ANALYSIS

#### Introduction

Research and rhetoric in arts education exists on many topics, including *discipline-based arts education*, (Getty, 1985), that promotes the impact of the arts on high stakes testing and student academic performance, the *art for art's sake* movement, (Allen, 1997), that promotes the inherent value of art, and *arts infusion*, (Rabkin & Redmond, 2004), as a means of supporting the general academic curriculum, thus promoting the arts as a means of learning rather than a subject of learning. One research topic that was common among researchers in the general education movement, but lacking in the arts education community was a body of studies that addressed the relationship between education and workforce development.

With this study, the researcher proposed to examine the perceptions of Georgia Thespian Sponsors for possible relationships between the perceived importance of certain workplace competencies and the presence in theatre programs of opportunities to acquire or develop those competencies. This chapter includes a review of the research questions guiding the study, a discussion of the demographic characteristics of the respondents, a factual reporting of the findings of the study, an analysis of those data gathered, and responses to the research questions posed.

#### Research Questions

The overarching question that guided this study was “What are the perceptions of high school Thespian sponsors regarding the importance of

SCANS workplace competencies to workplace preparation and the relationship between student participation in a high school theatre program and development of those competencies as related to administrative support?” In an effort to answer this question, the researcher pursued responses to four sub-questions:

1. To what extent do Georgia Thespian sponsors perceive the importance of designated workplace competencies in determining a student’s success in the workplace?

2. To what extent do Georgia Thespian sponsors perceive that students who participate in their theatre program are afforded the opportunity to acquire or develop workplace competencies?

3. To what degree is there a relationship between Georgia Thespian Sponsors’ perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their theatre programs?

4. To what degree is there a correlation between Georgia Thespian sponsors’ perceptions of administrative support and their perceptions regarding the presence of an opportunity to acquire or develop workplace competencies within their theatre programs?

#### Respondents

The respondents to this study were active Georgia Thespian sponsors. Of the 156 High School Thespian Troupes listed on the Georgia Thespian website at [www.gathespians.org](http://www.gathespians.org), 96 (61.54%) completed survey instruments.

Demographic information collected from the survey included sex, years of experience, classification (size) of school, the number of certified drama teachers

at the school, the number of drama classes offered and number of plays produced per year.

The majority of respondents (71.9%) to the survey reported their sex were female; 28.1% of the respondents were male. Respondents in the survey reflected a range of teaching experience from newcomer to veteran, with 69% of participants having experience of more than ten years. New teachers, with zero-to-five years of experience, were represented in 17.7% of the survey responses. 10.4% of survey respondents taught for 6-10 years and 27.1% of respondents taught for 11-15 years. Respondents with 16-20 years of experience, and those with 21-25 years of experience each represented 13.5% of responses. Finally, 17.7% of respondents had taught for 25 years or more. A summary of survey respondents' teaching experience were illustrated in Table 7.

**Table 7**  
**Teaching Experience of Survey Respondents**

Years of Teaching Experience	Percentage of Respondents
0-5 years	17.7
6-10 years	10.4
11-15 years	27.1
16-20 years	13.5
21-25 years	13.5
More than 25 years	17.7

Respondents also represented schools of various sizes or classifications ranging from largest schools, in the AAAAA classification, down to the smallest schools, in the A classification. Classification, defined through membership in the



Georgia High School Association, is divided into five classifications. Schools with an F.T.E. count of 1,850 or more are placed in Class AAAAA. Schools with an F.T.E. count of 525 or less are placed in Class A. Remaining schools are divided evenly into Classes AAAA, AAA and AA. Schools may opt to transfer to a higher classification (GHSA, 2007).

Sponsors from mid-size to larger schools constituted the clear majority of respondents, with more than 80% of respondents coming from AAA, AAAA, and AAAAA classifications. Respondents' school size was illustrated in Table 8.

The majority of respondents (74%) reported one full-time drama teacher on staff at their schools. Of the remaining responses, 14.6% of respondents

**Table 8**  
**Survey Respondents' School Size**

Classification	Percentage of Respondents
A	7.3
AA	11.5
AAA	28.1
AAAA	24.0
AAAAA	29.2

reported 2 or more teachers; 10.4% of respondents reported that they had no full-time drama teacher on staff at their school. (See Table 9 for a summary of responses on the number of certified drama teachers at respondents' schools.)

When asked about their relationship with administration, 69.8% of respondents reported that the support they received from school administration for their programs was either good or outstanding. Another 24% reported

adequate support, with only 6.3% suggesting they were poorly supported by administration. A summary of these responses were reported in Table 10.

**Table 9**  
**Number of Drama Teachers at Respondents' Schools**

Number of Teachers	Percentage of Respondents
0	10.4
1	74.7
2	9.4
3 or more	5.2

**Table 10**  
**Sponsors' Perceptions of Administrative Support**

Classification	Percentage of Respondents
Poor	6.3
Adequate	24.0
Good	23.3
Outstanding	36.5

### Findings

The workplace competencies and specific area skills defined were those included in the SCANS report (1992). The skills were divided into five areas or competencies, including resource-management, interpersonal communication, information/data handling, systems comprehension, and use of technology. Skills and competencies were reviewed in Table 11.

This report of findings from survey responses was organized to answer the four research sub-questions presented in the study:

1. To what extent do Georgia Thespian sponsors perceive the importance of designated workplace competencies in determining a student's success in the workplace?

2. To what extent do Georgia Thespian sponsors perceive that students who participate in their theatre program are afforded the opportunity to acquire or develop workplace competencies?

3. To what degree is there a relationship between Georgia Thespian Sponsors' perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their theatre programs?

4. To what degree is there a correlation between Georgia Thespian sponsors' perceptions of administrative support and their perceptions regarding the presence of an opportunity to acquire or develop workplace competencies within their theatre programs?

**Table 11  
Scans Competencies and Skills**

Resource Management	Interpersonal	Information (Data)	Systems Comprehension	Technology
Allocating:	Teamwork	Acquiring & Evaluating	Understanding social organizational technological	Selecting appropriate equipment and tools
Time	Teaching	Organizing & Maintaining	Monitoring & Correcting	Applying technology to specific tasks
Money	Serving	Interpreting & Communicating	Designing & Improving	Maintaining & trouble-shooting
Materials	Leading	Processing with computers		
Space Staff	Negotiating			
	Working well with a diverse population			

## Perceptions of the Importance of Workplace Competencies

A review of the mean scores of the 27 individual skills that make up workplace competencies revealed that the respondents were in general agreement concerning the importance of each. The highest levels of agreement concerned the importance of time management (mean score of 3.94), participating in the team concept (mean score of 3.91) and self-monitoring and self discipline (mean score of 3.91). The lowest mean score (3.23), for cost and revenue forecasting, still reflected general agreement among the respondents. A complete summary of descriptive statistics reflecting perceptions of the importance of individual workplace skills was reported in Table 12.

A review of group means based on the five competency areas described in the SCANS Report (1992) resulted in a grand mean of 3.66 on a 4-point scale where a "4" indicated strong agreement that the skill was important for success in the workplace. The highest group mean was found in the use of information (3.79), followed by interpersonal skills (3.69), understanding systems (3.67), resource management (3.60) and use of technology (3.55). A summary of respondents' perceptions concerning the importance of the five workplace competencies appeared in Table 13.

## Perceptions Concerning Development of Workplace Competencies via Theatre

Upon a review of mean scores of the 27 individual skills that make up workplace competencies concerning the presence of opportunities for students to acquire or develop those skills through participation in a theatre program, the researcher found that respondents generally agreed that students involved in

**Table 12**  
**Perceptions of the importance of workplace skills**

	Minimum	Maximum	Mean	Standard. Deviation
Time Management	3.00	4.00	3.936	.247*
Money Management	2.00	4.00	3.592	.513
Budgeting	2.00	4.00	3.570	.519
Cost and Revenue Forecasting	2.00	4.00	3.237	.666
Creative use of available space	2.00	4.00	3.591	.556
Efficient use of space	2.00	4.00	3.602	.514
Managing others	2.00	4.00	3.667	.558
Participating in the team concept	3.00	4.00	3.914	.282*
Tutoring and teaching others	2.00	4.00	3.473	.618
Meeting expectations of others	2.00	4.00	3.742	.487
Leadership	2.00	4.00	3.656	.561
Negotiating	2.00	4.00	3.609	.534
Adjusting to a multicultural setting	2.00	4.00	3.742	.464
Organization	3.00	4.00	3.882	.325*
Retaining knowledge	3.00	4.00	3.783	.415
Interpreting knowledge	3.00	4.00	3.796	.405
Sharing knowledge with others	3.00	4.00	3.710	.456
Understanding social systems	3.00	4.00	3.559	.499
Understanding organizational systems	3.00	4.00	3.645	.481
Understanding technological systems	3.00	4.00	3.602	.492
Self-monitoring and self-discipline	3.00	4.00	3.914	.282*
Correcting problems	3.00	4.00	3.785	.413
Analyzing how systems work and developing ideas for improvements	2.00	4.00	3.527	.563
Using computers	3.00	4.00	3.720	.451
Using technology to solve problems	2.00	4.00	3.548	.542
Using technology for a multitude of tasks	2.00	4.00	3.612	.531
Troubleshooting and maintaining technology	2.00	4.00	3.301	.639

**Table 13**  
**Perceptions of the Importance of Workplace Competencies**

COMPETENCY AREA	MEAN	STD. DEV
Resource management skills	3.60	.204
Interpersonal communication skills	3.69	.149
Skills in handling data & information	3.79	.071
Skills in understanding systems	3.67	.149
Skills in use of technology	3.55	.179
Grand Mean (All skills combined)	3.66	.168

their programs had the opportunity to acquire or develop 23 of those competencies. They did not agree that students involved in their programs would have the opportunity to develop skills in money management, budgeting, cost and revenue forecasting, and troubleshooting and maintenance of technology. A complete summary of descriptive statistics reflecting the presence of opportunities to acquire workplace skills through participation in theatre was reported in Table 14.

A review of means, grouped by competency, concerning the presence of opportunities for students to develop workplace skills reflects agreement in four of the five competency areas. Respondents agreed that students who participated in theatre were afforded the opportunity to acquire or develop competencies in resource management (3.26), interpersonal skills (3.60), use of information (3.66), and understanding systems (3.43). Respondents disagreed that students involved in their programs had the opportunity to develop competency in the use of technology. The grand mean for all competencies

**Table 14**  
**Perceptions of the presence of opportunities to develop workplace skills**

	N	Minimum	Maximum	Mean	Standard. Deviation
Time Management	96	2.00	4.00	3.792	.433
Money Management	95	1.00	4.00	2.736	.718
Budgeting	95	1.00	4.00	2.716	.753
Cost and Revenue Forecasting	95	1.00	4.00	2.558	.768
Creative use of available space	96	2.00	4.00	3.802	.426
Efficient use of space	96	3.00	4.00	3.750	.435
Managing others	96	1.00	4.00	3.500	.616
Participating in the team concept	96	2.00	4.00	3.906	.327
Tutoring and teaching others	96	2.00	4.00	3.625	.508
Meeting expectations of others	96	2.00	4.00	3.708	.501
Leadership	96	1.00	4.00	3.708	.560
Negotiating	96	1.00	4.00	3.406	.689
Adjusting to a multicultural setting	96	1.00	4.00	3.271	.839
Organization	96	2.00	4.00	3.677	.492
Retaining knowledge	95	3.00	4.00	3.674	.471
Interpreting knowledge	96	3.00	4.00	3.688	.466
Sharing knowledge with others	96	2.00	4.00	3.583	.516
Understanding social systems	96	2.00	4.00	3.313	.638
Understanding organizational systems	96	2.00	4.00	3.375	.567
Understanding technological systems	96	1.00	4.00	3.073	.669
Self-monitoring and self-discipline	96	2.00	4.00	3.802	.426
Correcting problems	96	2.00	4.00	3.667	.496
Analyzing how systems work and developing ideas for improvements	95	2.00	4.00	3.347	.632
Using computers	96	1.00	4.00	3.021	.680
Using technology to solve problems	96	1.00	4.00	3.000	.726
Using technology for a multitude of tasks	96	1.00	4.00	3.073	.729
Troubleshooting and maintenance of technology	95	1.00	4.00	2.811	.790

combined, however, indicated general agreement with a mean score of 3.39 on a 4-point scale where a 4 indicated strong agreement. A summary of grouped means concerning the presence of opportunities to develop workplace skills was reported in Table 15.

**Table 15**  
**Perceptions of the presence of opportunities to develop workplace competencies**

COMPETENCY AREA	MEAN	STD. DEV
Resource management skills	3.26	.204
Interpersonal communication skills	3.60	.149
Skills in handling data & information	3.66	.071
Skills in understanding systems	3.43	.149
Skills in use of technology	2.98	.179
Grand Mean (All skills combined)	3.39	.390

#### Relationship between Perceived Importance and Presence in the Program

Despite some commonalities from survey responses, a series of paired samples t-test revealed no areas of significant relationship between the perceived importance of workplace skills and competencies and the presence of opportunities for students who participate in theatre programs to develop those skills and competencies. A complete summary of paired t-test results was reported in Table 16.

#### Relationship between Administrative Support and Presence in Program

The final research question addressed in this study was to determine possible correlations between Thespian sponsors' perceptions of administrative support and the opportunity to acquire or develop workplace skills and competencies within their programs. While a total of more than two-thirds



**Table 16**  
**T-scores comparing perceptions of importance to presence in theatre program**

	Mean	Standard. Deviation
Time Management	.140	.480
Money Management	.830	.750
Budgeting	.837	.829
Cost and Revenue Forecasting	.663	.893
Creative use of available space	-.226	.662
Efficient use of space	-.161	.613
Managing others	.151	.570
Participating in the team concept	.011	.404
Tutoring and teaching others	-.161	.595
Meeting expectations of others	.032	.429
Leadership	-.043	.588
Negotiating	.207	.603
Adjusting to a multicultural setting	.473	.842
Organization	.204	.501
Retaining knowledge	.109	.479
Interpreting knowledge	.108	.477
Sharing knowledge with others	.118	.529
Understanding social systems	.258	.641
Understanding organizational systems	.280	.559
Understanding technological systems	.548	.700
Self-monitoring and self-discipline	.118	.463
Correcting problems	.129	.472
Analyzing how systems work and developing ideas for improvements	.185	.662
Using computers	.720	.713
Using technology to solve problems	.570	.682
Using technology for a multitude of tasks	.565	.716
Troubleshooting and maintaining technology	.505	.761

(69.8%) of respondents indicated that they received good or outstanding support from their administration, the researcher, using an ANOVA (Best & Kahn, 1998), found only one area where evidence supported a correlation between sponsors' perceptions of administrative support for their programs and the presence in those programs of opportunities to develop workplace competencies and skills. The exception included was found in responses to Understanding Social Systems, where the score of 3.709 reflected statistical significance. F-values comparing the correlation between perceptions of administrative support and presence of opportunities to develop competencies in a theatre program appeared for all twenty-seven indicators in Table 17.

Further examination of the relationship between perceptions of administrative support and the presence of opportunities to acquire or develop SCANS competencies and skills in a theatre program involved the use of a Pearson correlation (Best & Kahn, 1998) to look for any significant correlations between the groups. The results of this series of tests support the presence of a relationship between perceptions of support and the presence of opportunities to develop skills in negotiating, understanding organizational systems, understanding technological systems, using computers, using technology to solve problems, using technology for a multitude of tasks, and troubleshooting and maintenance of technology. Each of these tests produced a correlation significant at the 0.05 level. Complete data on the series of Pearson correlations was reported in Table 18.

**Table 17**  
**Relationship between perceptions of administrative support and presence in program**

SCANS Skill	F Value
Time Management	.096
Money Management	2.315
Budgeting	1.260
Cost and Revenue Forecasting	.312
Creative use of available space	2.041
Efficient use of space	.357
Managing others	.171
Participating in the team concept	.339
Tutoring and teaching others	.463
Meeting expectations of others	.770
Leadership	.435
Negotiating	1.285
Adjusting to a multicultural setting	.306
Organization	1.204
Retaining knowledge	.164
Interpreting knowledge	.649
Sharing knowledge with others	.793
Understanding social systems	3.709*
Understanding organizational systems	2.300
Understanding technological systems	2.282
Self-monitoring and self-discipline	.427
Correcting problems	.232
Analyzing how systems work and developing ideas for improvements	.200
Using computers	2.380
Using technology to solve problems	1.538
Using technology for a multitude of tasks	2.287
Troubleshooting and maintaining technology	2.098

*\*significant at .05 level.*

**Table 18**  
**Pearson correlation of perceptions of administrative support and presence in program**

Indicator	Pearson Correlation	Significance
Time Management	-.052	.306
Money Management	.016	.439
Budgeting	-.015	.442
Cost and Revenue Forecasting	.074	.238
Creative Use of Available Space	-.027	.399
Efficient Use of Space	-.026	.401
Managing Others	.018	.429
Participating in the Team Concept	.069	.251
Tutoring and teaching others	.067	.259
Meeting expectations of others	-.045	.331
Leadership	.101	.164
Negotiating	.197*	.027
Adjusting to a multicultural setting	.067	.257
Organization	-.023	.412
Retaining knowledge	.016	.438
Interpreting Knowledge	-.024	.407
Sharing knowledge with others	.110	.144
Understanding social systems	.302*	.001
Understanding organizational systems	.220*	.016
Understanding technological systems	.237*	.010
Self-monitoring and self-discipline	-.106	.151
Correcting problems	-.069	.253
Analyzing & improving systems	.036	.364
Using computers	.183*	.037
Using technology to solve problems	.203*	.024
Using technology for a multitude of tasks	.249*	.007
Troubleshooting and maintenance of technology	.245*	.008

\* Correlation is significant at the 0.05 level (1-tailed).

## Summary

The researcher answered the four research sub-questions to determine whether Georgia Thespian sponsors perceive that participation in a high school theatre program can contribute to the acquisition and/or development of workplace competencies. The researcher found that sponsors generally recognized the importance of workplace competencies and skills recommended by the Secretary's Commission on Achieving Necessary Skills, and in general reported that many of these skills can be developed through participation in a high school theatre program. The researcher found no evidence to indicate a relationship between sponsors' perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their own programs. There was further no clear evidence to support a strong all-encompassing relationship between sponsors' perceptions of administrative support for their program, and the presence of opportunities to develop workplace competencies and skills. The researcher explored possible conclusions and implications of this data in Chapter 5.

## CHAPTER 5

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

#### Summary

While the arts have been an important element in society since the beginning of western civilization (Dukore, 1974), arts advocates have consistently faced skepticism concerning the value of the “fine” as opposed to the “useful” arts (Brockett, 1984). Whether the argument involved Plato and Aristotle (1974) or Benjamin Franklin (Kirby, 1927), the rhetoric reflects the division of historical thought on the role of the arts in society. More recently, even the population of arts advocates has shown division, with some proponents for arts education expressing the importance of the inherent qualities of the arts (Allen, 1997), and others promoting the importance of empirical data to support the claim that the arts in education improve student performance (Grumet, 2004).

During the past decade, with an increased focus on high-stakes testing and student academic achievement, researchers have begun to explore the relationship between the arts and academics (Graziano, Peterson & Shaw, 1999; Wagner, 1998). Additional research exploring this relationship, and the relationship between arts education and workforce development, provided educational decision-makers with additional data to make difficult decisions. In looking at the relationship between the arts, specifically theatre, and the workplace, this researcher used the SCANS Report (1992) as a standard. This Report made connections between arts education and the workplace.

In the latter half of the twentieth century three major philosophies of arts education took shape: Discipline-based Arts Education (Getty, 1985), the

philosophy of the arts for art's sake (Rudgers, 1996), and the arts infusion or arts integration approach (Rabkin & Redmond, 2004).

The National Standards for Arts Education (Blakeslee, 1994), combined with the No Child Left Behind Act (2001), provided a catalyst for a wealth of new research in arts education. Researchers demonstrated a relationship between the arts and self-esteem, personal development, and social development (See Table 1). This researcher found a number of studies in support of a relationship between involvement in the arts and academic achievement, but no studies that supported a connection between arts participation and the workplace preparation students required to experience economic success.

The SCANS Report (1992) defined a set of basic skills and workplace competencies that were necessary for success in the 21<sup>st</sup> century. The broad categories of these skills and competencies included basic skills, thinking skills, personal qualities and specific workplace competencies.

This researcher, to determine the relationship between a student's participation in a high school theatre program and the development of workplace competencies and skills, distributed a quantitative survey instrument to Georgia Thespian Sponsors. The instrument required respondents to record their perceptions concerning the importance, and the opportunities to develop in their theatre programs, five general competency areas and twenty-seven specific skills presented in the United States Department of Labor's Report from the Secretary's Commission on Achieving Necessary Skills (1993).

Responses were analyzed by descriptive statistics. The researcher explored the relationships between importance and presence in an educational

theatre program of workplace competencies and skills. He also examined possible correlations between presence in those programs and perceptions of administrative support .

### Analysis of Findings

In order to develop a response to the overarching question of whether participation in a high school theatre program can contribute to the acquisition and/or development of workplace competencies, the researcher answered four sub-questions. 1. To what extent do Georgia Thespian sponsors perceive the importance of designated workplace competencies in determining a student's success in the workplace? 2. To what extent do Georgia Thespian sponsors perceive that students who participate in their theatre program are afforded the opportunity to acquire or develop workplace competencies? 3. To what degree is there a relationship between Georgia Thespian Sponsors' perceptions of the value of workplace competencies and the presence of opportunity for students to acquire or develop those competencies in their theatre programs? 4. To what degree is there a correlation between Georgia Thespian sponsors' perceptions of administrative support and their perceptions regarding the presence of an opportunity to acquire or develop workplace competencies within their theatre programs?

Sponsors generally recognized the importance of workplace competencies and skills recommended by the Secretary's Commission on Achieving Necessary Skills (USDOL, 1993), and in general reported that many of these skills could be developed through participation in a high school theatre program. The results of the study did not indicate a relationship between sponsors' perceptions of the



value of workplace competencies and the presence of an opportunity for students to acquire or develop those competencies in their own programs, but there was some evidence to support a correlation between sponsors' perceptions of administrative support for their program, and the presence of opportunities to develop certain workplace competency areas.

### Discussion of Research Findings

A review of existing research literature in the context of this study revealed several areas where the findings paralleled the work of other researchers. While no studies were found to draw direct connections between participation in theatre and the development of workplace skills, several earlier researchers who studied the relationship between the arts and academic achievement reported findings that included characteristics similar to or corresponding to workplace skills. This researcher's findings concerning four of the five workplace competency areas echoed the results of previous studies drew parallels between workplace competencies and skills and student participation in the arts.

### Resource Management

Competency in resource management included time and money management, budgeting, cost and revenue forecasting, the creative and efficient use of available space and managing others. Catterall and Waldorf (1994) reported that students who participated in the art experienced high-to-very-high growth in resource-related skills. Similar conclusions were drawn by Hetland (2000) in his meta-analysis of active music instruction on students' ability to perform spatial tasks. Instruction lasting as little as two years, he concluded, could have a dramatic positive impact. This researcher's conclusions were

consistent with these prior studies. Students involved in high school theatre programs develop skills in the creative and efficient use of space.

### Interpersonal Skills

Competency in interpersonal skills included specific skills in teamwork, tutoring and teaching, meeting expectations of others, leadership, negotiating, and adjusting to a multicultural setting. A number of researchers reported that arts instruction had a positive impact on these areas of student development. Among them were Bostrom (2003), who concluded that the public perceived the arts as instrumental in cultural understanding and teamwork among numerous other areas. Other researchers drew similar conclusions. Horn (1992) reported that students who participated in a theatre class improved their sense of responsibility and their leadership skills. Wolf (1998) concluded that students in her study of periodic dramatic coaching demonstrated improvement in argument and negotiation. Heath and Roach (1999) and Hughes and Wilson (2004) also reported development of interpersonal skills. This researcher's conclusions were in line with these earlier studies. Georgia Thespian sponsors reported that students involved in theatre programs developed many of these same skills in interpersonal communication.

### Use of Information

Use of information in this researcher's study included the ability to organize information, retain and interpret knowledge, and share knowledge with others. Heath and Roach (1999), in a quantitative study of community-based arts programs for students, reported improvement in a number of skills in handling, interpreting and manipulating information. Their conclusions were

similar to those of Hughes and Wilson (2004) and Wolf (1998). Like these studies, the conclusion of this study was that students who participate in high school theatre programs develop skill in the handling and use of information.

#### Understanding Systems

Competency in understanding systems included an understanding of social, organizational and technological systems, self-discipline and self-monitoring, and correcting, analyzing and improving systems. Heath and Roach (1999) concluded that students involved in theatrical production and performance improved syntactic complexity, theory-building, predicting, translating and transforming among numerous other skills. Several researchers, including Bostrom (2003), Horn (1992), and Catterall and Waldorf (1994), reported that students who participated in the arts demonstrated improvements in self-monitoring and self-discipline. In the current study, this researcher concluded that students involved in high school theatre develop skills in monitoring and understanding systems.

#### Use of Technology

Competency in the use of technology included specific skills in the general use of computers as well as the use of computers to solve problems and for a multitude of tasks, and the ability to troubleshoot and maintain computers. Existing research literature addressing this competency in the context of arts education was difficult to find. Getty (1996) reported an understanding of technology as one of seven areas where participation in the arts built skills that were valued by business leaders, but this researcher found no previous studies suggesting that participation in the arts had a positive impact on students' ability

to use technology. Similarly, this study failed to provide evidence of such a connection. There appears to be no relationship between the participation in high school theatre and the development of technology skills.

## Conclusions

After an in depth review of existing literature, the development and distribution of a survey instrument, the collection and analysis of a responses, and a comparison of prior researchers' findings to the findings in this study, the researcher concluded that Georgia Thespian sponsors: (see abstract)

- recognize the importance of workplace skills;
- teach many workplace skills and competencies through their theatre programs;
- believe that their ability to provide students with opportunities to develop competency in the understanding of how social, organizational and technological systems work is at least in part dependent upon administrative support; and
- believe that their ability to provide students with opportunities to develop skills in the use of technology is at least in part dependent upon administrative support.

The overarching question that the researcher used to guide this study was whether participation in a high school theatre program contributed to the acquisition or development of workplace competencies. Based on these conclusions, this researcher concluded that yes, participation in theatre can, and often does, lead to the development of such competencies. Participation in theatre helps students to acquire and develop skills in

- the management and use of resources;
- interpersonal communication;
- the gathering and use of information;
- the understanding and manipulation of social, organizational and technological systems; and
- the use of technology to accomplish goals.

These skills are directly linked to the United States Department of Labor's SCANS skills. Where in prior studies researchers have produced evidence that specific workplace skills were at least a by-product of participation in theatre and other arts, this researcher concluded that participation in theatre provided a direct link to several of those workplace skills.

#### Implications

As reported in Chapter 1, the results of this study could be of importance to a variety of populations, including Thespian sponsors, leaders of business and industry, advocates of educational theatre, and educational administrators. Both practical and theoretical implications can be gleaned from the results of the study.

#### Practical Implications for Thespian Sponsors

Thespian sponsors need to use the results of this study to articulate the value of theatre to students, parents, colleagues and school administrators. All too often the arts, and theatre in particular, are the first programs to be cut during hard financial times. Thespian sponsors and teachers of theatre recognize the importance of workplace skills, and realize that they are teaching those skills through meaningful application when they produce theatre with their students.

They now need to take responsibility for telling others what they do. They must become vocal advocates for the art and craft of educational theatre.

These Thespian sponsors must also become vocal advocates for providing the support and resources necessary to effectively teach workplace competency skills. If they do not have the technology necessary to provide students with the opportunity to learn, then they must articulate and defend that need to school and system-level administration. Furthermore, if school administrators are not allowing sponsors to use a systems approach to theatre that would most effectively help students develop skills for the workplace, sponsors must communicate that need and work with administrators to develop a response.

#### Practical Implications for Leaders of Business and Industry

A successful community supports its schools. Business and industry leaders sponsor athletic programs, academic programs, and arts programs for a variety of reasons, but during difficult financial times, funding may be limited, and some programs may lose out. Leaders of commercial interests take note: theater programs teach curriculum. Theatre is not an extra-curricular event or a means of enrichment. Theatre helps to prepare the workforce. As business leaders face the difficult choices of whom to fund, they must take heed of the results of this study. Theatre promotes learning. Theatre promotes workforce development. Theatre promotes a better, stronger, community.

#### Implications for Advocates of Educational Theatre

Students, parents, and other advocates of educational theatre are called upon to use the information reported in this study as ammunition in their ongoing

quest to secure a foundation on which strong, sustainable theatre programs can be built. Advocates can and should use the results of this study to speak in a language that policy-makers understand. Theatre skills are workplace skills. Students entering the workforce in the 21<sup>st</sup> century must have these skills in order to be successful, productive citizens. Students and parents, share the passion. Spread the word and bring in new recruits to promote the value and importance of theatre in schools.

#### Implications for Educational Administrators

The results of this could be used by educational administrators to support arts education programs at the school and district levels. These results support the conclusion that theatre is a vocational program. Theatre teaches success in the workplace by equipping the worker with the skills necessary to succeed. The policy implications of this conclusion are substantial. Administrators are called upon to recognize the value of theatre as an integral part of a student's educational program. Administrators who want to take advantage of the knowledge gained through this study are encouraged to take three specific steps to act on the findings.

1. Administrators, who already recognize the importance of workplace skills, must now recognize the value of theatre as a means of promoting the development of those skills in students who participate. Recognition is just the first step, but it is an important first step.

2. Administrators must establish a policy that allows Thespian sponsors and other theatre teachers the opportunity to develop students' proficiency in the understanding and application of social, organizational and technological

systems. Specifically, theatre teaches protocol by expecting all students to follow protocol. Ask sponsors what challenges they face that make it difficult to teach students about the operation of systems. Ask what administrative support is missing that must be provided in order for them to be effective. Be prepared to listen, and to find solutions to the problems they share. If they need space, find them the space they need. If they need to be allowed to use unorthodox methods of classroom/production management, work with them to find ways to meet their needs.

3. Administrators must begin to consider the technological needs of theatre programs as they establish budget priorities. Like support for systems, Thespian sponsors reported a problem with administrative support in the area of technology. Again, listen to sponsors and teachers to determine the source of the problem. Assess the current status and future needs for technology in theatre programs, and raise the level of priority for meeting those needs.

#### Theoretical Implications

In the early pages of this study, the researcher alluded to a series of debates as old as western civilization: debates over the value of theatre and the extent to which it should be funded, debates over the value of arts education in general, the arguments of art for arts-sake, arts infusion, or arts for student achievement. This battle continues today. The past two thousand years of discussion have failed to produce consensus, and there is no reason to believe that the next two thousand will be any more successful in doing so.

This researcher offers a simple but potentially effective strategy: continue the discussion, but do so in agreement. Agree that the art for the sake of art is



an important tenet in the theory of arts education. Agree that arts infusion is an effective strategy for teaching and learning that helps to reach students with a variety of learning styles. Agree that participation in the arts expands the life experience of students, and thus develops qualities that lead to greater student achievement. And, as a result of this study, agree that in addition to all of these wonderful qualities, the arts, or at least theatre arts, also promote the development of workplace skills. Let the discussion continue, but recognize the potential for everyone to win if all work together.

### Summary

Theatre is vocational. Students who participate in theatre develop job skills. They display growth in many workplace competencies and skills necessary for the 21<sup>st</sup> century worker to experience success. Theatre students learn to use and manage resources from rehearsal space to scene shops to the people who staff a production. They learn to use space creatively. They especially learn to manage their time. Theatre students develop interpersonal communication skills. They learn to manage others by participating in the team concept. They teach one another. They discern and respond to the expectations that others place on them. They take on the role of leaders, and meet the expectations of leadership. They negotiate to resolve problems, and learn to work with people who are different from themselves.

Theatre students acquire and use information. They learn to organize. They retain and interpret knowledge in a very literal sense through the memorization and delivery of lines as characters in a play, but also by learning

from the experiences of the characters they play. They share what they learn with others.

Theatre students learn how systems operate, and learn how to operate within systems. Through working with others in a production setting they develop an understanding of protocol. As they watch and participate in the onstage, backstage and promotional happenings of a production, they come to understand the way organization, and organizations, work. They acquire hands-on experience as the technology of lighting, sound, scenery, and costumes interact to support the theatre experience.

Finally, theatre students learn how to use technology to create, to solve and to support. Lighting and sound choices have an impact on the mood of a performance. The use of wheeled wagons on stage speeds up set changes and eliminates delays in a performance. Costumes, lighting, sound and virtually all the technological elements of a production support the overall performance. Students also learn to troubleshoot equipment and technology, sometimes making adjustments in the middle of a performance in front of a live audience.

Theatre is vocational. It is an effective means for students to develop workplace skills. Theatre is an important, meaningful part of a comprehensive education that prepares students for success in the 21<sup>st</sup> century workplace.

#### Dissemination

The researcher will use the results of this study at the local level to influence local decision-making in arts education, with the specific goal of continued expansion of drama/theatre opportunities to all grade levels. At the state level, reports at state meetings including the annual convention of the

Georgia Theatre Conference, and the annual conference of Georgia State Thespians will be made. Additional presentations will be explored through organizations of educational administrators, including the Southern Regional Council of Professors of Educational Administration.

The results of this study will be presented at a future convention of the Southeastern Theatre Conference. The researcher will also explore additional opportunities to present at other regional theatre organizations. Exposure to state-level administrator organizations will lead to opportunities to present to administrators at the regional and national levels.

Finally, on a national level, the researcher anticipates presenting the results of this study to participants in the Southern Regional Educational Board's annual High Schools That Work convention. This organization hosts the largest educational conference in the nation each July. Its mission, making the connection between what happens in the classroom and what happens in the workplace, makes it an ideal location to report the results of a study that makes the effort to connect high school theatre participation with the development of workplace skills.

### Recommendations

It is clear and conclusive from the evidence provided in this study that Georgia Thespian sponsors recognize the importance of workplace skills and agree that students in their program are afforded the opportunity to develop and/or acquire those skills. In the additional two sub-questions developed to answer the overarching question of whether participation in a high school theatre program promotes the development of workplace skills, the answers are less

clear and raise additional questions that may become the subject of future studies.

Because he believes it is worthy of note that Thespian sponsors believe use of technology to be an important workplace competency, but do not offer opportunities for students to develop it, this researcher recommends one such study to explore the extent to which the teaching or use of technology is present in theatre arts curriculum and educational theatre programs. To what extent do theatre teachers (and students) use technology in the making of theatre? Would funding or other factors result in an increased use of technology in educational theatre?

The results of this study also reflected a correlation between the presence of opportunities to develop competency in the use of technology and sponsors' perceptions of administrative support. Additional research might be conducted to explore the nature of that correlation—to determine if the absence of technology in theatre programs is due to a lack of administrative support or funding.

Another area where the researcher recommends additional study is in the correlation between understanding systems and perceptions of administrative support. Additional research in this area might explore whether sponsors believe that there are qualities in the design and operation of a theatre program that warrant special consideration from administrators. In other words, research might be undertaken to determine whether administrators expect the theatre classroom to look and sound like a traditional classroom, and whether such expectations hinder the ability of theatre educators to teach these competencies.

The results of this study indicate strong agreement concerning the importance of workplace competencies, and in most cases, strong agreement that students involved in theatre have opportunities to acquire or develop those competencies, but there was no evidence of a relationship between these two variables. Additional research might be conducted to delve into the reasons that no such relationship was indicated. Do sponsors make conscious decisions about what they teach through theatre, or do they simply report what they understand to be the inherent teaching value of theatre arts?

There is also a need for additional research to further explore the relationship between the perceived importance of competencies and the presence of opportunities to develop them. This researcher has established that Georgia Thespian sponsors agree the skills are important, and report that such opportunities are present. But if there is no relationship between the two variables, *why* are they present? The existing study confirms the non-relationship, but any other conclusions about their presence are mere speculation.

Consider, for example, the generally low score (in the context of this study) reported by sponsors concerning the presence in their program of opportunities to develop skills in the use of technology. Why did sponsors report these results? Is it because they do not see the relative importance of technology in theatre, because they need to be brought into the 21<sup>st</sup> century and begin to use technology, or because they do not receive the administrative support to bring technology into their classroom and theatre laboratories? These are

questions that cannot be answered by the existing study. More research is warranted in this and other areas.

The researcher also recommends that this study be replicated in other states, with other Thespian sponsors. Comparison between Georgia results and results from other states will help to establish potential patterns or tendencies, and may provide opportunities for further discussion.

### Closing

In the first chapter, this researcher quoted Aguecheek's lament from Shakespeare's Twelfth Night. "O, but had I followed the arts," he cried, alluding to a better quality of life that might have come with an arts-enriched experience. He recognized his limitations, but beyond his desire to understand French, fails to articulate the value of the aesthetic education he longed for. As a result of this study, Aguecheeks everywhere can know the true value of following the arts. They can develop skills in resource management, interpersonal communication, use of information, and understanding systems. These are skills that are needed for the workplace, skills that will enable them to be successful in the 21<sup>st</sup> century.

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APPENDIX A  
SURVEY INSTRUMENT



**Thespian Sponsor's Perceptions Regarding the Importance of Workplace Competencies  
and the Opportunity for Students to Develop Those Competencies through  
Participation in a High School Theatre Program.**

The data collected in this survey will be used in a dissertation submitted by a doctoral candidate at Georgia Southern University. It is structured to furnish information concerning:

1. the perceptions of Georgia Thespian sponsors regarding the value of designated workplace competencies in determining a student's success in the workplace;

2. the perceptions of Georgia Thespian sponsors regarding whether students who participate in their theatre program are afforded the opportunity to acquire or develop those competencies;

3. the relationship between the perceived importance of a competency and the opportunity for students to acquire or develop the competency by participating in the Georgia Thespian sponsor's program; and

4. the extent to which Georgia Thespian sponsors perceive a relationship between various demographic variables and a student's opportunity to acquire or develop these competencies.

The workplace competencies used in this survey are described in the 1992 Report from the Secretary's Commission on Achieving Necessary Skills. Based on your perceptions and personal experience, please provide responses to each of the statements below. A "theatre student" is defined as a student who participates in a high school theatre program and/or enrolls in theatre courses. Please return the completed survey to me using the enclosed envelope. Thank you for your time and support.

*Part I: Perceptions concerning Workplace Competencies*

Please circle the response that best describes your position regarding each of the statements

Important: Please be certain to respond to both the left and right columns in the survey.

SD = Strongly Disagree

D = Disagree

A = Agree

SA = Strongly Agree

To be successful in the workplace, a student should acquire this competency.	Workplace Competencies: The successful 21 <sup>st</sup> century worker must demonstrate competence in . . .	Students who participate in my theatre program have the opportunity to acquire or develop this competency
SD D A SA	1. Time Management	SD D A SA
SD D A SA	2. Money management	SD D A SA
SD D A SA	3. Budgeting	SD D A SA
SD D A SA	4. Cost and Revenue Forecasting	SD D A SA
SD D A SA	5. Creative use of available space	SD D A SA
SD D A SA	6. Efficient use of space	SD D A SA
SD D A SA	7. Managing others	SD D A SA
SD D A SA	8. Participating in the team concept	SD D A SA
SD D A SA	9. Tutoring and teaching others	SD D A SA
SD D A SA	10. Meeting expectations of others	SD D A SA
SD D A SA	11. Leadership	SD D A SA
SD D A SA	12. Negotiating	SD D A SA

SD D A SA	13. Adjusting to a multicultural setting	SD D A SA
SD D A SA	14. Organization	SD D A SA
SD D A SA	15. Retaining knowledge	SD D A SA
SD D A SA	16. Interpreting knowledge	SD D A SA
SD D A SA	17. Sharing knowledge with others	SD D A SA
SD D A SA	18. Understanding social systems	SD D A SA
SD D A SA	19. understanding organizational systems	SD D A SA
SD D A SA	20. understanding technological systems	SD D A SA
SD D A SA	21. Self-monitoring and self-discipline	SD D A SA
SD D A SA	22. Correcting problems	SD D A SA
SD D A SA	23. Analyzing how systems work and developing ideas for improvements	SD D A SA
SD D A SA	24. Using computers	SD D A SA
SD D A SA	25. Using technology to solve problems	SD D A SA
SD D A SA	26. Using technology for a multitude of tasks	SD D A SA
SD D A SA	27. Troubleshoot and maintaining technology	SD D A SA

*Part II Demographic Variables*

Please provide the following information about you, your school, and your program.

28. \_\_\_\_\_ Male \_\_\_\_\_ Female

29. Number of years in education:

\_\_\_\_\_ 0-5      \_\_\_\_\_ 11-15      \_\_\_\_\_ 21-25      \_\_\_\_\_ 6-10      \_\_\_\_\_ 16-20      \_\_\_\_\_ 25+

30. High school classification:

\_\_\_\_\_ A      \_\_\_\_\_ AA      \_\_\_\_\_ AAA      \_\_\_\_\_ AAAA      \_\_\_\_\_ AAAAA

31. Does your high school have a certified drama teacher?

\_\_\_\_\_ Yes:      # of full-time positions: \_\_\_\_\_      # of part-time positions: \_\_\_\_\_  
# of classes offered per year \_\_\_\_\_

\_\_\_\_\_ No, but we offer after-school drama: Number of faculty involved in program: \_\_\_\_\_

32. How many plays per year does your school present?

\_\_\_\_\_ 0      \_\_\_\_\_ 1-2      \_\_\_\_\_ 3-4      \_\_\_\_\_ 5 or more

33. How do you rate the support your program receives from your administration?

\_\_\_\_\_ Poor      \_\_\_\_\_ Adequate      \_\_\_\_\_ Good      \_\_\_\_\_ Outstanding

## APPENDIX B

INFORMATION ON PANEL OF EXPERTS TO PARTICIPATE IN ASSESSMENT  
OF SURVEY INSTRUMENT FOR CONTENT AND FACE VALIDITY.

## PANEL MEMBERS

Rachel Baldwin  
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## SAMPLE LETTER

September 30, 2005  
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Statesboro, GA 30460

Dr. Burnham,

(As you know) I am a doctoral student at Georgia Southern University. I am developing my own survey instrument to use as part of my dissertation. The topic of my study is the relationship between participation in a high school theatre program and the development of workplace competencies as perceived by Georgia Thespian Sponsors. I have proposed to do a quantitative study of the perceptions of high school Thespian sponsors in Georgia concerning their perceptions of the importance of workplace skills as defined by the Secretary's Commission on Achieving Necessary Skills (1991) and whether or not the development of those skills is promoted through participation in a high school theatre program.

I have talked with Dr. Michael Richardson about putting together a panel to review the face and content validity of the survey instrument. I respectfully ask that you serve on that panel as a representative from Georgia Southern University.

Please let me know if you are willing to do this for me. If so, I will forward the appropriate materials.

Dean Slusser  
Fine Arts Director  
Camden County Schools  
Kingsland, GA

APPENDIX C  
STATISTICAL PACKAGE FOR SOCIAL SCIENCES COMPLETE DATA  
ANALYSIS REPORTS USED IN THE STUDY

**ANSWER TO RESEARCH QUESTION 1**  
**Descriptive Statistics – IMPORTANCE (Required for Success)**

	N	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Time Management	93	3.00	4.00	366.00	3.9355	.02561	.24700	.061
Money Management	92	2.00	4.00	330.50	3.5924	.05350	.51317	.263
Budgeting	93	2.00	4.00	332.00	3.5699	.05383	.51915	.270
Cost and Revenue Forecasting	93	2.00	4.00	301.00	3.2366	.06905	.66591	.443
Creative use of available space	93	2.00	4.00	334.00	3.5914	.05769	.55632	.309
Efficient use of space	93	2.00	4.00	335.00	3.6022	.05327	.51372	.264
Managing others	93	2.00	4.00	341.00	3.6667	.05788	.55821	.312
Participating in the team concept	93	3.00	4.00	364.00	3.9140	.02923	.28192	.079
Tutoring and teaching others	93	2.00	4.00	323.00	3.4731	.06413	.61840	.382
Meeting expectations of others	93	2.00	4.00	348.00	3.7419	.05048	.48685	.237
Leadership	93	2.00	4.00	340.00	3.6559	.05821	.56134	.315
Negotiating	92	2.00	4.00	332.00	3.6087	.05563	.53363	.285
Adjusting to a multicultural setting	93	2.00	4.00	348.00	3.7419	.04811	.46399	.215
Organization	93	3.00	4.00	361.00	3.8817	.03367	.32469	.105
Retaining knowledge	92	3.00	4.00	348.00	3.7826	.04324	.41473	.172
Interpreting knowledge	93	3.00	4.00	353.00	3.7957	.04204	.40538	.164
Sharing knowledge with others	93	3.00	4.00	345.00	3.7097	.04732	.45637	.208
Understanding social systems	93	3.00	4.00	331.00	3.5591	.05176	.49918	.249
Understanding organizational systems	93	3.00	4.00	339.00	3.6452	.04988	.48106	.231
Understanding technological systems	93	3.00	4.00	335.00	3.6022	.05103	.49211	.242
Self-monitoring and self-discipline	93	3.00	4.00	364.00	3.9140	.02923	.28192	.079
Correcting problems	93	3.00	4.00	352.00	3.7849	.04284	.41309	.171
Analyzing how systems work and developing ideas for improvements	93	2.00	4.00	328.00	3.5269	.05840	.56321	.317
Using computers	93	3.00	4.00	346.00	3.7204	.04679	.45122	.204
Using technology to solve problems	93	2.00	4.00	330.00	3.5484	.05621	.54206	.294
Using technology for a multitude of tasks	92	2.00	4.00	333.00	3.6196	.05539	.53127	.282
Troubleshooting and maintaining technology	93	2.00	4.00	307.00	3.3011	.06627	.63904	.408
Valid N (listwise)	90							

**ANSWER TO RESEARCH QUESTION 2**  
**Descriptive Statistics – Developed through Theatre**

	N	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
D Time Management	96	2.000	4.000	364.000	3.79167	.044220	.433266	.188
D Money Management	95	1.00	4.00	260.00	2.7368	.07364	.71772	.515
D Budgeting	95	1.00	4.00	258.00	2.7158	.07728	.75319	.567
D Cost and Revenue Forecasting	95	1.00	4.00	243.00	2.5579	.07879	.76792	.590
D Creative use of available space	96	2.00	4.00	365.00	3.8021	.04348	.42599	.181
D Efficient use of space	96	3.00	4.00	360.00	3.7500	.04443	.43529	.189
D Managing others	96	1.00	4.00	336.00	3.5000	.06283	.61559	.379
D Participating in the team concept	96	2.00	4.00	375.00	3.9062	.03337	.32697	.107
D Tutoring and teaching others	96	2.00	4.00	348.00	3.6250	.05183	.50783	.258
D Meeting expectations of others	96	2.00	4.00	356.00	3.7083	.05112	.50088	.251
D Leadership	96	1.00	4.00	356.00	3.7083	.05719	.56039	.314
D Negotiating	96	1.00	4.00	327.00	3.4063	.07037	.68944	.475
D Adjusting to a multicultural setting	96	1.00	4.00	314.00	3.2708	.08569	.83954	.705
D Organization	96	2.00	4.00	353.00	3.6771	.05021	.49193	.242
D Retaining knowledge	95	3.00	4.00	349.00	3.6737	.04836	.47135	.222
D Interpreting knowledge	96	3.00	4.00	354.00	3.6875	.04756	.46595	.217
D Sharing knowledge with others	96	2.00	4.00	344.00	3.5833	.05270	.51640	.267
D Understanding social systems	96	2.00	4.00	318.00	3.3125	.06508	.63764	.407
D Understanding organizational systems	96	2.00	4.00	324.00	3.3750	.05783	.56662	.321
D Understanding technological systems	96	1.00	4.00	295.00	3.0729	.06826	.66877	.447
D Self-monitoring and self-discipline	96	2.00	4.00	365.00	3.8021	.04348	.42599	.181
D Correcting problems	96	2.00	4.00	352.00	3.6667	.05058	.49559	.246
D Analyzing how systems work and developing ideas for improvements	95	2.00	4.00	318.00	3.3474	.06483	.63192	.399
D Using computers	96	1.00	4.00	290.00	3.0208	.06943	.68023	.463
D Using technology to solve problems	96	1.00	4.00	288.00	3.0000	.07404	.72548	.526
D Using technology for a multitude of tasks	96	1.00	4.00	295.00	3.0729	.07441	.72902	.531
D Troubleshooting and maintenance of technology	95	1.00	4.00	267.00	2.8105	.08100	.78949	.623
Valid N (listwise)	92							

\* D = presence of an opportunity to develop these skills in theatre programs



**DISSERTATION - GROUPED MEANS**

	IMPORTANCE RESOURCE MANAGEMENT	IMPORTANCE INTERPERSONAL COMMUNICATION	IMPORTANCE HANDLING DATA & INFORMATION	IMPORTANCE UNDERSTANDING SYSTEMS	IMPORTANCE USE OF TECHNOLOGY
VD	7	6	4	6	4
MG	0	1	3	1	3
Mean	3.599243	3.689250	3.792425	3.672050	3.547375
Std. Error of Mean	.0771682	.0606569	.0352618	.0607457	.0893525
Std. Deviation	.2041679	.1485786	.0705235	.1487959	.1787051
Variance	.042	.022	.005	.022	.032
Minimum	3.2366	3.4731	3.7097	3.5269	3.3011
Maximum	3.9355	3.9140	3.8817	3.9140	3.7204

	DEVELOPED RESOURCE MANAGEMENT	DEVELOPED INTERPERSONAL COMMUNICATION	DEVELOPED HANDLING DATA & INFORMATION	DEVELOPED UNDERSTANDIN G SYSTEMS	DEVELOPED USE OF TECHNOLOGY
VD	7	6	4	6	4
MG	0	1	3	1	3
Mean	3.264896	3.604150	3.655400	3.429433	2.976050
Std. Error of Mean	.2147487	.0937426	.0242119	.1073402	.0572734
Std. Deviation	.5681716	.2296215	.0484238	.2629288	.1145468
Variance	.323	.053	.002	.069	.013
Minimum	2.5579	3.2708	3.5833	3.0729	2.8105
Maximum	3.8021	3.9062	3.6875	3.8021	3.0729

**Statistics**

		IMPORTANCE	DEVELOPED
N	Valid	27	27
	Missing	0	0
Mean		3.656359	3.391910
Std. Error of Mean		.0323417	.0750472
Std. Deviation		.1680526	.3899564
Variance		.028	.152
Minimum		3.2366	2.5579
Maximum		3.9355	3.9062

**ANSWER TO RESEARCH QUESTION 3**  
**Paired Samples Test\***

		Paired Differences					t
		Mean	Standard Deviation	Std. Error Mean	95% Confidence Interval of the Difference		Mean
					LOWER	UPPER	
Pair 1	Time Management - D Time Management	.139785	.479841	.049757	.040963	.238607	2.809
Pair 2	Money Management - D Money Management	.82967	.74989	.07861	.67350	.98584	10.554
Pair 3	Budgeting - D Budgeting	.83696	.82910	.08644	.66525	1.00866	9.683
Pair 4	Cost and Revenue Forecasting - D Cost and Revenue Forecasting	.66304	.89292	.09309	.47813	.84796	7.122
Pair 5	Creative use of available space - D Creative use of available space	-.22581	.66150	.06859	-.36204	-.08957	-3.292
Pair 6	Efficient use of space - D Efficient use of space	-.16129	.61309	.06357	-.28755	-.03503	-2.537
Pair 7	Managing others - D Managing others	.15054	.57002	.05911	.03314	.26793	2.547
Pair 8	Participating in the team concept - D Participating in the team concept	.01075	.40364	.04186	-.07238	.09388	.257
Pair 9	Tutoring and teaching others - D Tutoring and teaching others	-.16129	.59509	.06171	-.28385	-.03873	-2.614
Pair 10	Meeting expectations of others - D Meeting expectations of others	.03226	.42864	.04445	-.05602	.12054	.726
Pair 11	Leadership - D Leadership	-.04301	.58818	.06099	-.16415	.07812	-.705
Pair 12	Negotiating - D Negotiating	.20652	.60289	.06286	.08167	.33138	3.286
Pair 13	Adjusting to a multicultural setting - D Adjusting to a multicultural setting	.47312	.84173	.08728	.29977	.64647	5.420
Pair 14	Organization - D Organization	.20430	.50128	.05198	.10106	.30754	3.930
Pair 15	Retaining knowledge - D Retaining knowledge	.10870	.47939	.04998	.00942	.20797	2.175
Pair 16	Interpreting knowledge - D Interpreting knowledge	.10753	.47691	.04945	.00931	.20575	2.174
Pair 17	Sharing knowledge with others - D Sharing knowledge with others	.11828	.52852	.05481	.00943	.22713	2.158

\* D = presence of an opportunity to develop these skills in theatre programs

Pair 18	Understanding social systems - D Understanding social systems	.25806	.64105	.06647	.12604	.39009	3.882
Pair 19	Understanding organizational systems - D Understanding organizational systems	.27957	.55883	.05795	.16448	.39466	4.824
Pair 20	Understanding technological systems - D Understanding technological systems	.54839	.69963	.07255	.40430	.69247	7.559
Pair 21	Self-monitoring and self-discipline - D Self-monitoring and self-discipline	.11828	.46273	.04798	.02298	.21358	2.465
Pair 22	Correcting problems - D Correcting problems	.12903	.47149	.04889	.03193	.22613	2.639
Pair 23	Analyzing how systems work and developing ideas for improvements - D Analyzing how systems work and developing ideas for improvements	.18478	.66182	.06900	.04772	.32184	2.678
Pair 24	Using computers - D Using computers	.72043	.71270	.07390	.57365	.86721	9.748
Pair 25	Using technology to solve problems - D Using technology to solve problems	.56989	.68203	.07072	.42943	.71036	8.058
Pair 26	Using technology for a multitude of tasks - D Using technology for a multitude of tasks	.56522	.71567	.07461	.41701	.71343	7.575
Pair 27	Troubleshooting and maintaining technology - D Troubleshooting and maintenance of technology	.50538	.76077	.07889	.34870	.66206	6.406

**ANSWER TO RESEARCH QUESTION 4**  
**ANOVA\***

		Sum of Squares	df	Mean Square	F	Sig.
D Time Management	Between Groups	.055	3	.018	.096	.962
	Within Groups	17.778	92	.193		
	Total	17.833	95			
D Money Management	Between Groups	3.433	3	1.144	2.315	.081
	Within Groups	44.988	91	.494		
	Total	48.421	94			
D Budgeting	Between Groups	2.127	3	.709	1.260	.293
	Within Groups	51.199	91	.563		
	Total	53.326	94			
D Cost and Revenue Forecasting	Between Groups	.565	3	.188	.312	.816
	Within Groups	54.867	91	.603		
	Total	55.432	94			
D Creative use of available space	Between Groups	1.076	3	.359	2.041	.114
	Within Groups	16.164	92	.176		
	Total	17.240	95			
D Efficient use of space	Between Groups	.207	3	.069	.357	.784
	Within Groups	17.793	92	.193		
	Total	18.000	95			
D Managing others	Between Groups	.200	3	.067	.171	.915
	Within Groups	35.800	92	.389		
	Total	36.000	95			
D Participating in the team concept	Between Groups	.111	3	.037	.339	.797
	Within Groups	10.045	92	.109		
	Total	10.156	95			
D Tutoring and teaching others	Between Groups	.365	3	.122	.463	.708
	Within Groups	24.135	92	.262		
	Total	24.500	95			
D Meeting expectations of others	Between Groups	.584	3	.195	.770	.514
	Within Groups	23.249	92	.253		
	Total	23.833	95			
D Leadership	Between Groups	.417	3	.139	.435	.728
	Within Groups	29.416	92	.320		
	Total	29.833	95			
D Negotiating	Between Groups	1.817	3	.606	1.285	.284
	Within Groups	43.340	92	.471		
	Total	45.156	95			
D Adjusting to a multicultural setting	Between Groups	.662	3	.221	.306	.821
	Within Groups	66.296	92	.721		
	Total	66.958	95			
D Organization	Between Groups	.868	3	.289	1.204	.313
	Within Groups	22.121	92	.240		
	Total	22.990	95			

\* D = presence of an opportunity to develop these skills in theatre programs

D Retaining knowledge	Between Groups	.112	3	.037	.164	.920
	Within Groups	20.772	91	.228		
	Total	20.884	94			
D Interpreting knowledge	Between Groups	.428	3	.143	.649	.585
	Within Groups	20.197	92	.220		
	Total	20.625	95			
D Sharing knowledge with others	Between Groups	.638	3	.213	.793	.501
	Within Groups	24.695	92	.268		
	Total	25.333	95			
D Understanding social systems	Between Groups	4.167	3	1.389	3.709	.014
	Within Groups	34.458	92	.375		
	Total	38.625	95			
D Understanding organizational systems	Between Groups	2.128	3	.709	2.300	.082
	Within Groups	28.372	92	.308		
	Total	30.500	95			
D Understanding technological systems	Between Groups	2.943	3	.981	2.282	.084
	Within Groups	39.546	92	.430		
	Total	42.490	95			
D Self-monitoring and self-discipline	Between Groups	.237	3	.079	.427	.734
	Within Groups	17.003	92	.185		
	Total	17.240	95			
D Correcting problems	Between Groups	.175	3	.058	.232	.874
	Within Groups	23.158	92	.252		
	Total	23.333	95			
D Analyzing how systems work and developing ideas for improvements	Between Groups	.246	3	.082	.200	.896
	Within Groups	37.291	91	.410		
	Total	37.537	94			
D Using computers	Between Groups	3.166	3	1.055	2.380	.075
	Within Groups	40.793	92	.443		
	Total	43.958	95			
D Using technology to solve problems	Between Groups	2.387	3	.796	1.538	.210
	Within Groups	47.613	92	.518		
	Total	50.000	95			
D Using technology for a multitude of tasks	Between Groups	3.505	3	1.168	2.287	.084
	Within Groups	46.985	92	.511		
	Total	50.490	95			
D Troubleshooting and maintaining technology	Between Groups	3.790	3	1.263	2.098	.106
	Within Groups	54.799	91	.602		
	Total	58.589	94			

**ANSWER TO RESEARCH QUESTION 4**  
**Pearson Correlations\***

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Time Management	3.79167	.433266	96

**Correlations**

		Administrative support	D Time Management
Administrative support	Pearson Correlation	1	-.052
	Sig. (2-tailed)		.613
	N	96	96
D Time Management	Pearson Correlation	-.052	1
	Sig. (2-tailed)	.613	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Time Management	3.79167	.433266	96

**Correlations**

		Administrative support	D Time Management
Administrative support	Pearson Correlation	1	-.052
	Sig. (1-tailed)		.306
	N	96	96
D Time Management	Pearson Correlation	-.052	1
	Sig. (1-tailed)	.306	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Money Management	2.7368	.71772	95

\* D = presence of an opportunity to develop these skills in theatre programs

**Correlations**

		Administrative support	D Money Management
Administrative support	Pearson Correlation	1	.016
	Sig. (1-tailed)		.439
	N	96	95
D Money Management	Pearson Correlation	.016	1
	Sig. (1-tailed)	.439	
	N	95	95

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Budgeting	2.7158	.75319	95

**Correlations**

		Administrative support	D Budgeting
Administrative support	Pearson Correlation	1	-.015
	Sig. (1-tailed)		.442
	N	96	95
D Budgeting	Pearson Correlation	-.015	1
	Sig. (1-tailed)	.442	
	N	95	95

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Cost and Revenue Forecasting	2.5579	.76792	95

**Correlations**

		Administrative support	D Cost and Revenue Forecasting
Administrative support	Pearson Correlation	1	.074
	Sig. (1-tailed)		.238
	N	96	95
D Cost and Revenue Forecasting	Pearson Correlation	.074	1
	Sig. (1-tailed)	.238	
	N	95	95

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Creative use of available space	3.8021	.42599	96

**Correlations**

		Administrative support	D Creative use of available space
Administrative support	Pearson Correlation	1	-.027
	Sig. (1-tailed)		.399
	N	96	96
D Creative use of available space	Pearson Correlation	-.027	1
	Sig. (1-tailed)	.399	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Efficient use of space	3.7500	.43529	96

**Correlations**

		Administrative support	D Efficient use of space
Administrative support	Pearson Correlation	1	-.026
	Sig. (1-tailed)		.401
	N	96	96
D Efficient use of space	Pearson Correlation	-.026	1
	Sig. (1-tailed)	.401	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Managing others	3.5000	.61559	96



**Correlations**

		Administrative support	D Managing others
Administrative support	Pearson Correlation	1	.018
	Sig. (1-tailed)		.429
	N	96	96
D Managing others	Pearson Correlation	.018	1
	Sig. (1-tailed)	.429	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Participating in the team concept	3.9063	.32697	96

**Correlations**

		Administrative support	D Participating in the team concept
Administrative support	Pearson Correlation	1	.069
	Sig. (1-tailed)		.251
	N	96	96
D Participating in the team concept	Pearson Correlation	.069	1
	Sig. (1-tailed)	.251	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Tutoring and teaching others	3.6250	.50783	96

**Correlations**

		Administrative support	D Tutoring and teaching others
Administrative support	Pearson Correlation	1	.067
	Sig. (1-tailed)		.259
	N	96	96
D Tutoring and teaching others	Pearson Correlation	.067	1
	Sig. (1-tailed)	.259	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Meeting expectations of others	3.7083	.50088	96

**Correlations**

		Administrative support	D Meeting expectations of others
Administrative support	Pearson Correlation	1	-.045
	Sig. (1-tailed)		.331
	N	96	96
D Meeting expectations of others	Pearson Correlation	-.045	1
	Sig. (1-tailed)	.331	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Leadership	3.7083	.56039	96

**Correlations**

		Administrative support	D Leadership
Administrative support	Pearson Correlation	1	.101
	Sig. (1-tailed)		.164
	N	96	96
D Leadership	Pearson Correlation	.101	1
	Sig. (1-tailed)	.164	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Negotiating	3.4063	.68944	96

**Correlations**

		Administrative support	D Negotiating
Administrative support	Pearson Correlation	1	.197*
	Sig. (1-tailed)		.027
	N	96	96
D Negotiating	Pearson Correlation	.197*	1
	Sig. (1-tailed)	.027	
	N	96	96

\*. Correlation is significant at the 0.05 level (1-tailed).

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Adjusting to a multicultural setting	3.2708	.83954	96

**Correlations**

		Administrative support	D Adjusting to a multicultural setting
Administrative support	Pearson Correlation	1	.067
	Sig. (1-tailed)		.257
	N	96	96
D Adjusting to a multicultural setting	Pearson Correlation	.067	1
	Sig. (1-tailed)	.257	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Organization	3.6771	.49193	96

**Correlations**

		Administrative support	D Organization
Administrative support	Pearson Correlation	1	-.023
	Sig. (1-tailed)		.412
	N	96	96
D Organization	Pearson Correlation	-.023	1
	Sig. (1-tailed)	.412	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Retaining knowledge	3.6737	.47135	95

**Correlations**

		Administrative support	D Retaining knowledge
Administrative support	Pearson Correlation	1	.016
	Sig. (1-tailed)		.438
	N	96	95
D Retaining knowledge	Pearson Correlation	.016	1
	Sig. (1-tailed)	.438	
	N	95	95

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Interpreting knowledge	3.6875	.46595	96

**Correlations**

		Administrative support	D Interpreting knowledge
Administrative support	Pearson Correlation	1	-.024
	Sig. (1-tailed)		.407
	N	96	96
D Interpreting knowledge	Pearson Correlation	-.024	1
	Sig. (1-tailed)	.407	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Shainrg knowledge with others	3.5833	.51640	96

**Correlations**

		Administrative support	D Shainrg knowledge with others
Administrative support	Pearson Correlation	1	.110
	Sig. (1-tailed)		.144
	N	96	96
D Shainrg knowledge with others	Pearson Correlation	.110	1
	Sig. (1-tailed)	.144	
	N	96	96

### Descriptive Statistics

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Understanding social systems	3.3125	.63764	96

### Correlations

		Administrative support	D Understanding social systems
Administrative support	Pearson Correlation	1	.302**
	Sig. (1-tailed)		.001
	N	96	96
D Understanding social systems	Pearson Correlation	.302**	1
	Sig. (1-tailed)	.001	
	N	96	96

\*\* . Correlation is significant at the 0.01 level (1-tailed).

### Descriptive Statistics

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Understanding organizational systems	3.3750	.56662	96

### Correlations

		Administrative support	D Understanding organizational systems
Administrative support	Pearson Correlation	1	.220*
	Sig. (1-tailed)		.016
	N	96	96
D Understanding organizational systems	Pearson Correlation	.220*	1
	Sig. (1-tailed)	.016	
	N	96	96

\*. Correlation is significant at the 0.05 level (1-tailed).

### Descriptive Statistics

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Understanding technological systems	3.0729	.66877	96

**Correlations**

		Administrative support	D Understanding technological systems
Administrative support	Pearson Correlation	1	.237**
	Sig. (1-tailed)		.010
	N	96	96
D Understanding technological systems	Pearson Correlation	.237**	1
	Sig. (1-tailed)	.010	
	N	96	96

\*\* . Correlation is significant at the 0.01 level (1-tailed).

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Self-monitoring and self-discipline	3.8021	.42599	96

**Correlations**

		Administrative support	D Self-monitoring and self-discipline
Administrative support	Pearson Correlation	1	-.106
	Sig. (1-tailed)		.151
	N	96	96
D Self-monitoring and self-discipline	Pearson Correlation	-.106	1
	Sig. (1-tailed)	.151	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Correcting problems	3.6667	.49559	96

**Correlations**

		Administrative support	D Correcting problems
Administrative support	Pearson Correlation	1	-.069
	Sig. (1-tailed)		.253
	N	96	96
D Correcting problems	Pearson Correlation	-.069	1
	Sig. (1-tailed)	.253	
	N	96	96

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Analyzing how systems work and developing ideas for improvements	3.3474	.63192	95

**Correlations**

		Administrative support	D Analyzing how systems work and developing ideas for improvements
Administrative support	Pearson Correlation	1	.036
	Sig. (1-tailed)		.364
	N	96	95
D Analyzing how systems work and developing ideas for improvements	Pearson Correlation	.036	1
	Sig. (1-tailed)	.364	
	N	95	95

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Using computers	3.0208	.68023	96

**Correlations**

		Administrative support	D Using computers
Administrative support	Pearson Correlation	1	.183*
	Sig. (1-tailed)		.037
	N	96	96
D Using computers	Pearson Correlation	.183*	1
	Sig. (1-tailed)	.037	
	N	96	96

\*. Correlation is significant at the 0.05 level (1-tailed).

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Using technology to solve problems	3.0000	.72548	96

**Correlations**

		Administrative support	D Using technology to solve problems
Administrative support	Pearson Correlation	1	.203*
	Sig. (1-tailed)		.024
	N	96	96
D Using technology to solve problems	Pearson Correlation	.203*	1
	Sig. (1-tailed)	.024	
	N	96	96

\*. Correlation is significant at the 0.05 level (1-tailed).

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Using technology for a multitude of tasks	3.0729	.72902	96

**Correlations**

		Administrative support	D Using technology for a multitude of tasks
Administrative support	Pearson Correlation	1	.249**
	Sig. (1-tailed)		.007
	N	96	96
D Using technology for a multitude of tasks	Pearson Correlation	.249**	1
	Sig. (1-tailed)	.007	
	N	96	96

\*\* . Correlation is significant at the 0.01 level (1-tailed).

**Descriptive Statistics**

	Mean	Std. Deviation	N
Administrative support	3.0000	.92906	96
D Troubleshooting and maintenance of technology	2.8105	.78949	95



**Correlations**

		Administrative support	D Troubleshooting and maintenance of technology
Administrative support	Pearson Correlation	1	.245**
	Sig. (1-tailed)		.008
	N	96	95
D Troubleshooting and maintenance of technology	Pearson Correlation	.245**	1
	Sig. (1-tailed)	.008	
	N	95	95

\*\* . Correlation is significant at the 0.01 level (1-tailed).