

379
N816
NO. 4514

A DELPHI STUDY TO DETERMINE IF SCANS WORKPLACE KNOW-HOW
CAN BE DEVELOPED THROUGH THE ACHIEVEMENT OF NATIONAL
STANDARDS FOR [VISUAL] ARTS EDUCATION

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree

DOCTOR OF PHILOSOPHY

By

Jan Crews, B.F.A., M.F.A.

Denton, Texas

August, 1997

Crews, Jan, A Delphi Study to Determine if SCANS Workplace Know-How Can Be Developed Through the Achievement of National Standards for [Visual] Arts Education. Doctor of Philosophy (Art Education), August, 1997, 156 pp., 2 tables, 45 figures, 45 references, 45 titles.

The purpose of this study was to provide a basis for understanding among Tech Prep and School-to-Work change agents, and educational leaders, of the role that Discipline-Based Art Education (DBAE) can perform as a part of the core curriculum, within the framework of these reform movements. The literature indicated that the federally supported Tech Prep and School-to-Work reform movements were not acquainted with DBAE reform initiative which were supported by the Getty Education Institute for the Arts through the work of Regional Institutes. Therefore, they had no ideas about the possible worth of art as an education core component. Also, DBAE was not acquainted with Tech Prep and School-to-Work and therefore had established no common terminology to communicate the power of what they do in a manner which was relevant to that audience.

The DBAE Regional Institutes provided individuals to assist in the development and validation of the study tools, and to participate in the pilot study. The Regional Institutes also identified the 10 Discipline-Based Art Education experts who composed the national Delphi panel for the study.

The findings were reported according to research questions. They show the national Delphi panels' perceptions of which SCANS skills can be developed by Content Standards and Performance Standards from the National Standards for [Visual] Arts Education. The study concluded that: 1) there is a relationship between the Content and Performance Standards taken from the National Standards for [Visual] Arts Education

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and the SCANS skills; 2) SCANS Basic skills, Thinking skills, Resources skills, Information skills and Systems skills could be developed through the achievement of the Performance Standards of the National Standards for [Visual] Arts Education; and 3) the relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Art Education was validated by a national Delphi panel. Recommendations were made for DBAE, Tech Prep and School-to-Work, and Future Studies.

TABLE OF CONTENTS

LIST OF TABLES.....	v
LIST OF FIGURES	vi
Chapters	
1) INTRODUCTION.....	1
Introduction	
Purpose of Study	
Statement of Problem	
Research Questions	
Question 1	
Question 2	
Question 3	
Limitations of the Study	
Limitation 1	
Limitation 2	
Limitation 3	
Delimitation of the Study	
Definition of Terms	
Summary	
2) REVIEW OF THE LITERATURE.....	13
Trends and Dynamics Influencing the Workforce	
Training the Workforce	
Visual Arts and Workforce Education	
Summary	
3) METHODS AND PROCEDURES.....	28
Sources of Information	
Selection of Delphi Panel	
Data Gathering Instruments	
Stage 1	
Stage 2	
Data Collection Procedures	
Stage 3	
Methodological Process	
Summary	

4) PRESENTATION AND ANALYSIS OF DATA	39
Research Questions	
Question 1	
Research Question 1 Synopsis	
Question 2	
Research Question 2 Synopsis	
Question 3	
Research Question 1 Synopsis	
5) SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	91
Summary	
Conclusions	
Recommendations	
Concluding Statement	
Appendix	
A) SCANS WORKPLACE KNOW-HOW.....	97
B) NATIONAL STANDARDS FOR [VISUAL] ARTS	100
EDUCATION (SECONDARY LEVEL)	
C) PILOT STUDY QUESTIONNAIRE.....	105
D) PILOT STUDY AND ROUND ONE COVER LETTER	114
E) NATIONAL DELPHI QUESTIONNAIRE (ONE).....	116
F) NATIONAL DELPHI QUESTIONNAIRE (TWO).....	125
G) COVER LETTER (TWO).....	130
H) DELPHI FIRST ROUND DATA.....	132
I) DELPHI SECOND ROUND DATA	142
J) PANEL COMMENTS.....	145
REFERENCES.....	149

LIST OF TABLES

Table

Data Organization and Analysis.....	40
National Panel Delphi Study Results.....	87

LIST OF FIGURES

Figures

1. Delphi Study Methodological Process	30
2. National Standards for Visual Arts SCANS Relationship	41
3. Content Standard One - SCANS Relationship.....	43
4. Content Standard One - Proficient Achievement Level.....	44
5. Content Standard One - Advanced Achievement Level.....	45
6. Content Standard Two - SCANS Relationship	46
7. Content Standard Two - Proficient Achievement Level	47
8. Content Standard Two - Advanced Achievement Level	48
9. Content Standard Three - SCANS Relationship	49
10. Content Standard Three - Proficient Achievement Level	50
11. Content Standard Three - Advanced Achievement Level.....	50
12. Content Standard Four - SCANS Relationship	52
13. Content Standard Four - Proficient Achievement Level	53
14. Content Standard Four - Advanced Achievement Level.....	54
15. Content Standard Five - SCANS Relationship.....	55
16. Content Standard Five - Proficient Achievement Level.....	56
17. Content Standard Five - Advanced Achievement Level	57
18. Content Standard Six - SCANS Relationship	58
19. Content Standard Six - Proficient Achievement Level	59
20. Content Standard Six - Advanced Achievement Level.....	59
21. Performance Standard One	61

22. Performance Standard Two.....	62
23. Performance Standard Three.....	63
24. Performance Standard Four.....	64
25. Performance Standard Five.....	65
26. Performance Standard Six.....	66
27. Performance Standard Seven.....	67
28. Performance Standard Eight.....	68
29. Performance Standard Nine.....	69
30. Performance Standard Ten.....	70
31. Performance Standard Eleven.....	71
32. Performance Standard Twelve.....	72
33. Performance Standard Thirteen.....	73
34. Performance Standard Fourteen.....	74
35. Performance Standard Fifteen.....	75
36. Performance Standard Sixteen.....	76
37. Performance Standard Seventeen.....	77
38. Performance Standard Eighteen.....	78
39. Performance Standard Nineteen.....	79
40. Performance Standard Twenty.....	80
41. Performance Standard Twenty-One.....	81
42. Performance Standard Twenty-Two.....	82
43. Performance Standard Twenty Three.....	83
44. Performance Standard Twenty-Four.....	84
45. Performance Standard Twenty-Five.....	85

CHAPTER 1

INTRODUCTION

For over a decade educational reform movements such as Tech Prep, School-to-Work, and Discipline-Based Art Education (DBAE) have been prominent in secondary education. These movements continue to grow in popularity, affecting systematic curriculum shifts in schools throughout the nation. DBAE advocates the teaching of art as a component of the general education core. Tech Prep and School-to-Work advocate the integration of academic and technical education as a means of preparing students for the world of work and as life-long learners. However, the courses which they have established as necessary components of the curriculum do not include the arts.

The idea of comprehensive art education, such as that advocated by the DBAE movement, has been around for many years. “A comprehensive general education prepares individuals to think in systematic ways, to view the world through the different lenses or templates that study of each subject provides” (Clark, Day, & Greer, 1987, p. 138). The DBAE distillation of comprehensive art education was adopted around 1982 by the Getty Center for Education in the Arts, now known as the Getty Education Institute for the Arts. DBAE’s theoretical antecedents precede this movement by up to 25 years.

DBAE represented an important change in the philosophical precepts of art education. From the DBAE perspective, art was no longer thought of as a non-substantive creative activity. Now, art teaching, learning outcomes and evaluation

was expected to be performed just as they would be in relation to other subjects. “Goals, procedures, and evaluation are specific to art but are consistent and compatible with those of general education” (Clark, Day & Greer, 1987, p.131). Content is drawn from the integration of the foundation elements of aesthetics, art criticism, art history, and art production which are organized in a written and sequential curriculum. Aesthetics deals with the nature of specific and general environments. The basis for judging is established through criticism. Integration of historical components introduce socioeconomic ramifications. These events have always directly impacted art, people, and cultures. Art production gives students first hand information about art processes and techniques and serves as an experiential catalyst for connecting the four elements. The study of the four disciplines cultivate the aesthetic domain. “Educational experiences in the aesthetic domain shape perception and imagination, enabling us to perceive meaning in contrived objects in the built environment and in natural objects, such as landscapes and sunsets” (Clark, Day & Greer, 1987, p.139).

Tech Prep began as a vocational education reform effort. Dale Parnell's book, The Neglected Majority (1985) provided the name and theoretical model for the initiative. “Parnell advocated high quality vocational education, applied academics, strong relationships between business and education, and increased emphasis on the two-year associate degree” (Bragg, 1994). Federal endorsement was received in 1990 when the Tech Prep Education Act (101st Congress, 1990) was signed. The act defined Tech Prep as a combined secondary/postsecondary program which: “consist(s) of two years of secondary...and two years of higher education, or an apprenticeship program of at least two years following secondary instruction with a common core of required proficiency in mathematics, science, communications, and technologies designed to lead to an associate degree or certificate in a specific career field...and leads to... effective

employment, placement or transfer of students to four-year baccalaureate degree programs...(Congressional Record, 1980, September 25)” (Beaumont, 1996, August 19).

Forerunners to Tech Prep are evident in vocational education in the 1960s. After years of implementation Tech Prep has evolved from an option for vocational education to an inclusive system for comprehensive educational reform. “It engages students who have been neglected by our nation's system of schooling and encourages them to aspire to further education and rewarding work. A fundamental underpinning of Tech Prep is the linkage of school-based knowledge to the broader context of family, work, and civic life. Increasingly, Tech Prep is recognized as an approach that can make education fulfilling for students and teachers alike, and motivate students to pursue their education and career goals” (Bragg, 1994).

In 1994, the School-to-Work Opportunities Act (103rd Congress) was signed by President Clinton. As a cornerstone for the initiative, “Tech Prep education is a key strategy for building a School-to-Work system and is a significant innovation in the education reform movement in the United States. The principles and practices of Tech Prep are key components of the School-to-Work Act” (U.S. Department of Education, 1994). Three core components are associated with School-to-Work. School-based learning refers to classroom activity based on high academic and occupational standards. Work-based learning entails career exploration, work experience, structured training, and mentoring at job sites. Connecting activities assist in bridging gaps between school and work.

Because Tech Prep and School-to-Work are interrelated, the main purpose of both reform efforts correspond. Their intent is “to bring together efforts at education reform, worker preparation, and economic development to create a system -- A system to prepare

youth for the high wage, high skill careers for today's and tomorrow's global economy” (The National School-to-Work Learning and Information Center, 1996).

Tech Prep and School-to-Work programs develop graduation plans which outline a coherent sequence of courses. Students must follow these plans through high school and college. Ideally, academic and technical courses, with direct relevance to students' career pathways or which develop Secretary's Commission on Achieving Necessary Skills (SCANS) Workplace Know-How skills (see Appendix A), are included in the plans.

Published and released in June 1991, the report of the Secretary's Commission on Achieving Necessary Skills (SCANS) recommended the foundation skills and competencies it had identified as essential to high school graduates or persons entering the workforce. “The report places particular emphasis not only on acceptable identified skills, but on acceptable levels of proficiency, proficiency assessment, and strategies employers and educators must consider in order for students to have access to, and meaningful experience with, the identified skills” (NCPQVE, 1994). In practice, many of these skills are taught through academic disciplines which are a part of the core curriculum--math, English, science, and occasionally social science.

Tech Prep and School-to-Work programs do not currently utilize art in the core curriculum to develop SCANS skills. However, information in literature indicates that the arts can also successfully develop Workplace Know-How. According to Learning A Living: A Blueprint for High Performance (1992): “SCANS Know-How can be taught 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 visually appealing, and in general, calling on the talents that only yesterday

were primarily the concern of graphic artists....Arts education naturally embraces methods and characteristics of high performance schools. Art departments often accept and evaluate 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?"(SCANS, 1991, p.37)

Comprehensive art programs, such as those associated with DBAE reform efforts, evidence success in developing skills which are similar to those advocated by SCANS, Tech Prep, and School-to-Work initiatives.

"The lasting dividends of a comprehensive visual arts education program includes numerous skills needed in life. Such a program helps students:

- *learn to solve problems and make decisions;*
- *build self-esteem and self-discipline;*
- *develop informed perception;*
- *build skills in cooperation and group problem-solving;*
- *develop the ability to imagine what might be;*
- *learn to weigh meanings and evaluate what is seen;*
- *appreciate, understand, and be aware of different cultures and cultural values"* (National School Board Association, 1992, p.17).

In an attempt to define the essential knowledge which educators needed to embrace as teaching outcomes in the arts, Art Education curriculum Content Standards for kindergarten through 12th grade have been identified in the National Standards for Arts Education (Consortium of National Arts Education Associations, 1994). This publication specifies essential knowledge for students studying music, dance, theatre, and the visual arts (see Appendix B). For secondary level students there are two levels of achievement: proficient and advanced. The secondary level Content Standards presume a command of the standards set for preceding levels. The National Standards for

[Visual] Arts Education are the only contemporary example of universal teaching outcomes available in the field. With some enhancement to the aesthetics component, these standards adequately address the four disciplines of DBAE.

Purposes of the Study

As Tech Prep and School-to-Work movements gain momentum to create systematic education reform, there is a real threat that art will be completely omitted from secondary education. The purpose of this investigation was to provide a basis for understanding among Tech Prep and School-to-Work change agents, educational leaders, and business representatives, of the role that comprehensive art education can perform as a part of the core curriculum, within the framework of these reform movements. This study attempted to determine the scope of Workplace Know-How skills which can be developed in relation to the National Standards for [Visual] Arts Education from the perspective of experts in DBAE.

Richard Riley was quoted as saying, "Our economic prosperity, our national security, and our nation's civic life have never been more linked to education than they are today as we enter the Information Age of the 21st century" (Beaumont, 1996, August 19). With this in mind, it is imperative that we do not overlook, due to unfamiliarity, the contribution that any discipline can make to the success of the whole. "Art education is a 21st century essential that helps create well-rounded graduates with multidimensional interests and capabilities" (National School Boards Association, 1992, p.11). The primary purpose of this study was measure the perceptions of DBAE curriculum experts concerning the relationship of visual arts education learning outcomes and the SCANS Workplace Know-How skills.

Statement of the Problem

Since Tech Prep and School-to-Work change agents, educational leaders, and business representatives may not have ideas about the worth of art as an education core component, this lack of knowledge should be changed. An attempt was made to acquaint Tech Prep and School-to-Work reform initiatives with the DBAE movement. Similarities in intent and rationale between the various reform efforts were determined. Also, the relationship between the components of a comprehensive art education program and SCANS Workplace Know-How skills were examined. Additionally the relationship between the National Standards for [Visual] Arts Education and DBAE was scrutinized. By examination of these issues it was hoped that a relationship between these reform efforts can be established.

Research Questions

The following research questions are presented as a basis for testing the aforementioned purpose of the study:

Question 1:

Is there a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education?

Question 2:

If there is a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education, which SCANS skills could be developed through the achievement of the visual art education performance standards?

Question 3:

If there is a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education, can this relationship be validated by a national Delphi panel?

Limitations of the Study

The items listed below represent possible limitations to this research study:

Limitation 1:

The attitudes gauged are representative of a selected group of people so there is a possibility they may not be representative of the larger whole.

Limitation 2:

Research results are dependent on educated opinion so the respondents' truthfulness in responding to the questionnaires is a potential limitation. Participants' bias, communication skills or interpretation of the assignment could also limit the generalizability of the findings of study.

Limitation 3:

The Delphi technique exhibits a tendency to eliminate extreme positions and force a middle-of-the-road consensus.

Delimitation of the Study

The study was delimited in terms of art education and workforce education curriculum issues at the secondary education level. The research study was also limited to perceptions of DBAE experts concerning the development of SCANS Workplace Know-How learning outcomes resulting from visual arts education curricula. The Delphi

process was also delimited to the perceptions of the 10 art experts concerning the Performance Standards within the National Standards for [Visual] Arts Education.

Definition of Terms

Aesthetic Domain: Focuses on conscience and communication expressed through images and serves to shape human perception and imagination.

Articulation: A planned process linking educational institutions and experiences to assist students in making a smooth transition from one level of education to another without experiencing delays or duplication in learning.

Comprehensive Art Education: Provides skills specific to the art field and prepares individuals to think in systematic ways, to view the world from a perspective that can only come through integrated study in the aesthetic domain. Goals, procedures, and evaluation are consistent with and enhance general education. DBAE is a comprehensive art education approach.

Contextual Teaching: Teaching students in character with real-life activities and experiences.

Core Curriculum: Courses which are a required part of a student's educational plan but which are not necessarily directly related to their specific career pathway.

DBAE Lasting Dividends: Higher level thinking skills generally including: solving problems/making decisions, self-esteem/self-discipline, informed perception, cooperation/group problem-solving, imagine what might be, weigh meanings, and appreciate, understand, and be aware of different cultures and cultural values.

Delphi Technique: Structured assessment technique which utilizes questionnaires and summarized feedback to reach consensus and generate and clarify ideas.

Discipline-Based Art Education: An approach to art education that introduces students to the four foundation disciplines that contribute to creation and understanding of art: art production, art history, art criticism, and aesthetics. This is done through written, sequential art curriculum which is taught as a part of general education.

DBAE is a comprehensive art education approach.

Diverse Populations: Individuals from various ethnic, gender, religion, nationality, or sexual persuasion.

Experiential Learning: The process of learning through experiences. Transformational learning experiences which involve students actively in the classroom rather than passively. In experiential learning, reflecting, demonstrating, experimenting, discovering, manipulating, and applying are encouraged.

Global Economy: Supply, demand, and fiscal system dependent on competitive world-wide trade.

Graduation Plans: Outline of the coherent sequence of courses a student will take in a Tech Prep/School-to-Work program.

Integrated Curricula: Including the theories, processes or competencies of one field of study in the curriculum of another field of study.

National Standards for Arts Education: Kindergarten through 12th grade content and achievement standards for dance, music, theatre, and visual arts. The indications are that all students should be able to communicate at a basic level in the four art disciplines, communicate proficiently in at least one art form, develop and present basic analyses of works of art, have an informed acquaintance with exemplary works of art from a variety of cultures and historical periods, and relate various types of arts knowledge and skills within and across art disciplines.

National Standards for [Visual] Arts Education: The part of the National Standards for Arts Education that deals specifically with the visual arts. For the purposes of this study the scope is limited to secondary education.

Outcome-Based Education: A method of focusing and organizing all school programs and instructional efforts around the clearly defined competencies which all students need to demonstrate by the time they leave school.

SCANS Workplace Know-How: Those skills desired by employers generally including: Basic skills, Thinking skills, Personal skills, Resources skills, Interpersonal skills, Information skills, Systems skills, and Technology skills.

School-to-Work: Seamless system from high school through college that provides students with short- and long-term educational and career options. The systems' cooperatively developed, competency-based programs are composed of school-based learning, work-based learning, and connecting activities.

Tech Prep: A cooperatively developed, competency-based six-year program of study which begins in high school and which results in an associate of applied science degree and an advanced skills mastery certificate from a community or technical college.

Transformational Leadership: Style of management or administration which encourages and leads, in a non-threatening way; a systemic transition in a company, school, or other institution to position that organization for state-of-the-art competitiveness.

Summary

In recent years educational reform movements and curriculum change in secondary education programs included Tech Prep programs, School-to-Work programs,

SCANS Workplace Know-How skills, and DBAE initiatives. Tech Prep programs, as well as School-to-Work efforts, have recommended the integration of academic curricula and technical education as a means of better preparing students for the world of work.

The integration of academic and technical education in these workforce education programs has resulted in the development of English, math, science, and some social science learning outcomes as they are used in work. In contrast, there have been very little integrated curriculum efforts involving the use of art education outcomes to develop curriculum and instruction for either Tech Prep or School-to-Work programs.

This research was aimed at determining if there is relationship between the National Standards for [Visual] Arts Education learning outcomes and the SCANS Know-How skills. Another focus of the study was to identify which SCANS Know-How skills can be developed through art education curricula outcomes.

CHAPTER 2

REVIEW OF THE LITERATURE

Curriculum in Tech Prep and School-to-Work programs was influenced by a number of forces. The content and structure of these workforce education programs has responded dramatically to social, economic, educational, and occupational forces which reflect America's concept of education and work. The SCANS skills studies, completed in the 1990s created a major impetus for curriculum development and revision. Revised priorities, new programs, and emerging concepts in the workplace required workforce education specialists to review and revise existing curriculum and create new approaches for preparing our youth for careers in many different fields.

The purpose of this study was to determine the perspectives of DBAE experts concerning the relationship of visual art education learning outcomes and the SCANS Workplace Know-How skills within workforce education programs like Tech Prep and School-to-Work. Because the study dealt with the perceptions of art education specialists toward curriculum issues in workforce education and art education, the author has undertaken an in-depth review of the literature pertaining to trends and dynamics influencing the workforce, educating the workforce, and visual arts and workforce education.

Trends and Dynamics Influencing the Workforce

Since the second World War, our nation's economy has become increasingly global in nature. In addition, the ability of the workforce to remain competitive in the

world market has ebbed. According to Peter Drucker (1989) our society, economy, and government, are tenaciously connected in this cycle of change. Drucker looked at the environment and communicated his scope of the situation. Barlett and Steele (1992) added to our understanding as they showed how the decay of our economy threatened the realization of the so called “American Dream.” After two years of study they concluded that the middle class in the United States was in decline. Government policies were negatively affecting our economy and society. As a result, the middle class and the coming society will not have the range of possibilities that were enjoyed by members of previous generations (Mattera, 1990). The Good Society (Bellah, 1991) revealed the connection between a positive communal motivation and a healthy democracy. The book examined economic activities and work in sociological perspective.

A very instrumental report, America's Choice! High Skills or Low Wages: The Report of the Commission on the Skills of the American Workforce (Executive Summary, 1990), discussed how earnings were falling and how productivity in our country was slowing down. According to the report, “If productivity continues to falter, we can expect one of two futures. Either the top 30 percent of our population will grow wealthier while the bottom 70 percent become progressively poorer or we will all slide into relative poverty together.” Similar issues were presented in The Work of Nations: Preparing Ourselves for 21st Century Capitalism (Reich, 1991). The author examined the changes within the workforce as the economy became global. He believed that nations should attempt to improve the skills of their people to the extent that they could be competitive in the global market. According to Secretary of Labor Reich, we must concentrate on the abilities of our workers because they have become our principle resource. One of the most highly praised books on the subject of the 21st century workforce was Peter Senge's The Fifth Discipline: The Art and Practice of the Learning

Organization (1990). He also emphasized the importance of a highly skilled workforce. Senge believed that organizations should be learning systems and should be reflexive to their environment rather than taking action based on past experience.

The human equation was examined in Worklife Visions (Hallett, 1987). Hallett focused on what was needed of people in a changing workforce. From a historical perspective, he provided an ample overview of our transition into an information society. He pointed out that our dominant technology was now the computer, our strategic resource is now knowledge, and the power behind all of this was the human mind. Hallett believed, “We must find a way of generating more output with fewer resources while improving the overall quality of the products and services we produce or resign ourselves to a standard of living that does not improve” (p. 100). Another factor in the workforce human equation was that of diverse populations. In Managing Workforce 2000, Jameison and O'Mara (1991) believed that management must develop strategies for matching people and jobs, rewarding performance, communicating with networks, forming partnerships, and supporting lifestyles and needs. Workforce diversity issues were also addressed in Workforce America! Managing Employee Diversity as a Vital Resource, (Loden and Rosener, 1991). Here, the pros and cons of valuing the human qualities unique to diverse populations were discussed in the context of the workforce.

Whether dominantly pertaining to government, economics, society, or education, related literature across the board solicited leaders. A single statement, “Managers do things right; leaders do right things” (Bass, 1985), summed up the desired administrative style of the new vanguard. Bass provided an erudite analysis of leadership. To assist readers in putting persuasion into practice, Kouzes and Posner (1987) provided a hands-on index in The Leadership Challenge. Though the field of leadership has become highly specialized, most writers concentrated on the transformational style which freed

people to compassionately accomplish what was required for continual improvement and success.

Educating the Workforce

In 1983, the National Commission on Excellence in Education published their report, A Nation at Risk: The Imperative for Educational Reform. The report stated that “more and more young people emerged from high school ready neither for college nor for work. This predicament becomes more acute as the knowledge base continues its rapid expansion, the number of traditional jobs shrink, and new jobs demand greater sophistication and preparation.” This synopsis was the first of a large number of reform reports to be written during this general time frame. Most carried virtually the same message. To speak to this message educational reform movements were launched. Most notable among these initiatives were Tech Prep and School-to-Work. Tech Prep received federal endorsement in 1990 through the Tech Prep Education Act (101st Congress, 1990).

Dale Parnell's book, The Neglected Majority (1985) provided the name and theoretical model for the Tech Prep initiative. Parnell reiterated the impending economic crisis faced by the United States if our citizens continued to receive inadequate educational preparation. He introduced Tech Prep as a flexible theoretical strategy to address this issue. In 1992, Tech Prep High School and Associate Degree Programs: Guidelines for Development and Implementation (The Texas Education Agency, Texas Higher Education Coordinating Board and Texas Department of Commerce) identified the elements of a Tech Prep program as 1) a six year program of study consisting of four years of high school and two years of community college [in some states, rather than a six year plan, a four year plan of study consisting of two years of high school and two years of community college was the norm]; 2) curriculum that was cooperatively

developed, was competency based, eliminated duplication of content, and blended academic and technical competencies; 3) curriculum that included SCANS Workplace Know-How skills; 4) opportunities for advanced technical skills training and for advanced studies at four year baccalaureate institutions; 5) coordinated delivery system that ensured access for all students including special populations; 6) Comprehensive career counseling programs; and 7) Staff and faculty professional development opportunities. In volume five of CenterFocus (1994), Debra Bragg gave a detailed and well-referenced overview of the Tech Prep movement. She examined the origins, federal role, fundamental components, emerging models, and implications for the future of this initiative. This information was elaborated on in Chapter 1.

A later coterminous antecedent known as School-to-Work was federally sanctioned in 1994 through the School-to-Work Opportunities Act (103rd Congress, 1994). The National School-to-Work Learning and Information Center provided a general overview of the movement in School-to-Work Opportunities (1996). This article described School-to-Work and stated why it was needed and how it worked. A more detailed description was provided in Brustein and Mahler's AVA Guide to the School-To-Work Opportunities Act, a 1994 publication of the American Vocational Association. The core components of a School-to-Work System included school-based learning, work-based learning, and connecting activities. The key components of school-based learning included: "Career counseling; Selection of a career major; Program of study; Integration of academics and vocational education; evaluation; and Secondary/postsecondary articulation" (p.25). The key components of work-based learning included: "Work experience; Job training; Workplace mentoring; Instruction in workplace competencies; and Instruction in all elements of an Industry" (p.30). The key connecting activities included: "Matching students with employers; Establishing liaisons

between education and work; Technical assistance to schools; students and employers; Assistance to integrate school-based and work-based learning; Encourage participation of employers; Job placement; Continuing education or Further training assistance; Collection and analysis of post-program outcomes of participants; and Linkages with youth development activities” (p.33).

Though Tech Prep and School-to-Work have their differences, both encouraged delineated curricula that linked secondary and postsecondary institutions. They strived to eliminate duplication of effort by developing career pathways which outline academic and technical courses to be taken by students throughout the duration of their secondary and postsecondary programs. Both reform initiatives encourage curricula that: was developed in cooperation with business and industry; was based on competencies prescribed by business and industry; blended academic and technical disciplines; contained critical thinking/problem solving skills; and emphasized the development of workplace basic competencies. These two movements continue to systematically change the way secondary educators view their teaching methodologies and roles in student tutelage.

Tech Prep was identified as a foundation for School-to Work in a fact sheet written by the U. S. Department of Education (1996). The fact sheet provided a succinct overview of Tech Prep components which correlated with key School-to-Work elements. Another publication, Tech Prep and School-to-Work: Working Together to Foster Educational Reform (Beaumont, 1996, August 19), also explored commonalties between the Tech Prep and School-to-Work. This work called for concerted efforts between the two initiatives.

The most widely recommended list of Workplace Know-How was published in What Work Requires of Schools (Secretary's Commission on Achieving Necessary Skills,

1991). The SCANS skills were composed of five workplace competencies and three foundation skills. These eight skills provide the major headings under which a variety of achievement standards were listed. The SCANS Commission produced related documents which examined current and future workforce needs. These volumes promoted reformation of workforce training to utilize the SCANS Workplace Know-How skills. Titles included: Skills and Tasks for Jobs (1992), and Learning a Living: A Blueprint for High Performance (1992).

In Tech Prep and School-to-Work programs, teaching methodologies which promoted contextual or experiential learning were highly touted. A perfect example was David Kolb's model of experiential learning. Kolb (1984) believed that learning occurs when concrete experience, reflective observation, abstract conceptualization, and active experimentation were collectively a part of the teaching and learning cycle. According to Wayne Zako (1993), it was useful "to provide a 'transforming' learning experience that involved students actively in the classroom rather than passively and to encourage reflecting, demonstrating, experimenting, discovering, manipulating and applying."(p.1) The idea was to integrate experiences and techniques which allowed students with a variety of learning styles to become successful. Additionally, outcome-based education (OBE) was promoted. "The principles followed by OBE practitioners included: 1) clarity of focus...2) expansion of available time and resources...3) consistent, high expectations ...and 4) explicit relationships between any learning experience, with its design and outcomes, and the ultimate outcomes to which the learning experience is essential" (On Purpose Associates, 1996).

Visual Art and Workforce Education

DBAE has been one of the longest running art education reform movements in history. Several articles which document the development of DBAE have been written. In an article which appeared in Art Education, Leilani Lattin Duke explained how, based on their research, the Getty Center for Education in the Arts, now known as the Getty Education Institute for the Arts, came to believe “if there is to be change in the way arts education is perceived and practiced in schools today, a more holistic approach to what is taught is needed” (Duke, 1983, p.6). This idea of holistic education was the same type of approach which was advocated by Tech Prep and School-to-Work. “The position embraced by the Getty Center about what should comprise an education in the visual arts supports a consensus that has existed in art education literature for the past 100 years and has earned considerable support over the last 15” (Greer and Rush, 1985, p.32). Finding minimal examples of these theories in practice, the Center undertook four projects in order to test their tenants. “First: a national research project of promising visual arts education programs; Second: a school personnel development project; Third: experimentation and application of media technologies to art education; And Fourth; a museum education demonstration program” (Duke, 1983). Another article by Leilani Lattin Duke, in Phi Delta Kappan, provided additional insight into the initial activities of the Center (Duke, 1984). From these activities the DBAE reform efforts began to take shape. Over the next few years numerous books, articles, papers and conference proceedings were published which would help to drive the DBAE reform initiative and show its' goals, evolution, and advocacy. Beyond Creating: The Place for Art in America's Schools formally introduced DBAE by drawing attention to the need for serious visual arts education programs. The publication affirmed that art was integral to education and sighted seven schools' programs as examples. Based on the Rand

Corporation studies of those seven schools, three critical factors in changing art education were identified. They were: 1) a change in the perspective of school boards, school administrators, teachers, parents and students about the quality and worth of art education; 2) both conceptual and financial advocacy and support from the community; and 3) academic rigor which was “informed by the theory and practice of aesthetics, criticism, history and production. To ensure continued integrity of these programs, school district policies will need to call for a comprehensive, sequential curriculum, in-service teacher training, and classroom review by district administrators”(Getty Center for Education in the Arts, 1985, p.6). In 1987, The Role of Discipline Based Art in America's Schools identified two functions of art which should be a part of the education of all students. One of these functions was to help students develop multiple forms of literacy in order to allow them to access “cultural capital”. Another function of art education was to develop student's minds. “Every sensory modality and each form of representation, as well as every material and each array of expressive techniques, exact their own unique intellectual demands....The types of intelligence we are able to use depends largely on the opportunities we have had to practice the skills of which they consist” (Eisner, 1987, p.6). The idea that a student's development in art should be guided in order to promote not only the creation of art but also interpretation, judgment, and response to art was also developed. The proceedings of the first national DBAE conference were recorded in Discipline-Based Art: What Forms Will It Take (Getty Center for Education in the Arts, 1988). Sessions on topics such as planning a district-wide and state-wide art program, DBAE components, program implementation and maintenance, curriculum resources, museum education and the roles of creativity and community art resources in DBAE were conducted. The conference encouraged

participants to reevaluate and to focus on developing the role of art professionals, creativity, and museums in DBAE school programs.

There were several publications which provided insight into the background and philosophical underpinnings of DBAE. The Journal of Aesthetic Education published a special issue devoted to DBAE (1987, Summer). This was one of the best sources of information on the philosophy and theory of DBAE. The special issue contained 10 papers from highly respected and widely recognized individuals in the vanguard of art education. These papers were commissioned by the Getty Center for Education in the Arts. Antecedents, rationale, components, and theories of learning in DBAE were advanced. In the journal, theoretical antecedents were addressed by Ralph Smith in his paper "The Changing Image of Art Education". Smith leads the reader through 30 years of art theory which show a major shift in the concept of purpose for the visual arts arena. He concluded that "thinking in the field has evolved from a conception of learning associated mainly with the creative activities of young children, which do not necessarily teach anything formally or substantively about art, to one that for the most part does" (p. 26). Another paper from this journal was "Discipline-based Art Education: Becoming Students of Art" (Clark, Day, & Greer). This key paper laid-out the rationale for DBAE by systematically developing 10 characteristics of DBAE. Characteristics 1 and 2 supported the contention that art is an essential component of general education. Characteristic 1 stated, "The goal of discipline-based art education is to develop students' abilities to understand and appreciate art. This involves a knowledge of the contexts and theories of art and abilities to respond to as well as to create art" (p.136). Characteristic 2 established that "art is taught as a essential component of general education and as a foundation of specialized art study" (p.138). Characteristics 3 and 4 related to the art disciplines and art education. Characteristic 3 expressed that "content for instruction is

derived primarily from the disciplines of aesthetics, art criticism, art history, and art production” (p.147). Characteristic 4 asserted that “content for study is derived from a broad range of the visual arts including folk, applied, and fine arts from Western and non-Western cultures and from ancient to contemporary times” (p.163). Art curricula was the subject of Characteristics 5, 6, 7, and 8. Characteristic 5 stated that “curricula are written with sequentially organized and articulated content at all grade levels” (p.165). Characteristic 6 established that “works of art are essential to the organization of curricula and to integration of content from the disciplines” (p.169). Characteristic 7 asserted that “curricula are structured to reflect comparable concern and respect for each of the four disciplines” (p. 171). Characteristic 8 related “curricula are organized to increase student learning and understanding. This involves a recognition of appropriate developmental levels” (p. 174). Art in every classroom was the concept behind Characteristics 9 and 10. Characteristic 9 stated that “full implementation is marked by systematic, regular art instruction on a district-wide basis, art education expertise, administrative support, and adequate resources” (p.175). Characteristic 10 asserted that “student achievement and program effectiveness are confirmed by appropriate evaluation criteria and procedures” (p.179). In The Role of Imagery in Learning, Harry Broudy pointed out that imagery plays a part in an individual's maturation of skills, values, and concepts. He emphasized the role of imagery as a rudimentary foundation of everyday experience and as a necessity in the development of an educated mind (1987). An overview of the issues, concepts, and practices in DBAE is provided in The DBAE Handbook (Dobbs, 1992). For those who may be unfamiliar with DBAE theory, the handbook could serve as a succinct reference tool. It provided a definition and information on features, curriculum, teaching, evaluation, implementation and available resources.

Outside of the visual arts community of scholars, the SCANS Commission communicated its' Workplace Know-How foundations and competencies through Learning A Living: A Blueprint for High Performance (1992) (see Appendix A). This publication also noted several preliminary uses for education in the arts which could be valuable in workforce preparation. These were quoted in Chapter 1. This role was expanded in Reinventing the Wheel: A Design for Student Achievement in the 21st Century (National Conference of State Legislatures, 1992). The report discussed the impact of a comprehensive art education program, such a DBAE, in the curriculum. It provided a state-by-state status report of art education. More Than Pumpkins in October: Visual Literacy in the 21st Century (National School Boards Association, 1992) also discussed the impact of DBAE in curriculum. This publication provided a list of seven lasting dividends of a DBAE program which were stated in Chapter 1.. These dividends can be contrasted to selected SCANS Workplace Know-How skills (see Appendix B).

By 1994, DBAE was looking outward at the goals of education reform. Perspectives of Education Reform: Arts Education As Catalyst (Getty Center for Education in the Arts, 1994) cited these reform goals as interdisciplinary learning, multicultural education, meaningful assessment, use of educational technology and access and equity. It affirmed that art was central to achievement of these goals because it develops the creative spirit. The need for art education to address workplace skills was mentioned in the report as a part of a summary of a workshop session which dealt with the challenge from business to art education. In this summary the components of the 3 SCANS Workplace Know-How foundation skills were specifically listed. However, neither SCANS nor the foundation categorical titles were listed. According to the summary one of the speakers in this session was quoted as saying, arts educators were challenged “to demonstrate how arts enhance business competitiveness” (Gurin, 1994, p.

29). Outward vision also prompted the development of curriculum Content Standards for art education. The goal of the National Standards for Arts Education (Consortium of National Arts Education Associations, 1994) was to identify the knowledge essential to allow students to: communicate at a basic level in dance, music, theatre and visual art; communicate proficiently in at least one of these art fields; analyze art works and present the findings; have awareness of past and current master works of art from a selection of cultures; and, have an integrated understanding of art knowledge and skills. For the purposes of this study the secondary level visual art standards were utilized. These consisted of six Content Standards and 25 Performance Standards (see Appendix B).

The proceedings of the 1995 Getty Center for Education in the Arts, which focused on the role of the arts in education reform, was the topic of Beyond the Three Rs (1995). This work quoted Romone Cortines, Special Advisor to the Secretary of Education as saying, "I never saw so much math, science, physics, history, reading, writing, listening, speaking, researching, comparing, contrasting, predicting, and presenting going on in a classroom, all through the prism of art." A recent insert in Business Week (October 28, 1996), Educating for the Workplace Through the Arts, reiterated that changes which have occurred in the workplace have changed our educational expectations. "Today's -- and tomorrow's -- workers have to be multi-skilled and multi-dimensional, flexible and intellectually supple". The supplement reaffirmed knowledge as a worker's most important resource. It cited management experts such as Drucker and Senge as proof. The publication also stated three examples of how art education could strengthen the workforce. The examples included, developing the qualities businesses need, stimulating the process of learning, and supporting and advocating school participation. Several examples of business support for comprehensive art programs in education were also cited. The article concluded with

suggestions of ways art supporters could build coalitions and become proactively involved to promote arts education as a means for preparing students for college or careers.

Summary

Several forces in the last decade have served as catalysts for curriculum change. Workforce education and art education, like many disciplines in education, have been experiencing curriculum change.

Tech Prep, School-to-Work, and the SCANS Workplace Know-How skills have been initiatives in public education which were specifically created to address our nation's challenge to better prepare our youth to enter the workforce. Tech Prep and School-to-Work initiatives encouraged the development of career pathways which provided seamless curricula between secondary and postsecondary schools in this country. These reform initiatives encouraged curricula that was: developed through cooperation between education, business, and industry; an integration of academic and technical disciplines which emphasized basic academic foundations as well as critical thinking, problem-solving, teambuilding; and other specific workplace foundations and competencies needed for job success.

DBAE represented an important change in the philosophical precepts of art education. Art was no longer thought of as a non-substantive creative activity. DBAE's comprehensive art education system, like Tech Prep and School-to-Work, took a holistic view of education. From this new perspective, art was no longer thought of as a non-substantive creative activity. It encouraged comprehensive art education as a basic part of general education. Through related literature it has evidenced some belief that

skills needed in the workplace could be delivered through comprehensive art programs in general education.

The purpose of this study was to determine the perceptions of DBAE professionals concerning how useful art education learning outcomes could be for students in developing the SCANS Workplace Know-How skills. The review of the literature completed for this Chapter provided the essential information that was used to determine that this study could be carried out.

CHAPTER 3

METHODS AND PROCEDURES

Sources of Information

This study resulted from a need to understand DBAE experts' attitudes toward the use of art education learning outcomes in developing SCANS Workplace Know-How skills in workforce education programs. Considerable time, effort and money had been spent in the development of integrated curriculum outcomes in English, math, science, social science and technologies to fulfill the SCANS skills. As an art educator and a practitioner and change agent in workforce education, the author was unable to understand why few efforts to develop integrated curriculum utilizing art education learning outcomes for the fulfillment of SCANS skills have been undertaken.

The study began with a review of the literature. Materials available from a variety of sources including the Internet and the University of North Texas library provided valuable information on workforce trends and dynamics, education the workforce, visual arts and workforce education, and the process of the Delphi technique.

Selection of Delphi Panel

The Delphi study participants were selected based on the following criteria: expertise in DBAE; strong foundation in curriculum; understanding of secondary education student skill levels; and willingness to commit approximately one to one-and-a-half hours to the completion of the survey instrument in each Round. This audience was qualified to distinguish the SCANS Workplace Know-How which could be developed as a result of the achievement of the National Standards for [Visual] Arts

Education. The average person was not familiar with the capacity of the visual arts discipline to develop workforce competencies through an art curriculum.

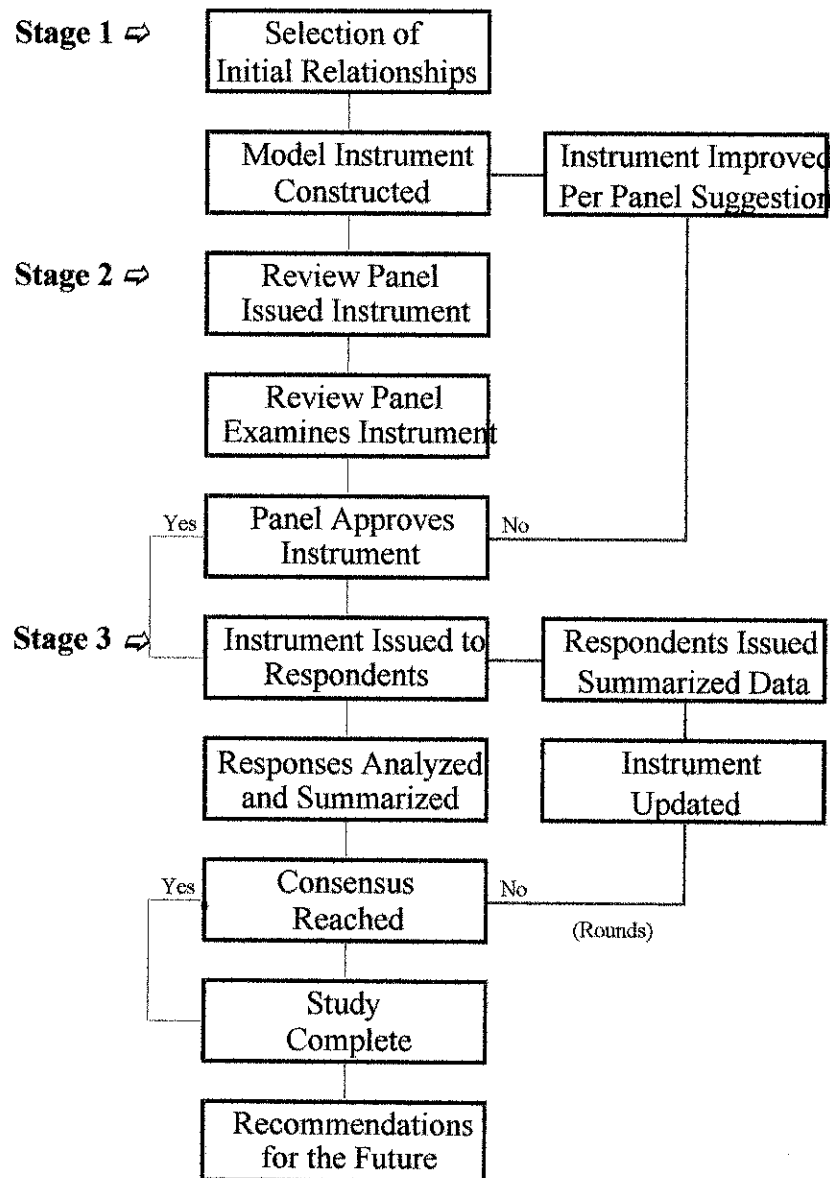
There are six epicenters of DBAE dissemination across the country. The directors of five of these centers were contacted and asked to identify individuals who meet the selection criteria. The individuals were contacted and agreed to participate. Two individuals each were selected from: The California Consortium for Visual Arts Education; Florida Institute for Art Education; The Ohio Partnership for the Visual Arts; Regional Institute for Educators; Prairie Visions: The Nebraska Consortium for DBAE; and The Southeast Center for Education in the Arts. The sixth DBAE site, North Texas Institute for Educators on the Visual Arts, provided an accessible location to test the instrument and process prior to data collection. Due to their involvement in the instrument validation, no information was solicited from this center during the data collection activities.

Delphi Technique

The Delphi technique was selected to answer the research questions. Figure 1 illustrates the methodological process. Utilization of this method of data analysis identified relationships between the SCANS Workplace Know-How and secondary visual arts Performance Standards from the National Standards for Arts Education. This structured qualitative assessment strategy utilized questionnaires and summarized feedback to reach consensus and to generate and clarify ideas. This technique encouraged independent thinking by promoting an atmosphere without dominance or pressure from the other participants. The respondents were encouraged to complete the instruments privately, at their own pace.

Allowing each respondent to review the summarized responses of all participants prior to completing subsequent instruments enabled the exchange of opinions.

Figure 1. The Delphi Study Methodological Process.



This resulted in individuals changing their ideas after they were able to read and analyze other points of view.

There were three distinct Stages which were completed in the Delphi process. The first Stage dealt with the development of an instrument and identification of the expected relationships between the items which are the subject of comparison. Stage two clarified and validated the instrument. The third Stage involved data collection and analysis. This Stage required two Rounds in order to reach a consensus on as many points as possible. In each Round, the instrument was issued to the experts and their responses were collected and analyzed. The experts' responses were collectively summarized and sent back to them in the form of frequency and percent of responses to each question. They reviewed the summarized information and then responded to another questionnaire.

It is hoped that the finding of this study will provide a basis for understanding among Tech Prep and School-to-Work change agents, educational leaders, and business representatives, of the role that comprehensive art education can perform as a part of the secondary core curriculum. It is also hoped that the study will communicate to art educators the value of what they do in terms of Tech Prep and School-to-Work systems. Recommendations for application of these findings will be made to these stakeholder groups. Upon completion, the results of this study will be disseminated directly to Tech Prep, School-to-Work and DBAE networks and indirectly to a broader audience through articles and publication.

Data Gathering Instruments

Stage 1

Stage 1 consisted of the construction and development of an instrument and identification and formatting of the expected relationships between the items which are the subject of the study's comparison. A questionnaire which focused on the relationship of the National Standards for [Visual] Arts Education and SCANS Workplace Know-How was developed.

Stage 2

In Stage 2 the model instrument was clarified and validated through a series of peer review activities and a pilot study. The instrument which had been created in Stage 1 was critiqued by a review panel consisting of five individuals from the North Texas Institute for Educators on the Visual Arts. By assisting in validation of the initial survey instrument, this panel ensured the construction of a quality instrument. The panel reviewed the documents' instructions, questions, and attachments. They noted any components which they felt were not straightforward and clear. The panel responded to the questions on the instrument in order to test the data collection process. This also validated the initially selected commonalities and agreements between the visual art Performance Standards and the SCANS Workplace Know-How skills. These were in the original instrument and subsequent versions of the instrument in preparation of the format for the first Round Delphi instrument to be completed by the national panel.

The first version of the survey instrument was released to a review panel of five participants from the North Texas Institute for Educators on the Visual Arts on November 18, 1996. It was immediately evident that the participants were having difficulty understanding the instructions. Therefore, the panel did not attempt to respond to the questionnaire. With input from several of these panelists, revisions to the

instruments instructions were quickly made. More emphasis was placed on the inclusion of visual cues to provide reference points and assist the participants.

On December 2, 1996 the second version of the survey instrument along with a two-page reference guide to the SCANS Workplace Know-How skills was released to the same review panel. This time the panelists were able to understand and complete the instrument. Based on a more than 50% consensus in their responses, the format of questions 2, 3, 6, 7, 8, 9, 11, 12, 13, 17, and 23 were updated. The panelist found the two-page SCANS reference list useful but awkward to use because they had to constantly refer back and forth from one document to the other (see Appendix A). Therefore the survey was redesigned to include the reference guide in a column on the left side of each page of the questionnaire. The panelists also expressed a desire for more information regarding the purpose of conducting such a study. Because of this, a background page was added to the instrument package. The instructions were rewritten to include the modifications which had been made to the instrument (see Appendix C).

Even though the panelists had been able to complete the survey and achieve some consensus, many of the panelist expressed adversity regarding the amount of time it took for them to complete the survey and how draining the experience had been due to its highly abstract nature. The panelists' completed surveys were replete with statements such as, "This is time consuming and difficult to take" and "If this survey was sent to me to fill out - I'm sorry, but it would go in the trash. My time is so precious and this is way too difficult." They assumed that completion of the instrument would require only a few moments of their time and were dismayed at not having been forewarned of the commitment required. In order to dispel this assumption, a cover letter explaining time requirements and the need for focused critical thought was created. The letter even suggested a strategy for participants to take in order to complete the questionnaire

without experiencing undue frustration (see Appendix D). Also, it was decided that future study participants should be contacted personally to secure their commitment to participate after having heard an explanation of the process, expectations and requirements.

With regard to the Performance Standards for secondary visual arts, the instrument review panel was consistent with comments such as: “They are too abstract - I need concrete examples” and “Very wordy - hard to understand where you're going.” However, these statements could not be changed because they were stated as published in the National Standards for Art Education (Consortium of National Arts Education Associations, 1994).

Because the updated survey package had undergone extensive alterations and because the previous review panel had expressed such discord with the response process, a decision was made to conduct a pilot study prior to involvement of the national expert panel. The pilot study would involve five participants from the North Texas Institute for Educators on the Visual Arts who had not been involved with previous review panels or versions of the instrument package.

Pilot study participants were asked in advance if they would agree to participate in the pilot study. They were told that completion of the survey would demand considerable time and that the concepts with which it dealt were considered highly abstract. On January 14, 1997, those who agreed to participate received the new cover letter, background information, and the revised questionnaire (Appendices C & D)

The pilot study participants thoroughly completed the survey instrument with no comments. Based on a more than 50% consensus in their responses, changes were made to the format of questions 1, 3, 11, 12, 15, 16, 18, and 24. The survey components, which consisted of a cover letter, background information, and a questionnaire with

instructions, a reference guide to the SCANS skills and 25 questions, was then ready to be submitted to the national panel (see Appendix E).

Data Collection Procedures

Stage 3

After the panel's suggestions had been incorporated, the first Round Delphi instrument was distributed on February 4, 1997 to the group of 10 national panel respondents from the other five DBAE centers. Each participant independently responded to the questionnaire and listed ideas regarding the identified issues.

Based on the panel's responses in Round One of the Delphi study, the following changes were made to the instrument in preparation for Round Two. In relation to the SCANS skills for all questions, where the respondents had reached 100% consensus to include a specific SCANS skill, the participants had reached a unanimous decision and that skill did not appear on the second Round instrument in relation to its respective Performance Standard. Where less than 50% of the participants selected to include a particular SCANS skill, that skill was removed from the revised instrument and eliminated from consideration because it did not meet that selection criteria. This reduced the number of questions from the Round One survey to the Round Two survey by 60%. It also reduced the number of total SCANS skills to consider by 95%. The second Round of the Delphi process included only 10 questions, with one SCANS skill to consider per question. This created a survey instrument which was much more succinct and easier to complete (see Appendix F). A new cover letter was also devised for use in Round 2(see Appendix G).

The second Round questionnaire and cover letter was developed and sent to the national panel on March 1, 1997. Prior to completing the second Round Delphi study

instrument, each participant reviewed the summarized findings from Round One. These consisted of the percentages of the panel's responses to each item which was included in the second Round questionnaire and the frequency of those responses.

The formula that was used to aggregate the data from Round One was also utilized in Round 2. The results of Round Two were combined with any items, from the first Round, on which the panel had reached a 100% consensus to determine the final Delphi study findings.

In the final analysis, the Delphi panel's responses were averaged to determine the percentage of consensus for each SCANS Workplace Know-How skill in relation to each secondary education Performance Standard from the National Standards for [Visual] Arts Education. Additionally, the percentages from each of the Performance Standards were also averaged in selected groupings. The Performance Standards related to each of six Content Standards from the National Standards for [Visual] Arts Education were averaged to determine relationships between each of the SCANS Workplace Know-How skills and each secondary education Content Standard from the National Standards for [Visual] Arts Education. Also, the panel responses associated with each of the Performance Standards were averaged in order to determine the relationship of the SCANS Workplace Know-How skills and National Standards for [Visual] Arts Education as a whole.

Summary

This study was initiated in October 1996 as a result of the researcher's inability to understand why art education learning outcomes were not being used in Tech Prep and School-to-Work programs to develop SCANS Workplace Know-How skills. A considerable amount of integrated curricula efforts were being developed in English, math, science and social sciences to use in Tech Prep and School-to-Work programs.

Very little integrated curriculum development had been completed in visual art for use in either Tech Prep or School-to-Work programs.

The initial planning of the study and review of literature were conducted through a variety of sources including the Internet and the University of North Texas Libraries. A questionnaire was developed which would provide for a means of arriving at a consensus of opinion by the Delphi panel concerning the relationship between the learning outcome standards included in the National Standards for [Visual] Arts Education and the SCANS Workplace Know-How skills.

A review panel of five DBAE art education experts from the North Texas Institute for Educators on the Visual Arts assisted in the development and validation of the initial Delphi instrument by critiquing the instructions, questions, and attachments. Several revisions were made to the initial instrument and because of the abstract nature of the questionnaire, it was decided to conduct a pilot field test of the Delphi process. The pilot study was completed utilizing five different participants associated with the North Texas Institute for Educators on the Visual Arts. Eight questions were changed as a result of the pilot test.

Directors and staff of the Getty Regional Institutes for DBAE were contacted in order to secure names of qualified individuals to participate in the national Delphi study. The Delphi study participants were selected based on the following criteria: expertise in DBAE; strong foundation in curriculum; understanding of secondary education student skill levels; and willingness to commit a considerable amount of time to the completion of the survey instrument in each Round.

The next step in the research process was to conduct the actual study. As explained in the Data Collection Procedures section of this chapter, the criteria for analyzing the Rounds of the Delphi process were determined and the materials for the

first Round of the Delphi process were mailed to the 10 panel members on February 4, 1997. The first Round Delphi mailing contained a 25-item questionnaire with a reference guide to the SCANS skills, background information, and a cover letter. After following the established criteria for data analysis, the Round 2 instrument containing 10 questions was constructed and mailed to the Delphi panel on March 1, 1997.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

Research Questions

The results of the analysis of the data collected for this study were presented in this Chapter. The primary purpose of this study, as stated in Chapter 1, was to measure the perceptions of DBAE curriculum experts concerning the relationship of visual art education learning outcomes and the SCANS Workplace Know-How skills.

The format to report the findings was to restate the Research Questions, show the Delphi panel's perceptions of which SCANS skills were developed by the Content or the Performance Standard from the National Standards for Art Education, and finally, to explain the findings. The findings were presented so that the perceptions of the national Delphi panel were reported in regard to the six Content Standards or each of the 25 Performance Standards. Only data items which upon completion of the actual study retained a Delphi panel consensus of 50% or greater on any of the survey questions have been reported or utilized in the averages reported in this Chapter.

Research Question 1: Is there a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education?

For Research Question 1, the data has been grouped in order to analyze the SCANS Workplace Know-How skills in relation to the National Standards for [Visual] Arts Education. The National Standards are considered as an inclusive group through

their major categorical subdivisions which include the Content Standards and their achievement levels.

Each Content Standard has both a Proficient and an Advanced Achievement Level. For the readers' benefit, information on how the Content Standards were organized is presented in Table 1.

Table 1. *Shows the organization of the National Standards and reiterates how the Performance Standard data was analyzed.*

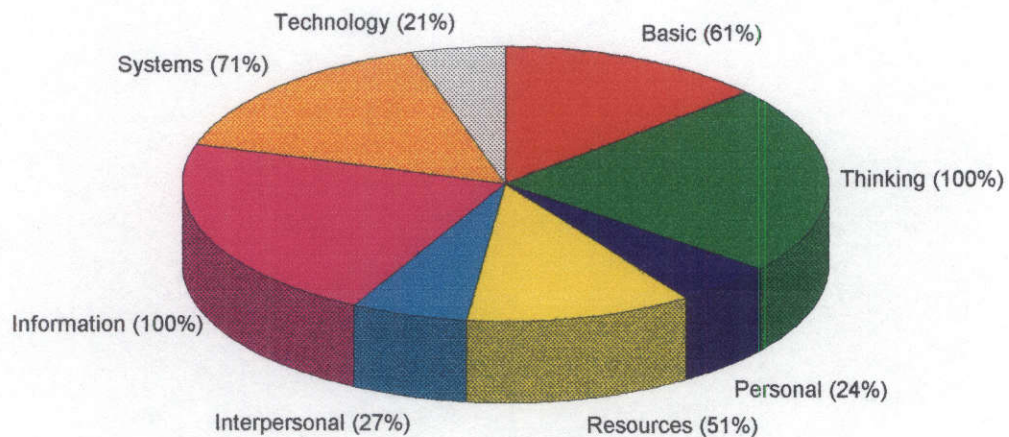
Content Standard 1 Includes:	<u>Proficient Achievement</u> Performance Standards 1 and 2
	<u>Advanced Achievement</u> Performance Standards 3 and 4
Content Standard 2 Includes:	<u>Proficient Achievement</u> Performance Standards 5 through 7
	<u>Advanced Achievement</u> Performance Standards 8 and 9
Content Standard 3 Includes:	<u>Proficient Achievement</u> Performance Standards 10 and 11
	<u>Advanced Achievement</u> Performance Standards 12 and 13
Content Standard 4 Includes:	<u>Proficient Achievement</u> Performance Standards 14 through 16
	<u>Advanced Achievement</u> Performance Standards 17 and 18
Content Standard 5 Includes:	<u>Proficient Achievement</u> Performance Standards 19 through 21
	<u>Advanced Achievement</u> Performance Standard 22
Content Standard 6 Includes:	<u>Proficient Achievement</u> Performance Standards 23 and 24
	<u>Advanced Achievement</u> Performance Standards 25

The panel individually examined each Performance Standard related to the six Content Standards which comprise the secondary level National Standards for [Visual] Arts Education. The data associated with each of those Performance Standards were grouped and examined in reference to the National Standards. The parenthetically

enclosed percentage next to each SCANS skill label represents the national panel's degree of consensus on the relationship of that skill to the National Standards (see Figure 2).

In regard to the first Research Question, the national panel was able to identify a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education. Figure 2 shows the relationship between the

Figure 2. The Relationship between the Six National Visual Arts Content Standards and the SCANS Skills as Perceived by the National Delphi Panel.



SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education at the secondary level. It represents the percentage of Content Standards in Visual Arts Education which the Delphi panel perceived as developing SCANS skills. It was a 100% consensus of the Delphi panel members that the six Content Standards and the 25 Performance Standards would develop the SCANS Thinking skills and Information skills. The panel also perceived a relationship with Systems skills at 71%, Basic skills at 61%, and Resources skills at 51%. Least reported but not unimportant

perceptions were Interpersonal skills at 27%, Personal skills at 24%, and Technology skills at 21%.

Relationship of SCANS Skills to Visual Arts Education by Content Standard

The Delphi panels' responses concerning the relationship of SCANS skills to the National Standards for [Visual] Arts Education were examined for each of the six Content Standards. Figures 3 through 20 show the panel's responses for each of the six of the Content Standards.

Content Standard 1

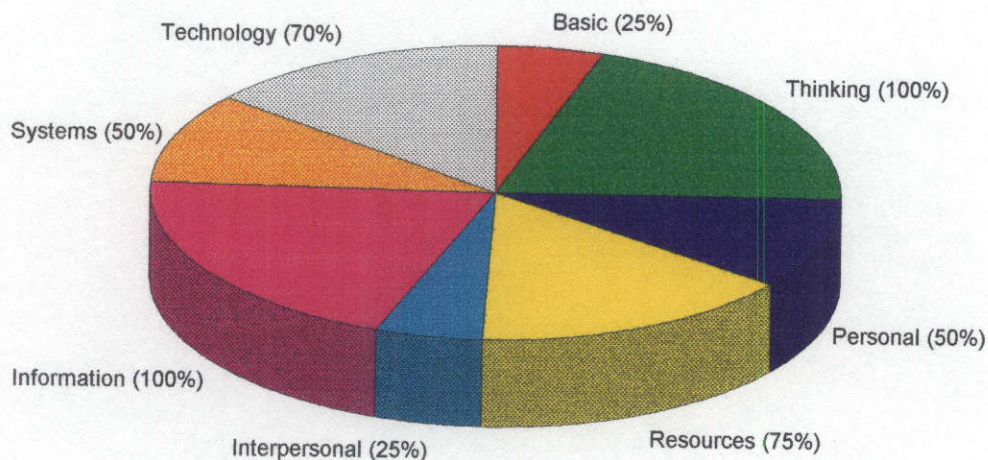
Understanding and applying media, techniques, and processes.

Related Performance Standards

- 1) Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.
- 2) Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.
- 3) Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.
- 4) Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

Performance Standards 1 through 4 , constitute Content Standard 1. Figure 3 shows the relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education for Content Standard 1.

Figure 3. The Relationship between Content Standard 1 and SCANS Skills as Perceived by the National Panel.

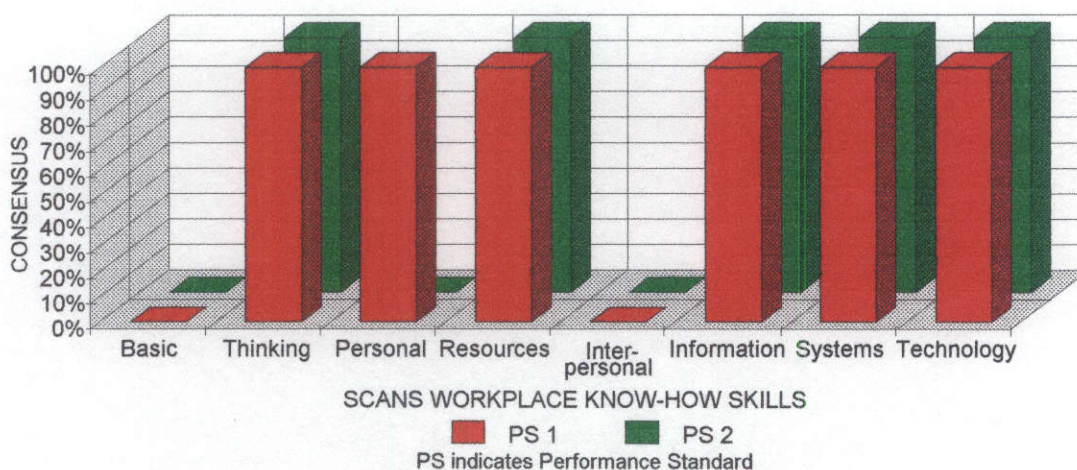


The Delphi panel members reached 100% consensus that SCANS Thinking skills and Information skills could be developed by achievement of Content Standard 1. Resources skills at 75% and Technology skills at 70% were also perceived to have a strong relationship while the panel reached 50% agreement each for both Personal skills and Systems skills. Basic skills at 25% and Interpersonal skills also at 25% were perceived as having the least relationship to Content Standard 1.

The relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education Content Standard 1 at the Proficient Achievement Level are the subject of Figure 4. Performance Standards 1 and 2 constitute a Proficient Achievement Level.

The Delphi panel agreed that six of the eight SCANS skills could be developed through the Proficient Achievement Level of Content Standard 1. No relationship was perceived for Basic skills and Interpersonal skills at the Proficient Achievement Level of

Figure 4. The Relationship between National Visual Arts Content Standard 1 --Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.

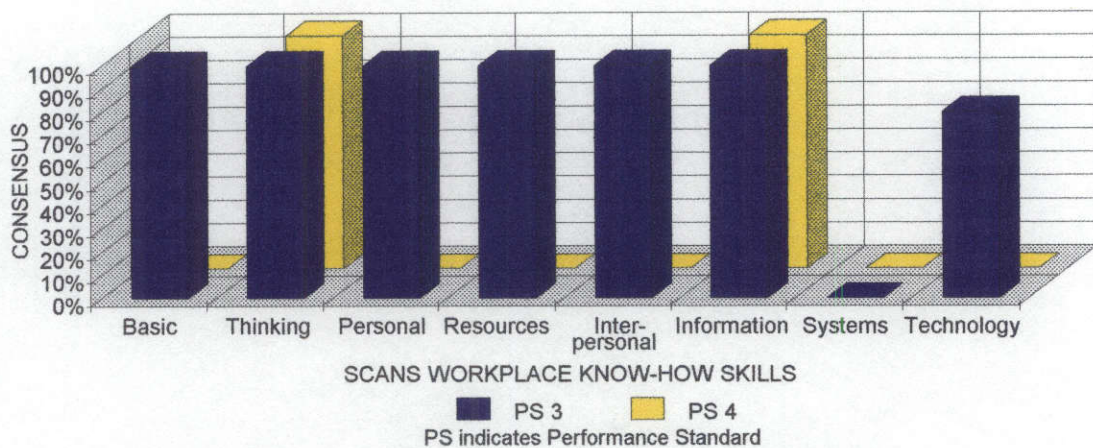


Content Standard 1. The panel did, however, achieve 100% consensus that SCANS Thinking skills, Resources skills, Information skills, Systems skills, and Technology skills could be developed in relation to Content Standard 1 at the Proficient Achievement Level. Personal skills were perceived to be pertinent to Content Standard 1's Proficient Achievement Level by 50% agreement.

Performance Standards 3 and 4 constitute the advanced level of achievement. Figure 5 portrays this relationship between the SCANS skills and the Advanced Achievement Level. At the Advanced Achievement Level for Content Standard 1, the Delphi panel agreed that seven of the eight SCANS skills could be developed. The panel reached 100% consensus on Thinking skills and Information skills. Basic skills at 50%,

Personal skills at 50%, Resources skills at 50%, Interpersonal skills at 50%, and Technology skills at 80% were also perceived as developed through the achievement of Content Standard 1 at the Advanced Achievement Level.

Figure 5. The Relationship between National Visual Arts Content Standard 1 - Advanced Achievement Level and SCANS Skills as Perceived by the National Panel.



Content Standard 2:

Using knowledge of structures and functions.

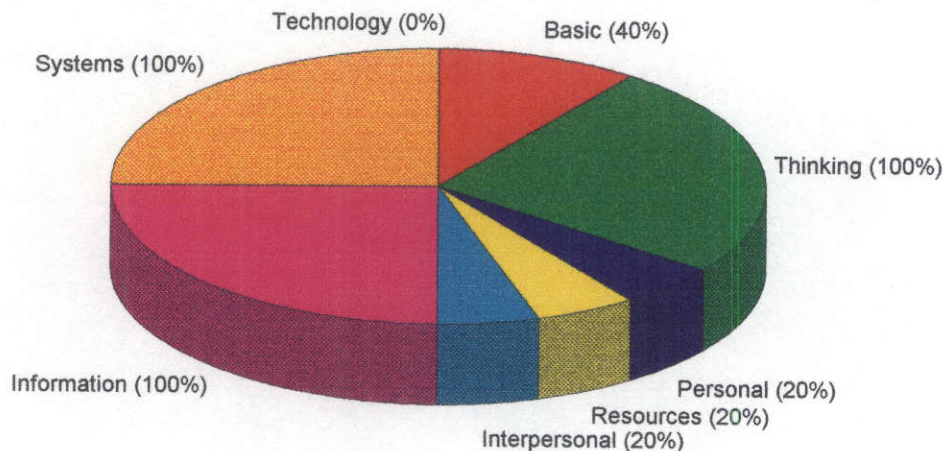
Related Performance Standards

- 5) Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.
- 6) Students evaluate the effectiveness of artworks in terms of organizational structures and functions.
- 7) Students create artworks that use organizational principles and functions to solve specific visual arts problems.

- 8) Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.
- 9) Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

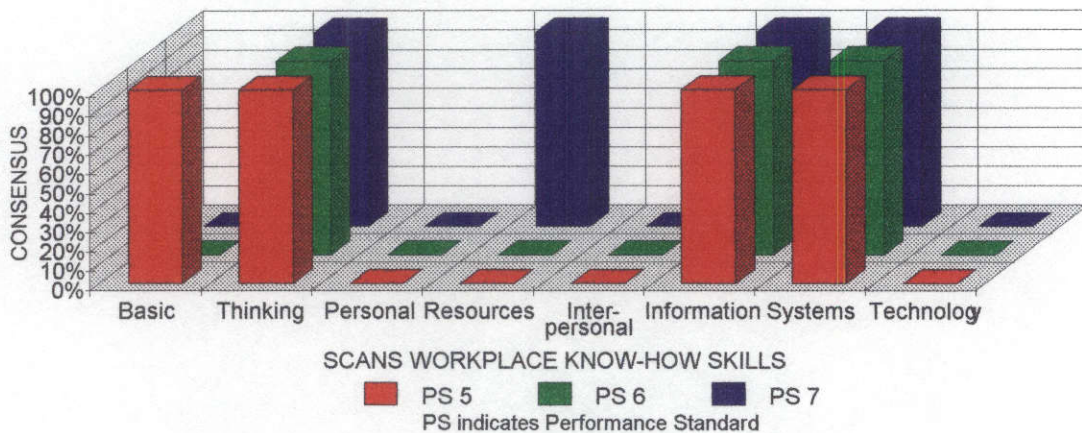
Performance Standards 5 through 9 as identified in the Delphi study, are associated with Content Standard 2. The subject of Figure 6 shows the relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education Content Standard 2. The Delphi panel members reached 100% consensus that SCANS Thinking skills, Information skills, and Systems skills could be developed by achievement of Content Standard 2. Basic skills at 40% and Personal skills, Resources skills, and Interpersonal skills each at 20% were also perceived to be developed.

Figure 6. The Relationship between Content Standard 2 and SCANS Skills as Perceived by the National Panel.



Performance Standards 5, 6, and 7 constituted Content Standard 2 at the Proficient Level of Achievement (see Figure 7). Here, Thinking skills, Information, skills and Systems skills are all represented through 100 % consensus of the Delphi panel.

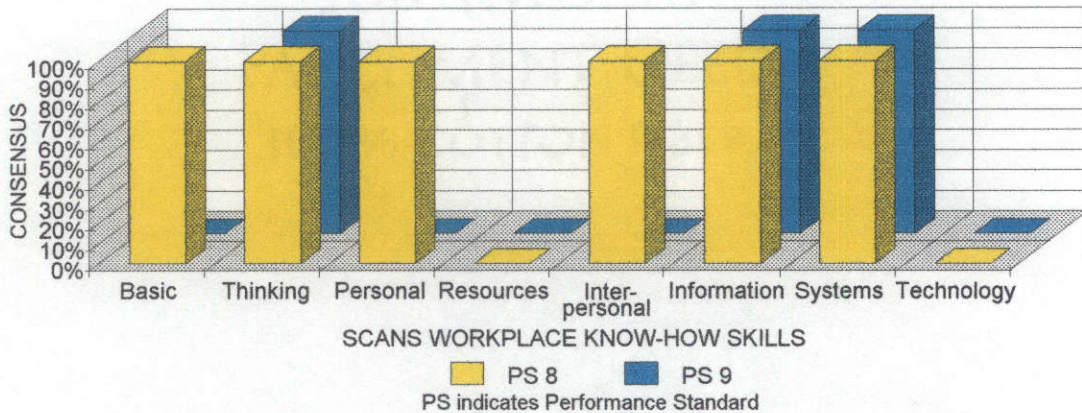
Figure 7. The Relationship between National Visual Arts Content Standard 2 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.



Resources skills and Basic skills each at 33% were also perceived as developed. The panel perceived no relationship for Personal skills, Interpersonal skills, or Technology SCANS skills at the Proficient Achievement Level for Content Standard 2.

Figure 8 shows Performance Standards 8 and 9 which compose the Advanced Achievement Level for Content Standard 2. In Figure 8, Thinking skills, Information skills, and Systems skills remain solidly represented through 100% consensus of the national Delphi panel. Basic skills, Personal skills, and Interpersonal skills were identified as having a 50% relationship with Content Standard 2 at the Advanced Achievement level. Resources skills and Technology skills were not perceived by the Delphi panel to be achieved by the development of Content Standard 2 at the Advanced Achievement Level.

Figure 8. The Relationship between National Visual Arts Content Standard 2 - Advanced Achievement Level and SCANS Skills as Perceived by the National Panel.



Content Standard 3:

Choosing and evaluating a range of subject matter, symbols, and ideas.

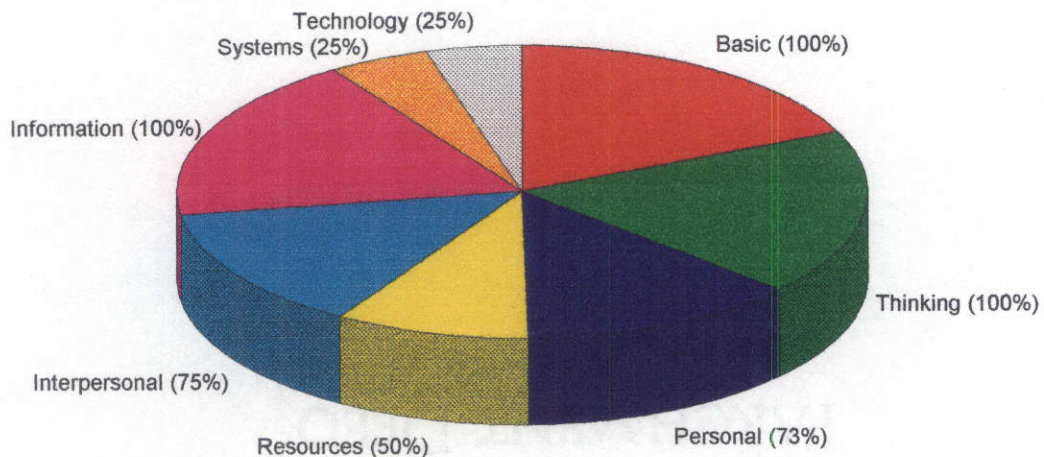
Related Performance Standards

- 10) Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.
- 11) Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.
- 13) Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.
- 14) Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the students' works and in significant works by others.

Performance Standards 10 through 13, constitute Content Standard 3. Figure 9 shows the relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education for Content Standard 3.

The Delphi panel members reached 100% consensus that SCANS Basic skills, Thinking skills, and Information skills could be developed by achievement of Content Standard 3. Interpersonal skills at 75%, Personal skills at 73% and Resources skills at 50% were also perceived to have a strong relationship. Systems skills and Technology skills at 25% were perceived as having the least relationship to Content Standard 3.

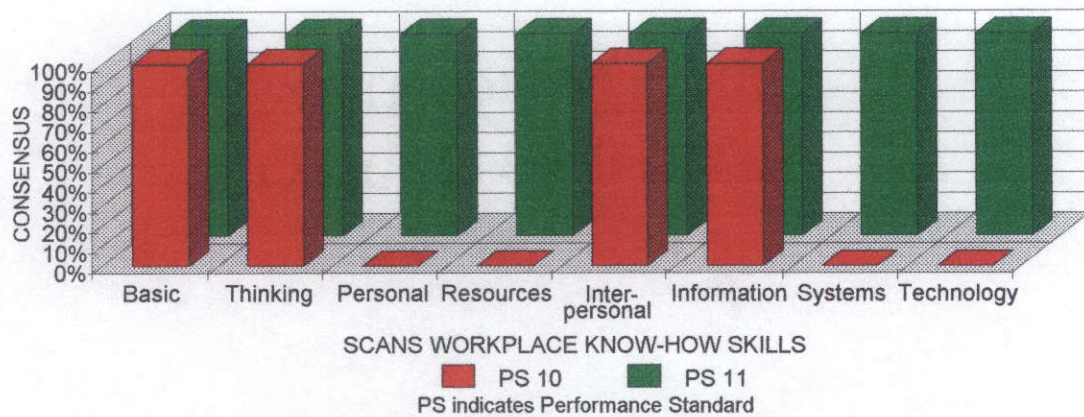
Figure 9. The Relationship between Content Standard 3 and SCANS Skills as Perceived by the National Panel.



At the Proficient Achievement Level for Content Standard 3, SCANS skills' relationships for Performance Standards 10 and 11 were reviewed. In Figure 10, Basic skills, Thinking skills, Interpersonal skills, and Information skills at 100% consensus show the strongest relationship. Personal skills, Resources skills, Systems skills, and Technology skills were perceived by the Delphi panel to each have a 50% relationship.

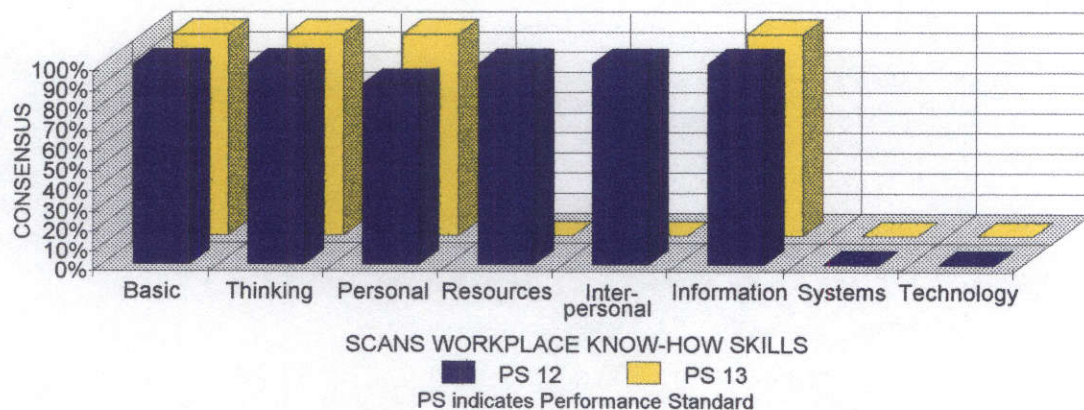
The panel believed that these SCANS skills could be developed by the achievement of Content Standard 3 learning outcomes at the Proficient Achievement Level.

Figure 10. The Relationship between National Visual Arts Content Standard 3 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel



Performance Standards 12 and 13 comprise the Advanced Achievement Level for Content Standard 3 (see Figure 11). At this level, Basic skills, Thinking skills, and

Figure 11. The Relationship between National Visual Arts Content Standard 3 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.



Information skills were perceived by the national panel to have a 100% relationship. Personal skills at 95%, Resources skills at 50%, and Interpersonal skills also at 50% were also perceived to have a relationship. These SCANS skills were perceived, by the Delphi panel, to be developed through the accomplishment of Performance Standards at the Advanced Achievement Level for Content Standard 3. In relation to this Content Standard and level, Systems and Technology skills do not appear to be pertinent.

Content Standard 4:

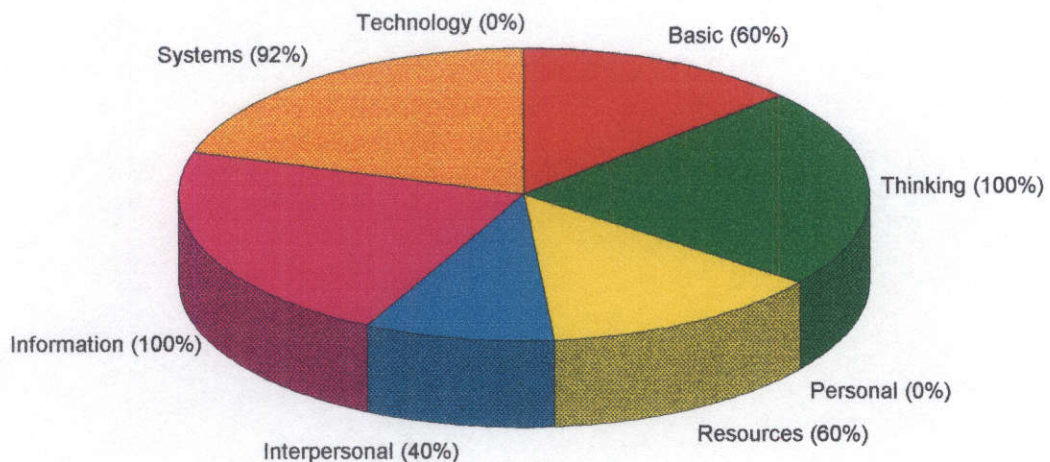
Understanding the visual arts in relation to history and cultures.

Related Performance Standards

- 14) Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.
- 15) Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places.
- 16) Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.
- 17) Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians, and arts.
- 18) Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

Performance Standards 14 through 18 make up Content Standard 4. Figure 12 shows the relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education for Content Standard 4. The Delphi panel members reached 100% consensus that SCANS Thinking skills and Information skills could be developed in relationship to Content Standard 4. Systems skills at 92%, Basic skills at 60%, and Resources skills also at 60% were perceived to have a strong relationship while the panel achieved a 40% agreement for Interpersonal skills. Personal skills and Technology skills were not perceived to have a relationship to Content Standard 4.

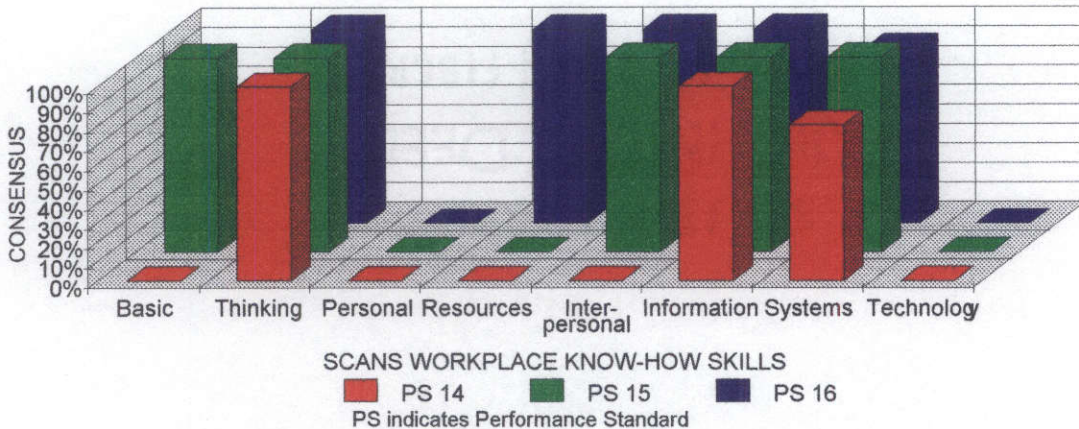
Figure 12. The Relationship between Content Standard 4 and SCANS Skills as Perceived by the National Panel.



The relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education Content Standard 4 at the Proficient Achievement Level is the subject of Figure 13. Performance Standards 14 through 16 constitute the Proficient Achievement Level. The Delphi panel agreed that six of the eight SCANS skills could be developed through the Proficient Achievement Level of

Content Standard 4. No relationships were perceived for Personal skills and Technology skills. The panel reached a 100% consensus that SCANS Thinking skills and Information skills could be developed in relation to Content Standard 4 at the Proficient Achievement Level. System skills at 90 % and Interpersonal skills at 67% were also perceived to have a strong relationship. The panel agreed that both Basic skills and Resources skills were developed 33% of the time in relation to the Proficient Achievement Level for Content Standard 4.

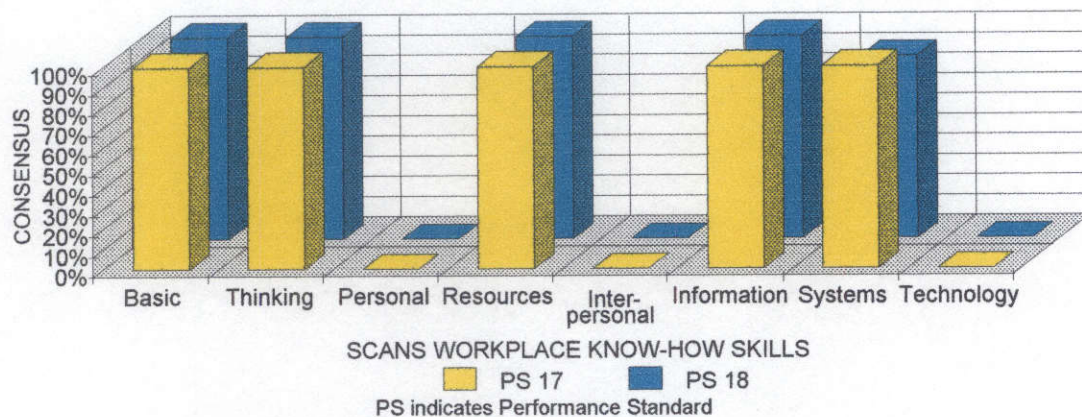
Figure 13. The Relationship between National Visual Arts Content Standard 4 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.



Performance Standards 17 and 18 constitute the Advanced Achievement Level (see Figure 14). At this level, the Delphi panel agreed that five of the eight SCANS skills could be developed. The panel reached 100% consensus that Basic skills, Thinking skills, Resources skills, and Information skills, could be developed through achievement of Content Standard 4 at the Advanced Achievement Level. The panel also agreed that Systems skills at 95% was also strongly related. The panel did not believe that either

Personal skills, Interpersonal skills or Technology skills would be acquired by achieving Content Standard 4.

Figure 14. The Relationship between National Visual Arts Content Standard 4 - Advanced Achievement Level and SCANS Skills as Perceived by the National Panel.



Content Standard 5:

Reflecting upon and assessing the characteristics and merits of their work and the work of others.

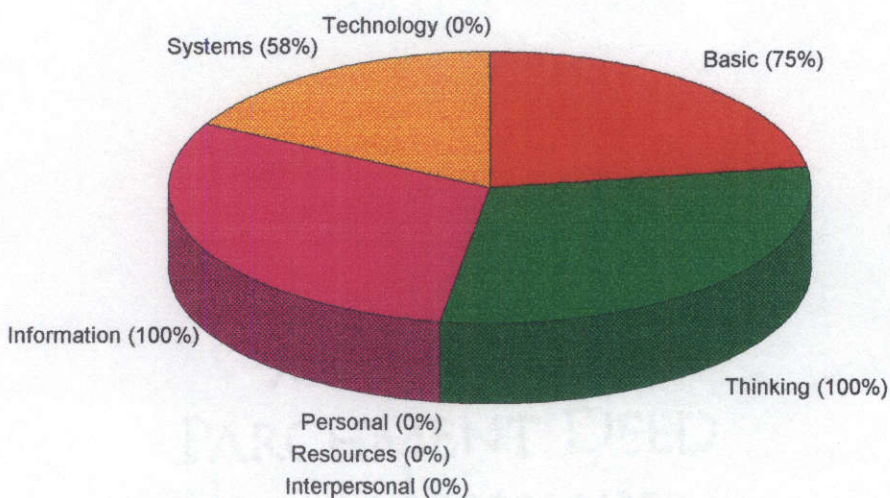
Related Performance Standards

- 19) Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.
- 20) Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.
- 21) Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

- 22) Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

Content Standard 5 is composed Performance Standards 19 through 22 as they are identified in the Delphi study. The Delphi panel members reached 100% consensus that SCANS Thinking skills and Information skills could be developed by achievement of Content Standard 5. Basic skills at 75% and Systems skills at 58% also were perceived, by the national panel, to have a strong relationship. The panel identified no relationship for SCANS Personal skills, Resources skills, Interpersonal skills, and Technology skills in relation to Content Standard 5 (see Figure 15).

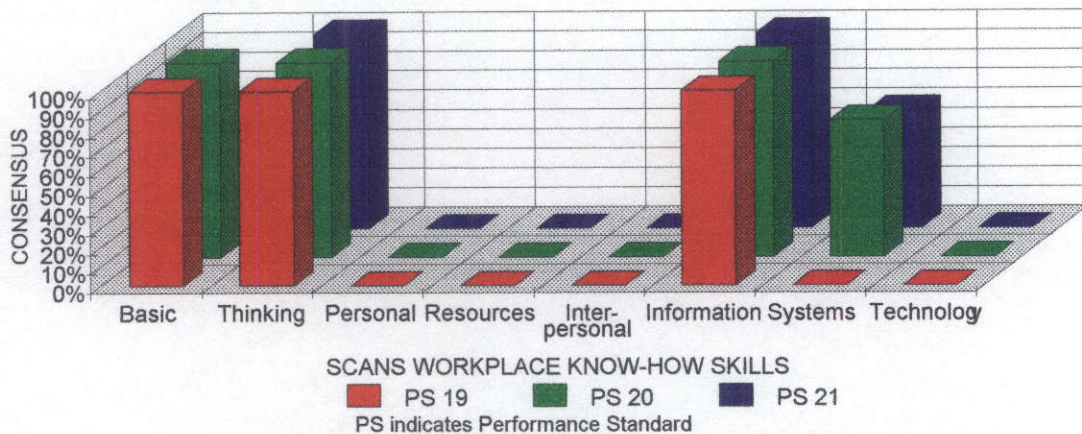
Figure 15. The Relationship between Content Standard 5 and SCANS Skills as Perceived by the National Panel.



In Figure 16, Performance Standards 19, 20, and 21 constitute Content Standard 5 at the Proficient Achievement Level. Thinking skills and Information skills remain solidly represented through 100% consensus of the national Delphi panel. Basic skills at

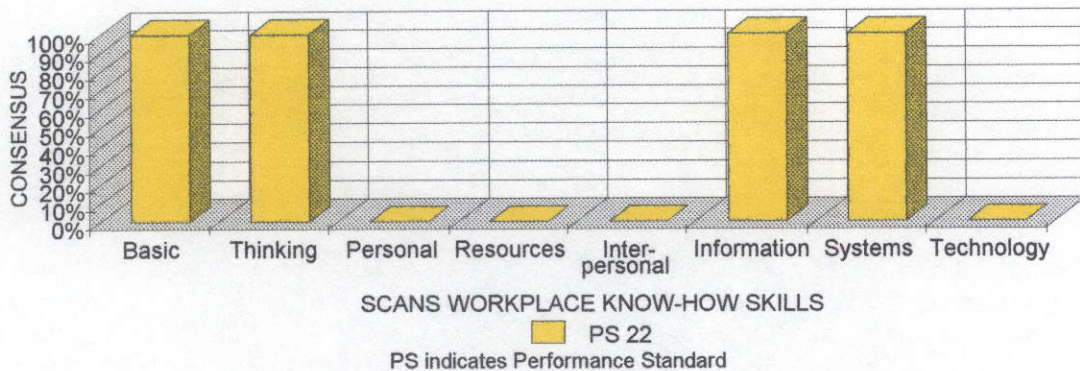
67% and Systems skills at 43% were also perceived to have a relationship. No relationship between SCANS Personal skills, Resources skills, Interpersonal skills, and Technology skills was identified by the national Delphi panel in relation to Content Standard 5 at the Proficient Achievement Level.

Figure 16. The Relationship between National Visual Arts Content Standard 5 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.



The addition of Performance Standard 22 constitutes the Advanced Achievement Level for Content Standard 5. Figure 17 portrays this relationship for an Advanced Achievement Level. At this level, the national panel reached 100% consensus that the SCANS Basic skills, Thinking skills, Information skills, and Systems skills could be developed in relation to Content Standard 4 at the Advanced Achievement Level. The panel did not believe that Personal skills, Resources skills, Interpersonal skills, and Technology skills had a relationship to Content Standard 5.

Figure 17. The Relationship between National Visual Arts Content Standard 5 - Advanced Achievement Level and SCANS Skills as Perceived by the National Panel.



Content Standard 6:

Making connections between visual arts and other disciplines.

Related Performance Standards

- 23) Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.
- 24) Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.
- 25) Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

Data for the analysis of Content Standard 6 was derived for Performance Standards 23 through 25 and is graphically represented in Figure 18. The Delphi panel

reached 100% consensus that the SCANS Thinking skills, Resources skills, Information skills, and Systems Skills could be developed through the achievement of Content Standard 6. Basic skills at 67 % and Technology skills at 33% were also perceived to have a relationship. No relationship was perceived between SCANS Personal skills and Interpersonal skills for Content Standard 6.

Figure 18. The Relationship between Content Standard 6 and SCANS Skills as Perceived by the National Panel.

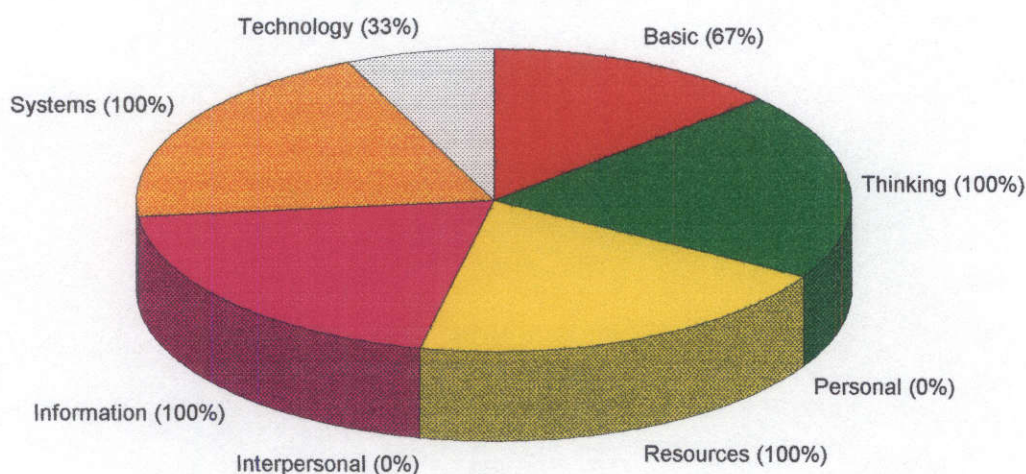
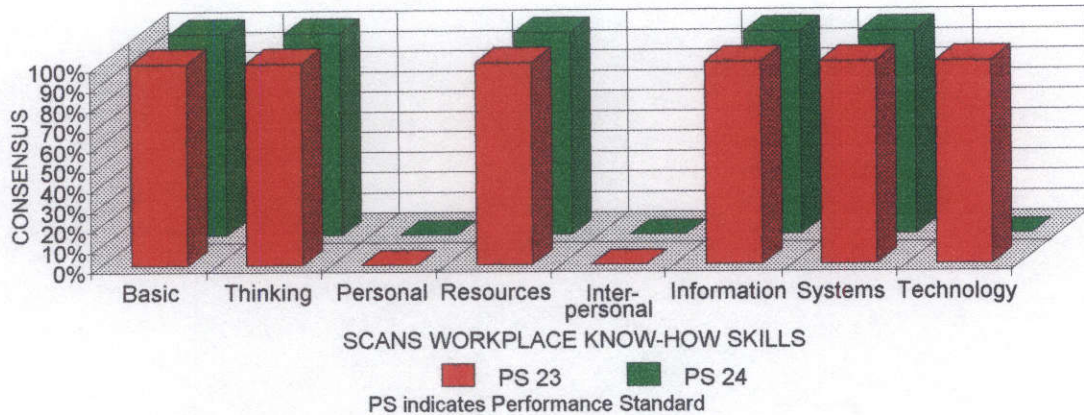


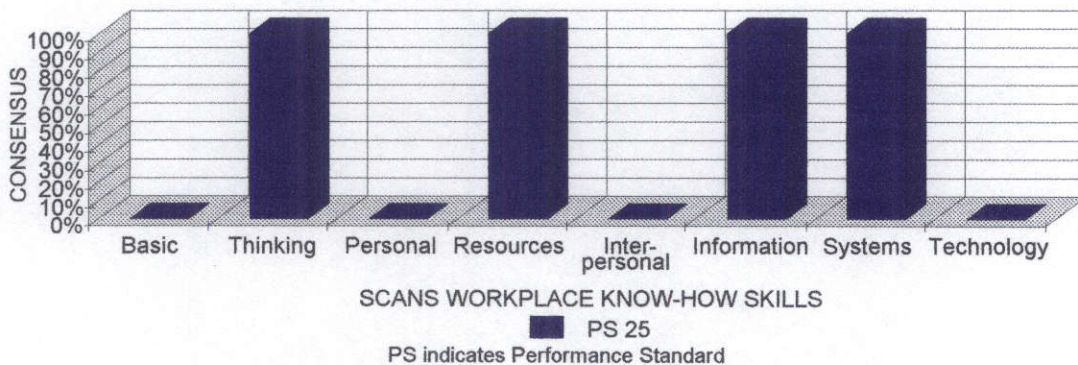
Figure 19 shows the panel's identified relationships for the Proficient Achievement Level of Content Standard 6 and the SCANS skills. Performance Standards 23 and 24 constitute the Proficient Achievement Level. The national panel reached a 100% consensus that Basic skills, Thinking skills, Resources Skills, Information Skills, and System Skills could be developed in relationship to Content Standard 6 at the Proficient Achievement Level. The panel also agreed that Technology skills at 50% were also related. No relationship was perceived between SCANS Personal skills and Interpersonal skills and Content Standard 6 at the Proficient Achievement Level.

Figure 19. The Relationship between National Visual Arts Content Standard 6 - Proficient Achievement Level and SCANS Skills as Perceived by the National Panel.



In Figure 20, the addition of Performance Standard 25 completes the Advanced Achievement Level for Content Standard 6. In fulfilling the Advanced Achievement Level for Content Standard 6, the Delphi panel reached 100% consensus that students would develop the SCANS Thinking skills, Resources skills, Information skills and Systems skills. No relationship was identified for Basic skills, Personal skills, Interpersonal skills, or Technology skills in relation to Content Standard 6 at the

Figure 20. The Relationship between National Visual Arts Content Standard 6 - Advanced Achievement Level and SCANS Skills as Perceived by the National Panel.



Advanced Achievement Level.

Research Question 1 Synopsis

The findings for Research Question 1 were presented so that the perceptions of the national Delphi panel were reported in regard to the six Content Standards. When analyzed collectively, the data showed that the national panel perceived a relationship of 100% between the SCAN Workplace Know-How Thinking skills and Information skills. They also identified a 71% overall relationship for Systems skills. Basic skills were determined to have a 61% relationship while Resources skills were perceived to have a 51% relationship as a whole. The panel perceived that Interpersonal skills had a 27% relationship, Personal skills had a 24% relationship and Technology skills had a 21% relationship.

The aim of the Delphi Technique was to achieve consensus among groups of people in relation to intractable questions. It is important, therefore, that the Delphi panel was able examine the many complex questions in this study and achieve consensus.

Research Question 2: If there is a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education, which SCANS skills would be developed through the achievement of the visual art education performance standards?

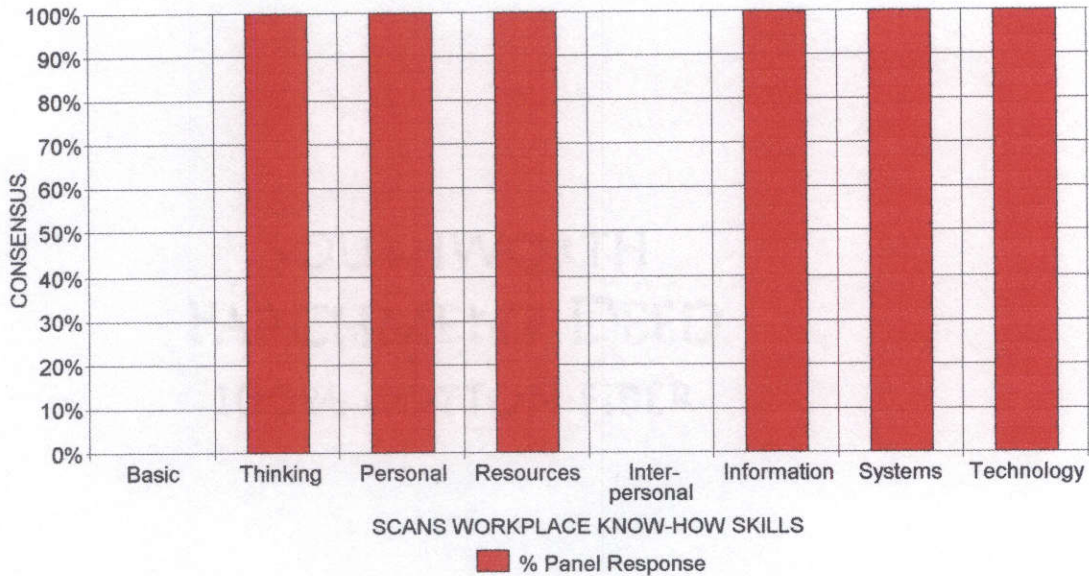
The data for each of the 25 Performance Standards within the National Standards for [Visual] Arts Education were analyzed in order to answer Research Question 2. Figures 20 through 44, show which SCANS skills are developed and could be developed through the achievement of each visual art education Performance Standard as perceived by the national Delphi panel. For ease in reading and understanding, each Performance Standard is stated prior to the related Figure.

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

Figure 21 shows the Delphi panel achieved 100% consensus that six of the eight SCANS skills were developed when students achieved Performance Standard One. The SCANS skills which the panel perceived would be achieved were Thinking skills, Personal skills, Resources skills, Information skills, Systems skills, and Technology skills. SCANS Basic skills and Interpersonal skills were not perceived to have a relationship to Performance Standard 1.

Figure 21. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 1.

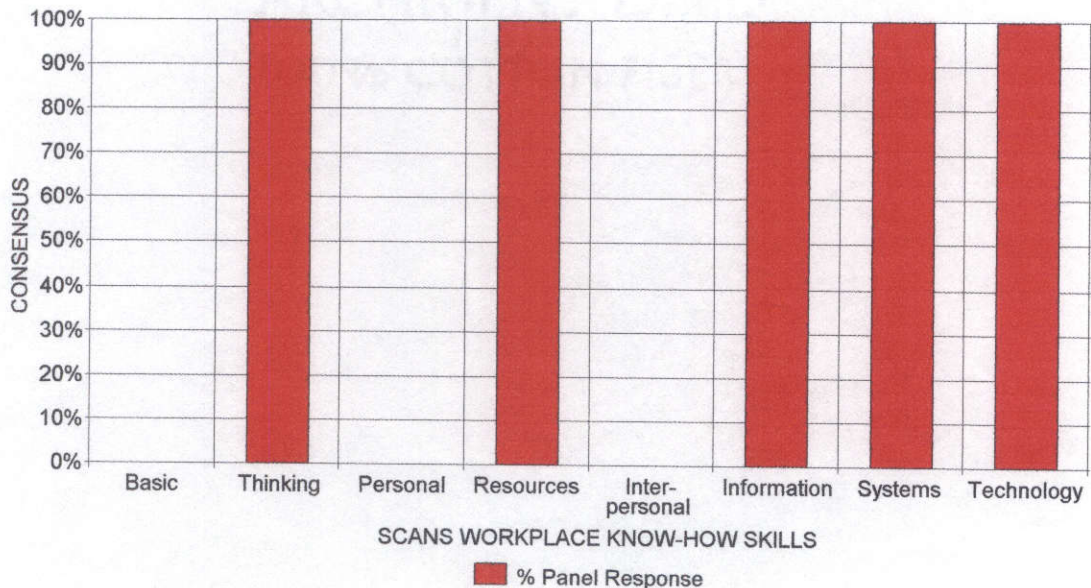


Performance Standard #2

Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.

The Delphi panel agreed by 100% consensus that five of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 2 (see Figure 22). The SCANS skills included Thinking skills, Resources skills, Information skills, Systems skills, and Technology skills. None of the ten panel members felt that Basic skills, Personal skills, and Interpersonal skills would be developed in accomplishing Performance Standard 2.

Figure 22. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 2.

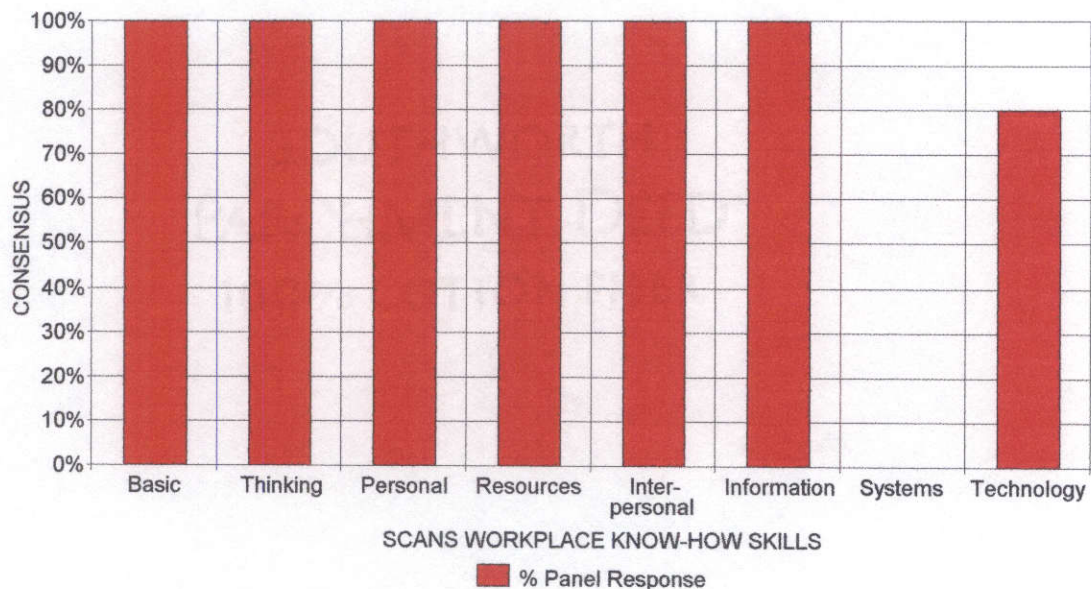


Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

Figure 23 illustrates 100% consensus by the Delphi panel that six of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 3. The SCANS skills included Basic skills, Thinking skills, Personal skills, Resources skills, Interpersonal skills, and Information skills. The Delphi panel members also reached 80% agreement that Technology skills were also achieved through the development of Performance Standard 3.

Figure 23. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 3.

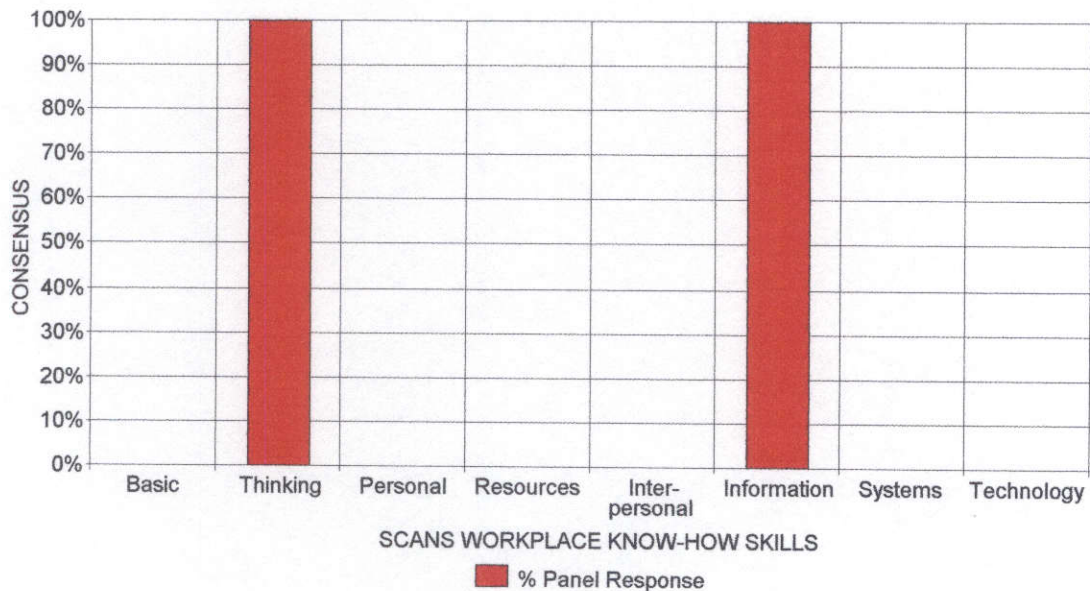


Performance Standard #4

Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

The Delphi panel reached 100% consensus that two of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 4 (see Figure 24). The SCANS skills included Thinking skills, and Information skills according to the Delphi results. None of the ten panel members felt that Basic skills, Personal skills, Resources skills, Interpersonal skills, Systems skills, or Technology skills were developed in accomplishing Performance Standard 4.

Figure 24. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 4.

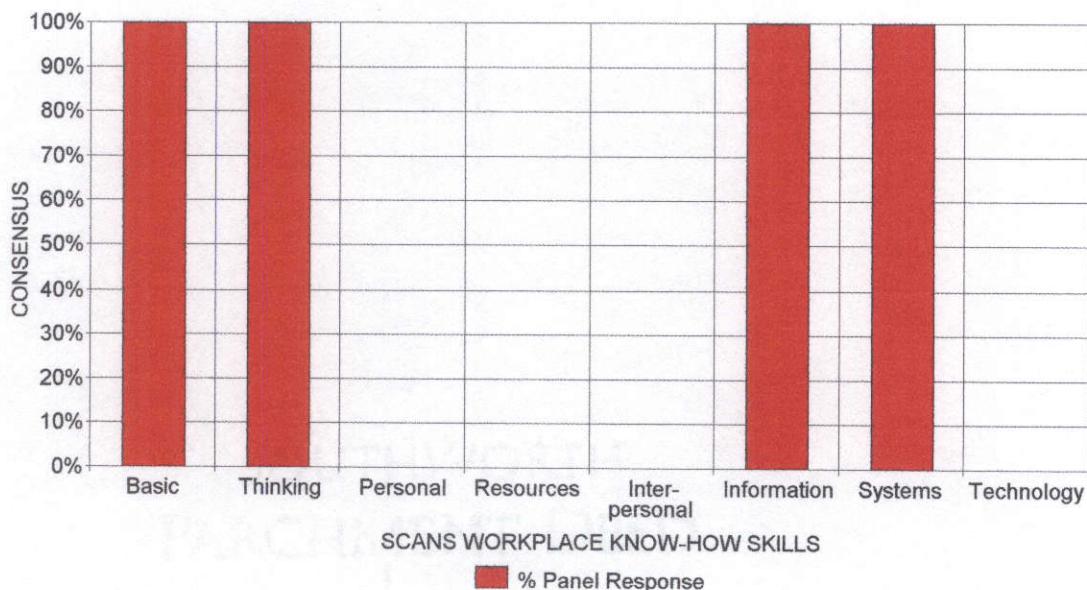


Performance Standard #5

Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.

Figure 25 shows the Delphi panel reached 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 5. The SCANS skills included Basic skills, Thinking skills, Information skills, and Systems skills. Personal skills, Resources skills, Interpersonal skills, and Technology skills were not perceived to have a relationship to this Performance Standard.

Figure 25. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 5.

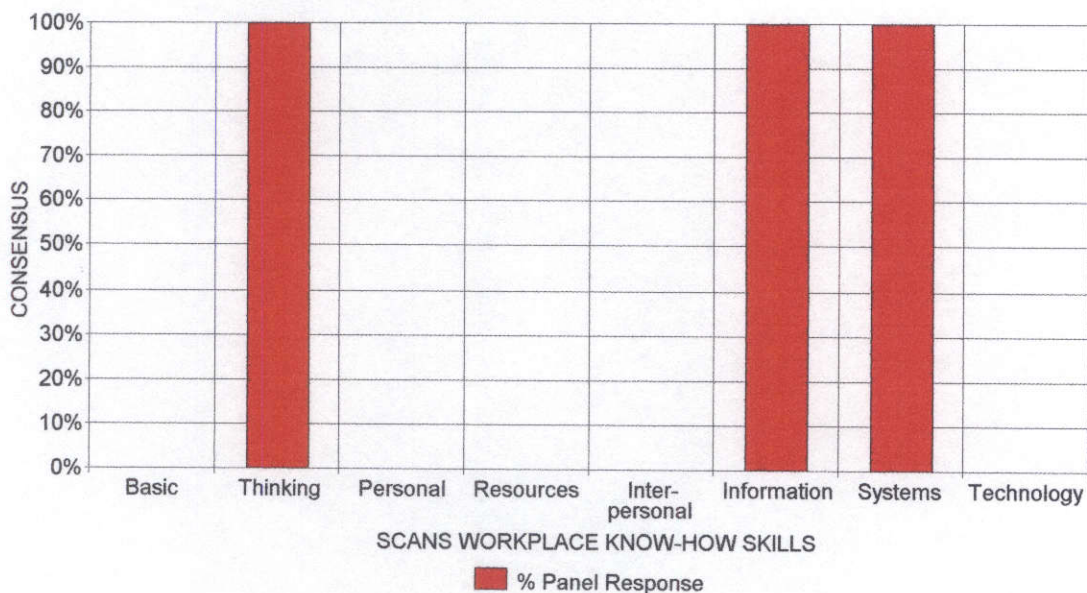


Performance Standard #6

Students evaluate the effectiveness of artworks in terms of organizational structures and functions.

The Delphi panel reached 100% consensus that three of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 6. These included Thinking skills, Information skills, and Systems skills. Basic skills, Personal skills, Resources skills, Interpersonal skills, and Technology skills were not perceived to have a relationship with this Performance Standard (see Figure 26).

Figure 26. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 6.

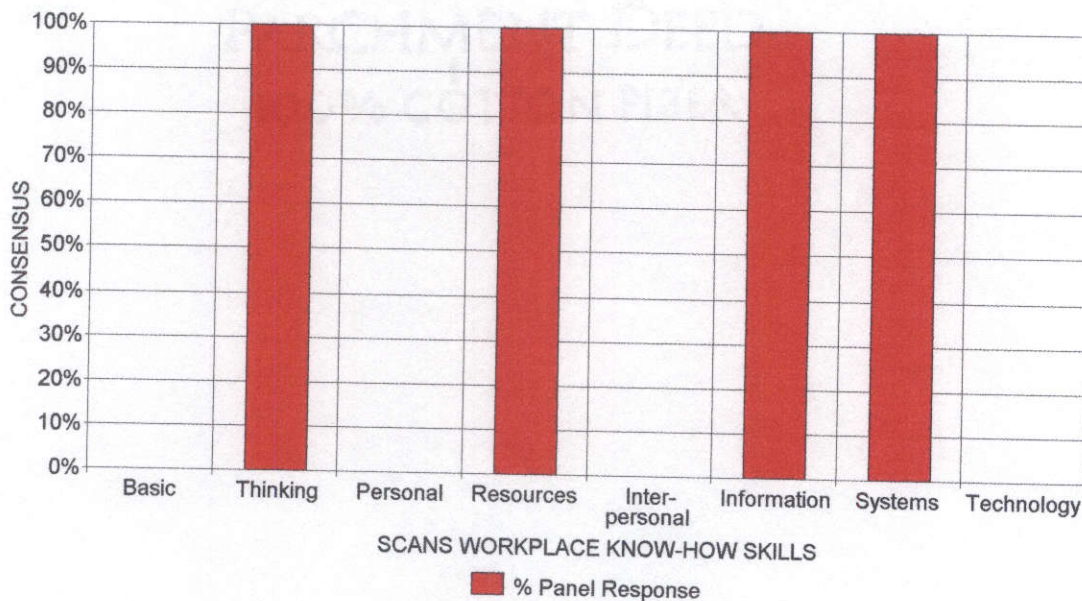


Performance Standard #7

Students create artworks that use organizational principles and functions to solve specific visual arts problems.

Figure 27 illustrates the Delphi panel's 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 7. The SCANS skills included Thinking skills, Resources skills, Information skills, and Systems skills. SCANS Basic skills, Personal skills, Interpersonal skills, and Technology skills were not believed to have a relationship for this Performance Standard.

Figure 27. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 7.

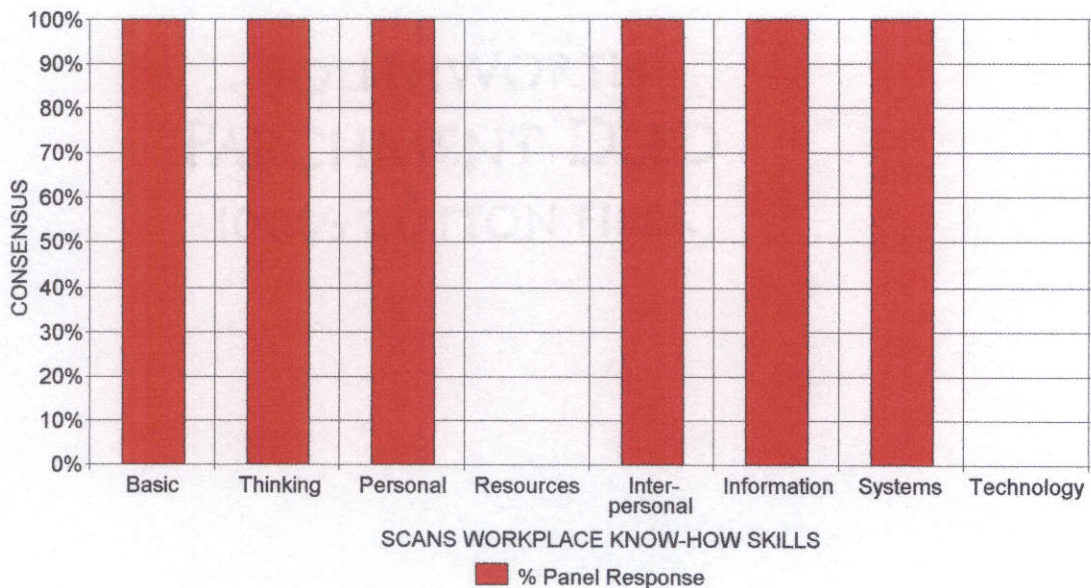


Performance Standard #8

Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.

The Delphi panel reached 100% consensus that six of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 8 (see Figure 28). The SCANS skills included Basic skills, Thinking skills, Personal skills, Interpersonal skills, Information skills, and Systems skills. Resources skills and Technology skills were not perceived by the Delphi panel to have a relationship for Performance Standard 8.

Figure 28. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 8.

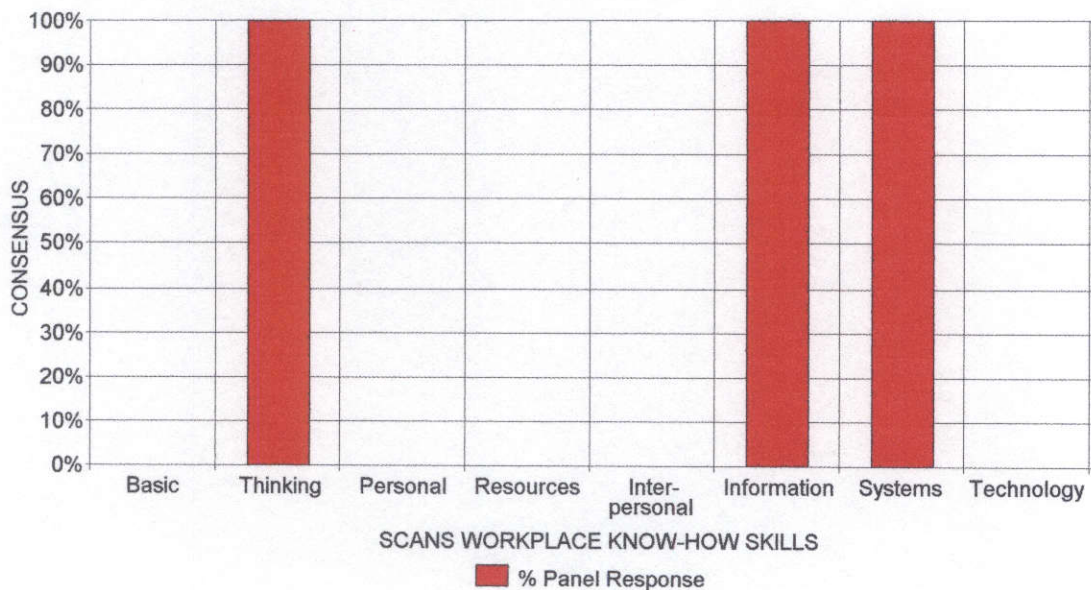


Performance Standard #9

Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

Figure 29 shows the Delphi panel achieved 100% consensus that three of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 9. The SCANS skills included Thinking skills, Information skills, and Systems skills. None of the ten panel members felt that Basic skills, Personal skills, Resources skills, Interpersonal skills, or Technology skills would be developed in accomplishing Performance Standard 9.

Figure 29. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 9.

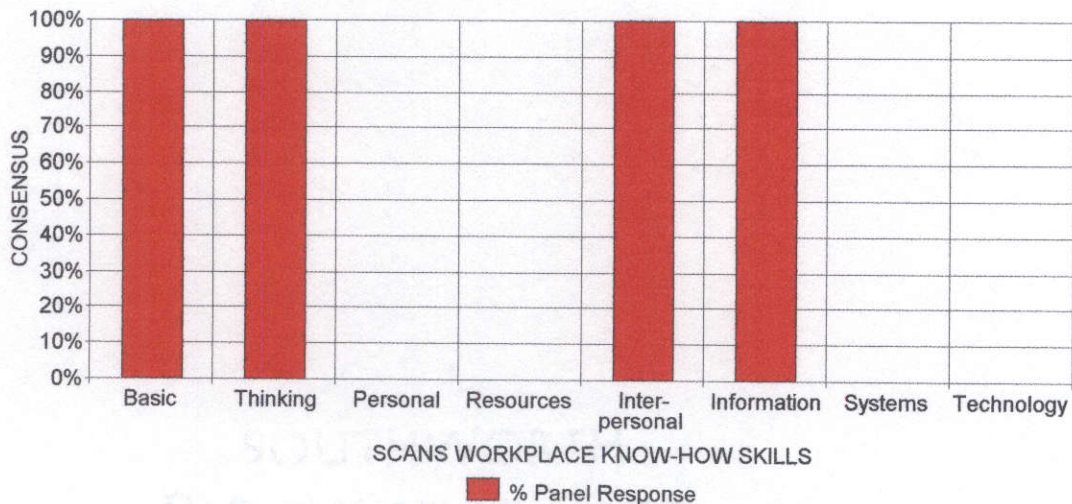


Performance Standard #10

Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.

The Delphi panel reached 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 10 (see Figure 30). The SCANS skills included Basic skills, Thinking skills, Information skills, and Interpersonal skills. The SCANS Workplace Know-How Basic skills Personal skills, Resources skills, Systems skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 30. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 10.

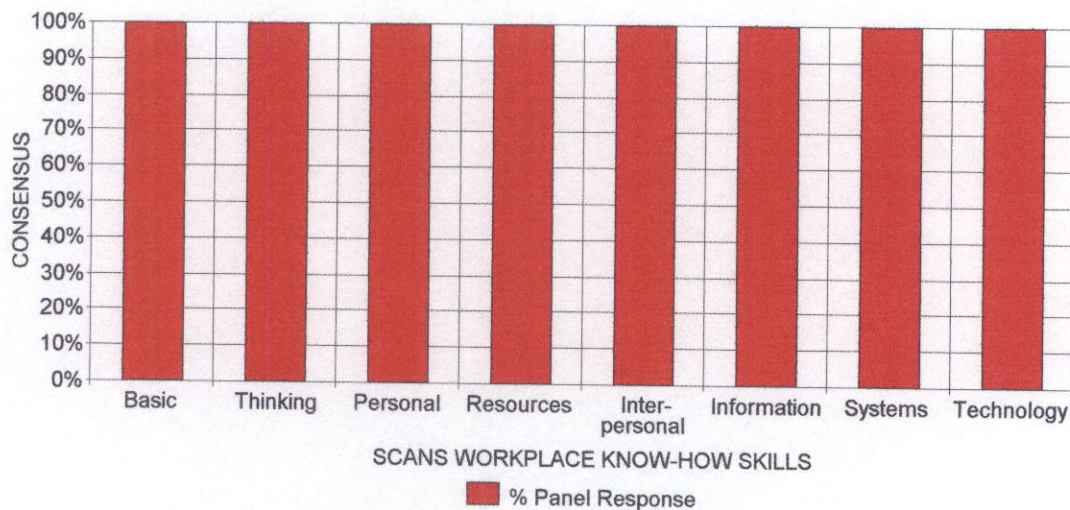


Performance Standard #11

Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.

Figure 31 illustrates the Delphi panel's 100% consensus that all eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 11. The SCANS skills included Basic skills, Thinking skills, Personal skills, Resources skills, Interpersonal skills, Information skills, Systems skills, and Technology skills.

Figure 31. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 11.

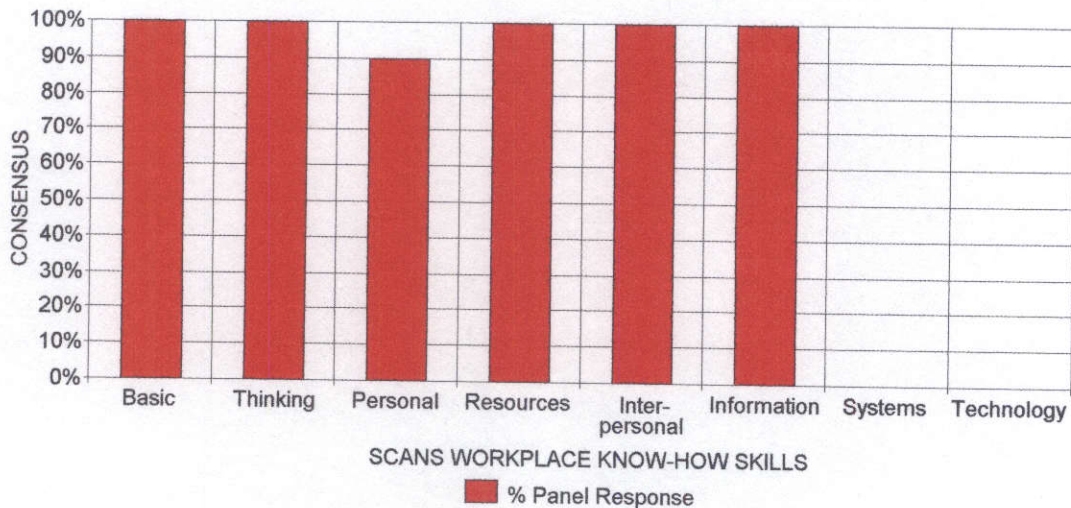


Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

The Delphi panel achieved 100% consensus that five of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 12 (see Figure 32). The SCANS skills included for Performance Standard 12 were Basic skills, Thinking skills, Information skills, Resources skills, and Interpersonal skills. The Delphi panel members also reached an 90% agreement for Personal skills. Systems skills and Technology skills were not included in relation to accomplishing Performance Standard 12.

Figure 32. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 12.

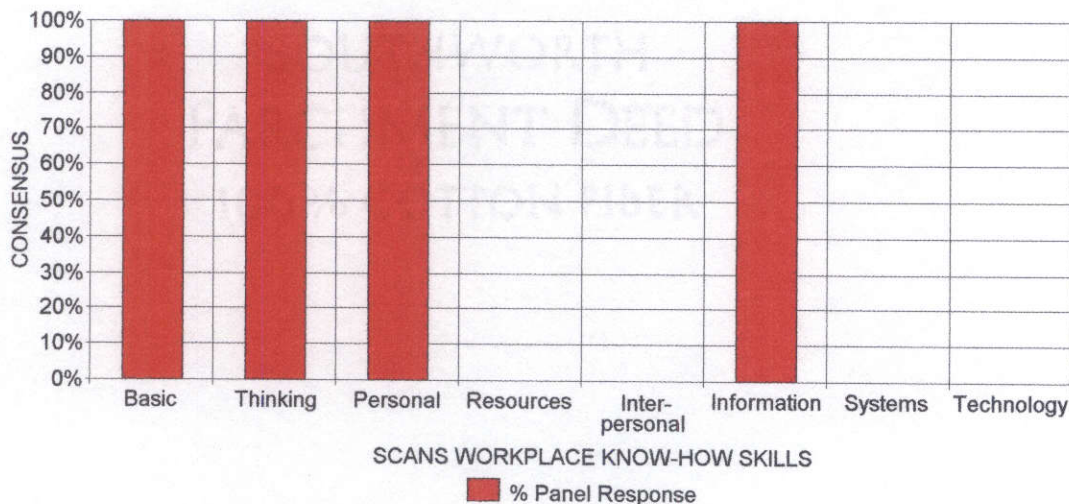


Performance Standard #13

Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the students' works and in significant works by others.

Figure 33 shows the Delphi panel reached 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 13. The SCANS skills included Basic skills, Thinking skills, Personal skills, and Information skills. Resources skills, Interpersonal skills, Systems skills, and Technology skills were not shown to have a relationship to this Performance Standard 13.

Figure 33. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 13.

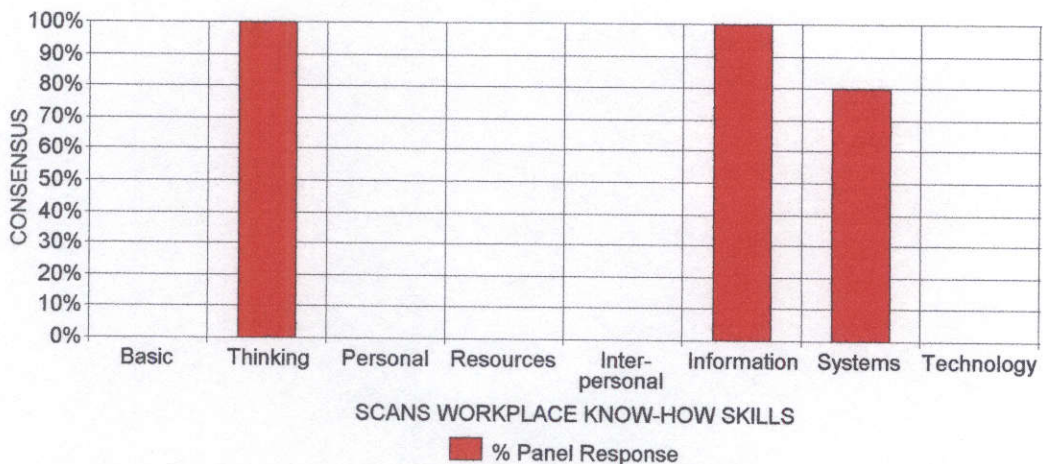


Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

The Delphi panel achieved 100% consensus that two of the eight SCANS skills were developed when students achieved Performance Standard 14 (see Figure 34). The SCANS skills which the panel believed would be developed included Thinking skills and Information skills. The panel also reached an 80% agreement that Systems skills were developed. Basic skills, Personal skills, Resources skills, Interpersonal skills, and Technology SCANS Workplace Know-How skills were not perceived by the Delphi panel to have a relationship to this performance standard.

Figure 34 Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 14.

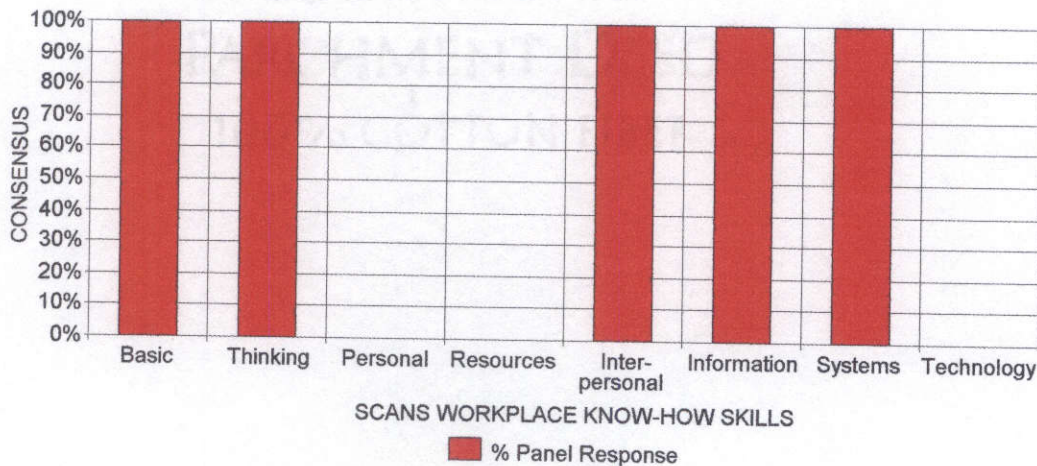


Performance Standard #15

Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places.

Figure 35 illustrates 100% consensus by the Delphi panel that five of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 15. The SCANS skills included Basic skills, Thinking skills, Interpersonal skills, Information skills, and Systems skills. Personal skills, Resources skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 35. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 15.

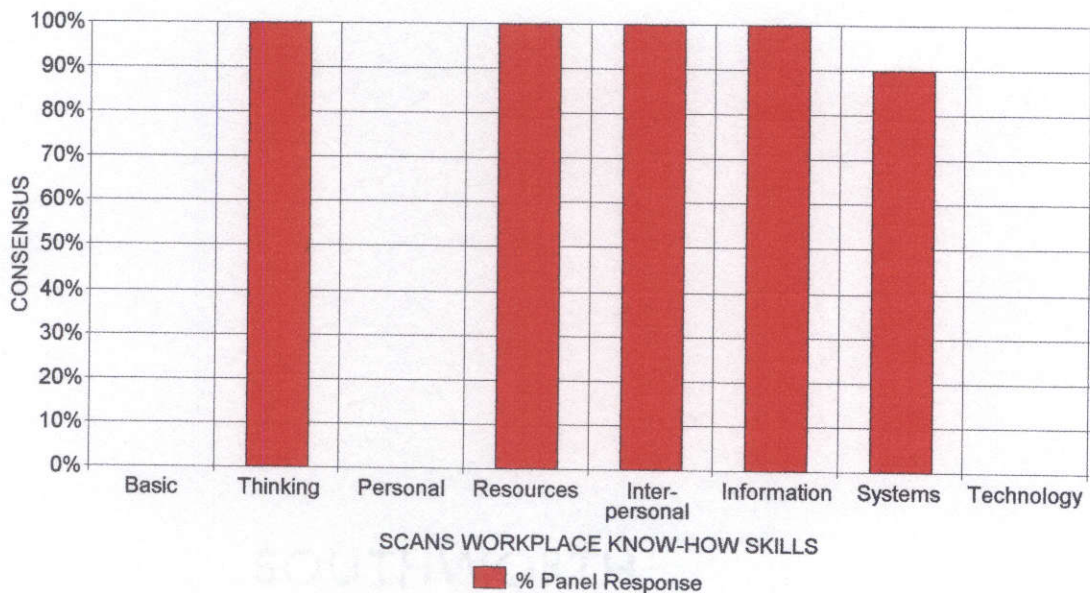


Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

The Delphi panel reached 100% consensus that four of the eight SCANS skills would be achieved by students who attain Performance Standard 16 (see Figure 36). The SCANS skills included Thinking skills, Resources skills, Interpersonal skills, and Information skills. The panel attained a 90% agreement that Systems skills were also developed. The SCANS Workplace Know-How Basic skills, Personal skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 36. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 16.

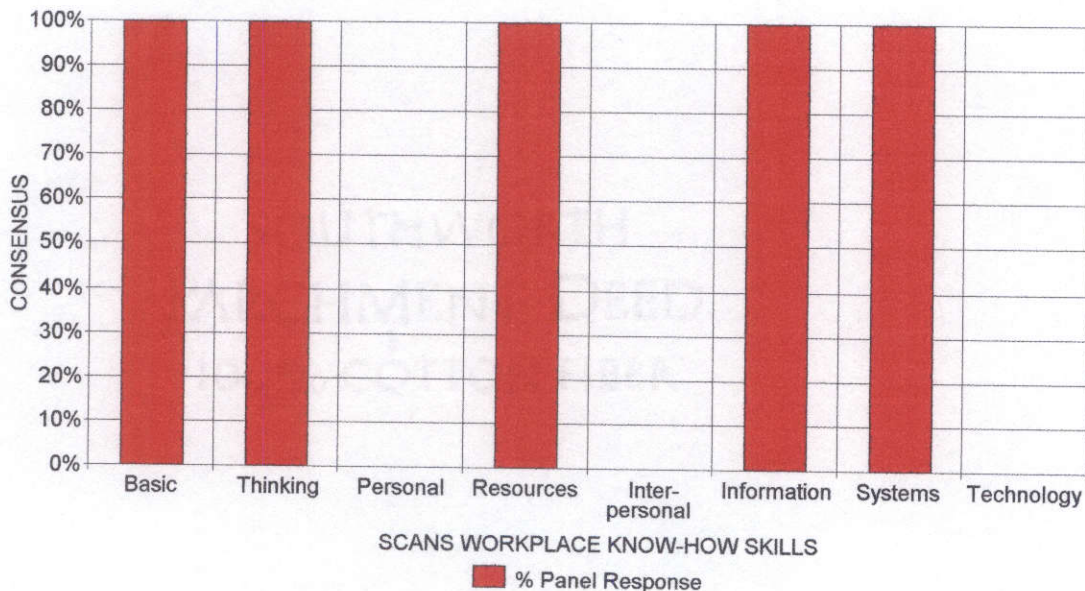


Performance Standard #17

Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians, and arts.

Figure 37 shows the Delphi panel reached 100% consensus that five of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 17. The SCANS skills included Basic skills, Thinking skills, Resources skills, Information skills, and Systems skills. The Delphi study found no relationship between the SCANS Personal skills, Interpersonal skills, or Technology skills in relation to this Performance Standard.

Figure 37. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 17.

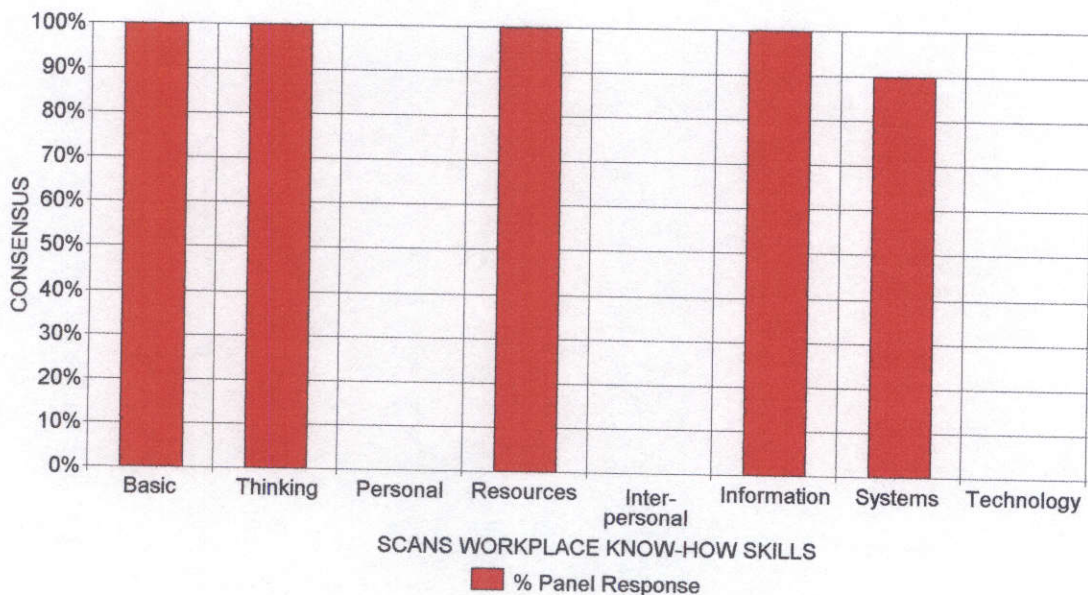


Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

Figure 38 illustrates the Delphi panel's 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 18. The SCANS skills included Basic skills, Thinking skills, Resources skills, and Information skills. The panel also reached a 90% agreement that Systems skills were also developed. The Delphi data did not support a relationship between Personal skills, Interpersonal skills, or Technology skills for this Performance Standard.

Figure 38. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 18.

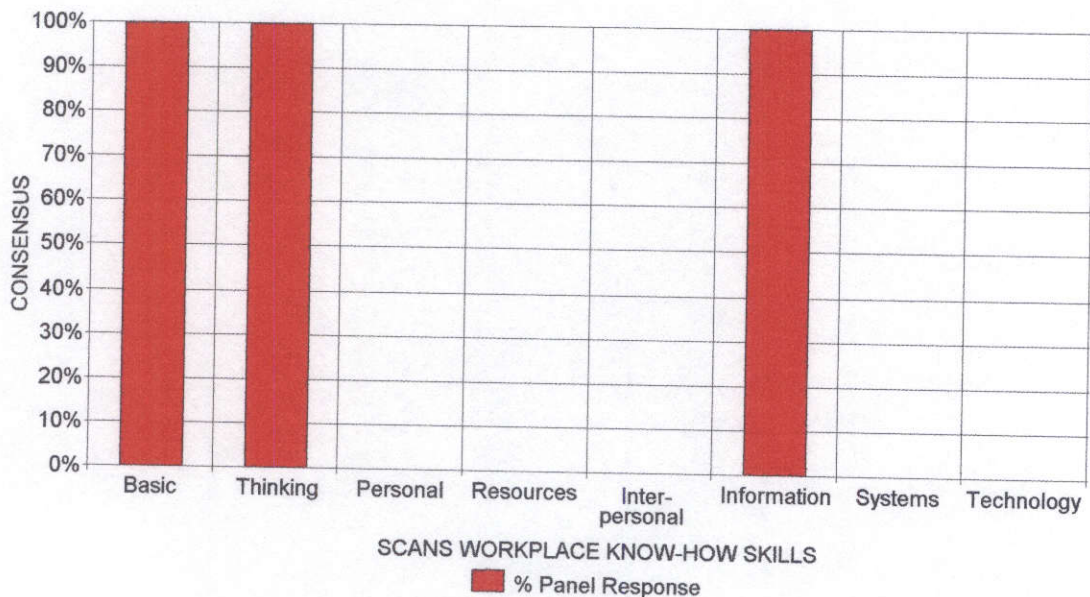


Performance Standard #19

Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.

The Delphi panel reached 100% consensus that three of the eight SCANS skills could be achieved by students who achieve Performance Standard 19 (see Figure 39). The SCANS skills included Basic skills, Thinking skills, and Information skills. SCANS' Personal skills, Resources skills, Interpersonal skills, Systems skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 39. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 19.

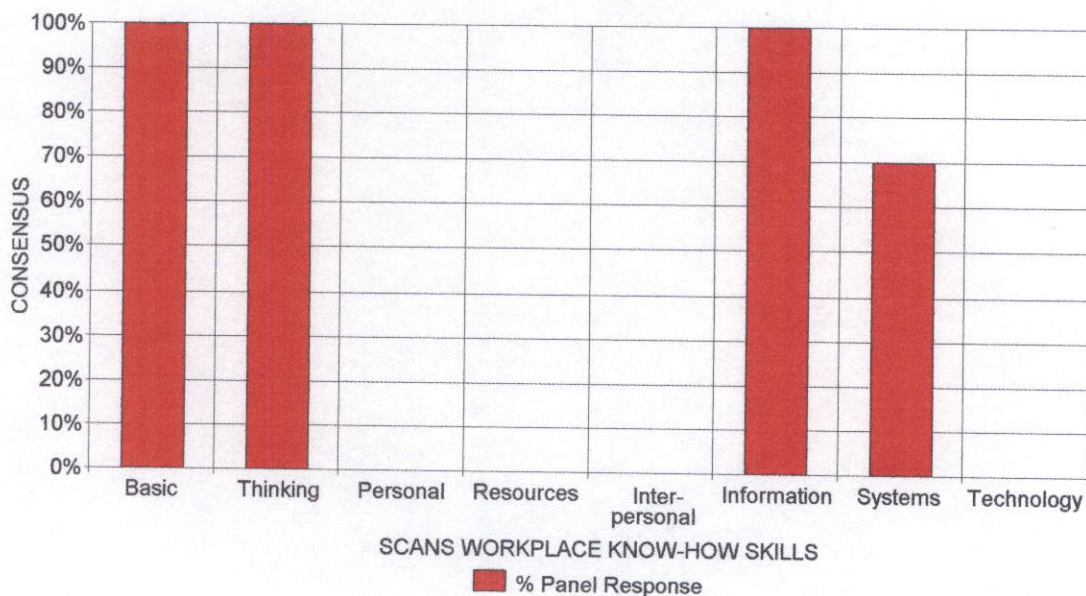


Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

Figure 40 shows the Delphi panels 100% consensus that three of the eight SCANS skill would be developed as a result of achieving Performance Standard 20. The SCANS skills included Basic skills, Thinking skills, and Information skills. The panel also reached a 70% agreement that Systems skills were developed. Personal skills, Resources skills, Interpersonal skills, and Technology skills were not shown by the Delphi data to have a relationship to this Performance Standard.

Figure 40. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 20.

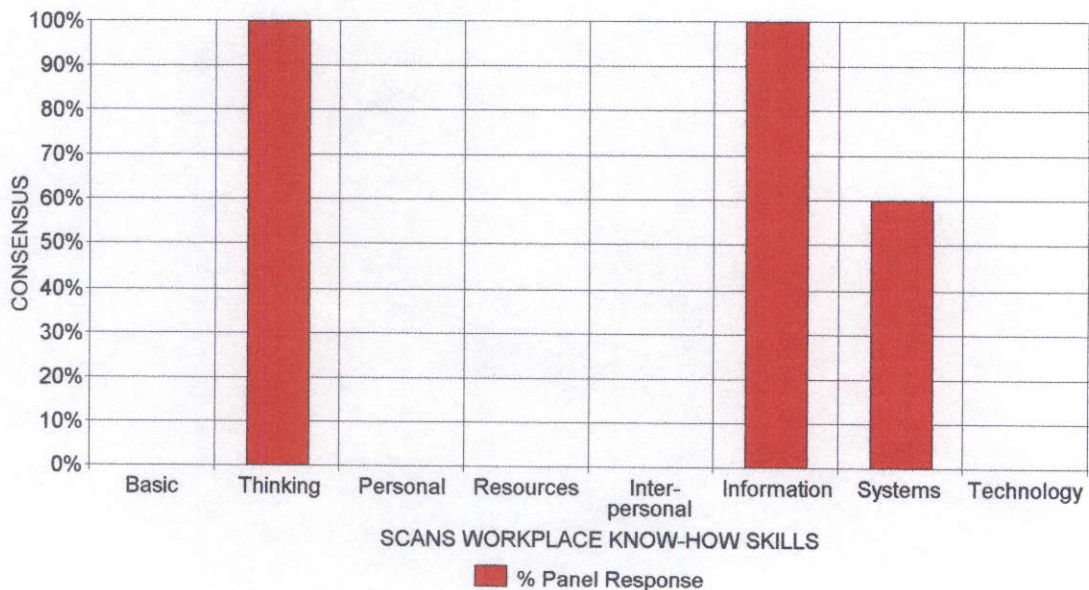


Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

Figure 41 illustrates the Delphi panel's 100% consensus that two of the eight SCANS skills would be achieved by students in fulfillment of Performance Standard 21. The SCANS skills included Thinking skills and Information skills. Also the panel reached a 60% agreement that Systems SCANS skills were developed. Basic skills, Personal skills, Resources skills, Interpersonal skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 41. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 21.

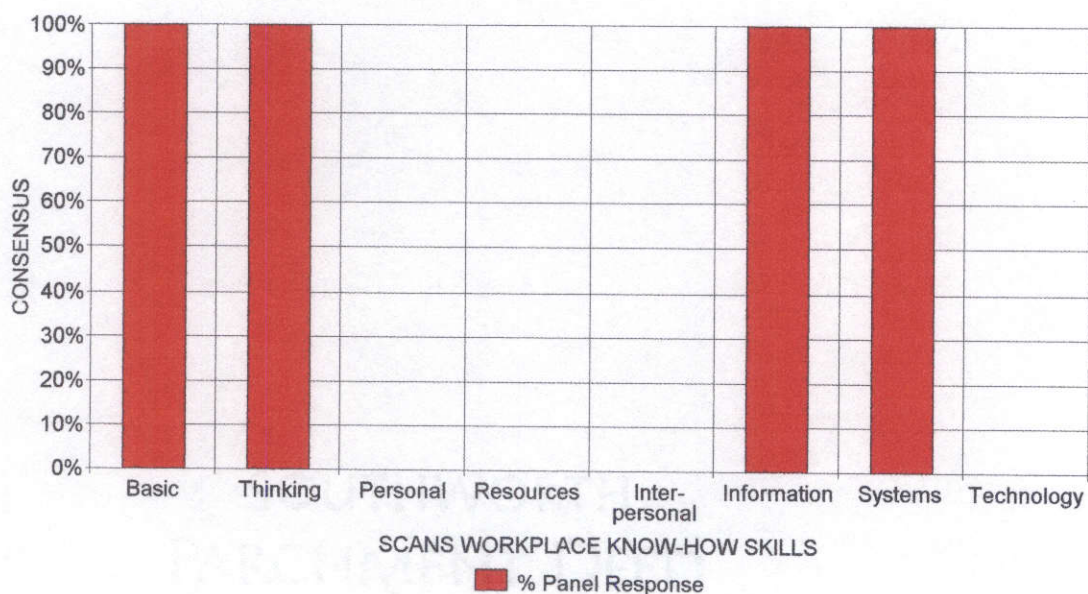


Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

The Delphi panel reached 100% consensus that four of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes of Performance Standard 10 (see Figure 42). The SCANS skills included Basic skills, Thinking skills, Information skills, and Systems skills according to the Delphi results. The SCANS Workplace Know-How Personal skills, Resources skills, Interpersonal skills, and Technology skills were not shown to have a relationship to this Performance Standard.

Figure 42. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 22.

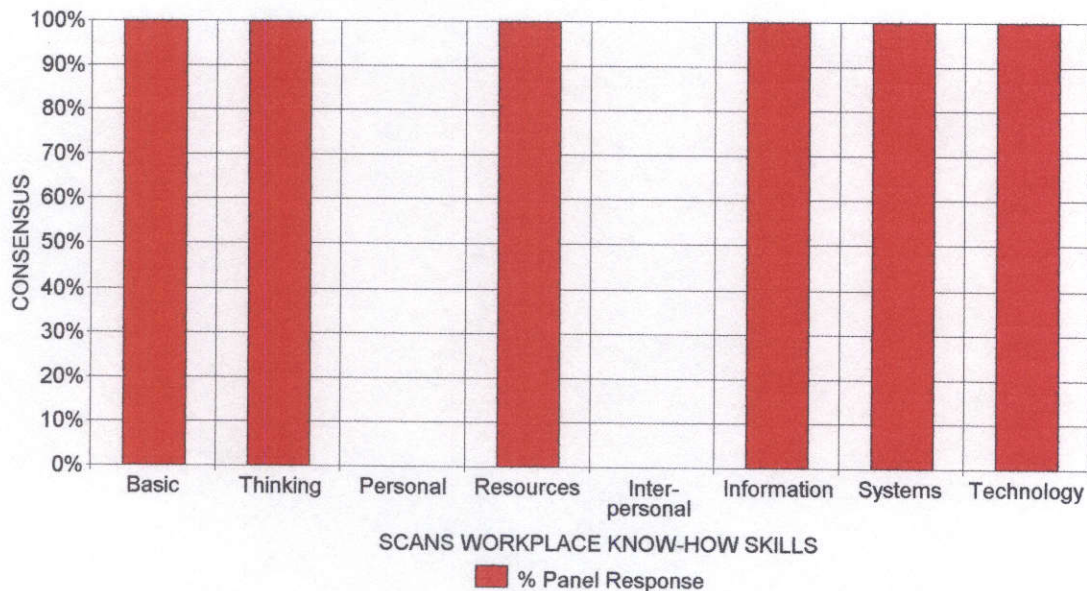


Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

Figure 43 shows the national Delphi panel reached 100% consensus that six of the eight SCANS skills would be achieved by students in fulfillment of learning outcomes for Performance Standard 23. The SCANS skills included Basic skills, Thinking skills, Resources skills, Information skills, Systems skills, and Technology skills according to the Delphi results. The SCANS Workplace Know-How Personal skills, and Interpersonal skills were not shown to have a relationship to this Performance Standard.

Figure 43. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 23.

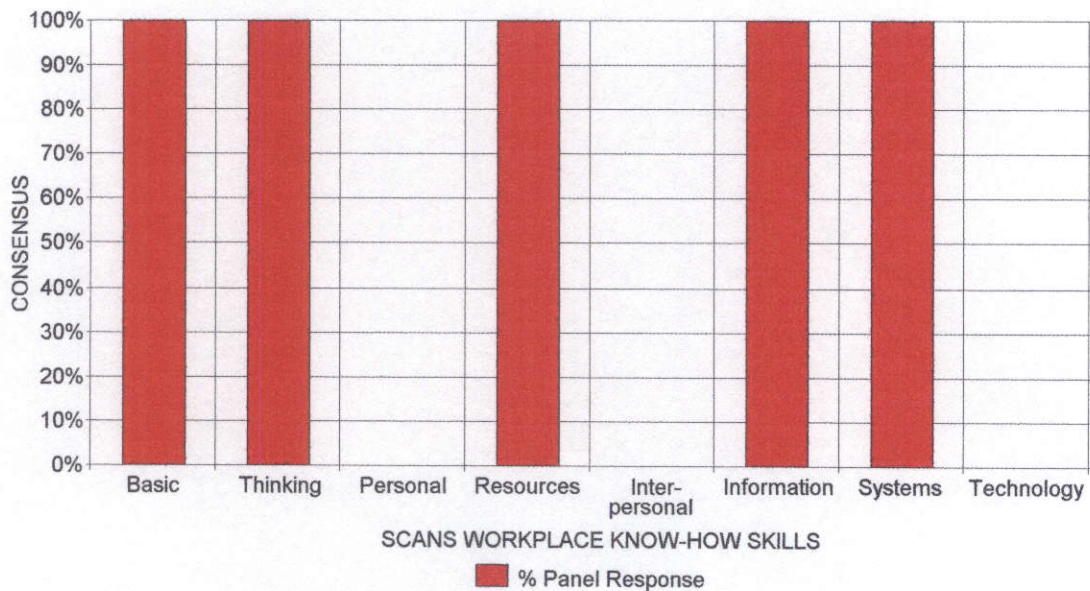


Performance Standard #24

Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

The Delphi panel achieved 100 % consensus that five of the eight SCANS skills would be achieved by students in fulfilling the learning outcomes for Performance Standard 24 (see Figure 44). The SCANS skills included Basic skills, Thinking skills, Resources skills, Information skills, and Systems skills. Personal skills, Interpersonal skills, and Technology skills were not supported in relation to this Performance Standard.

Figure 44. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 24.

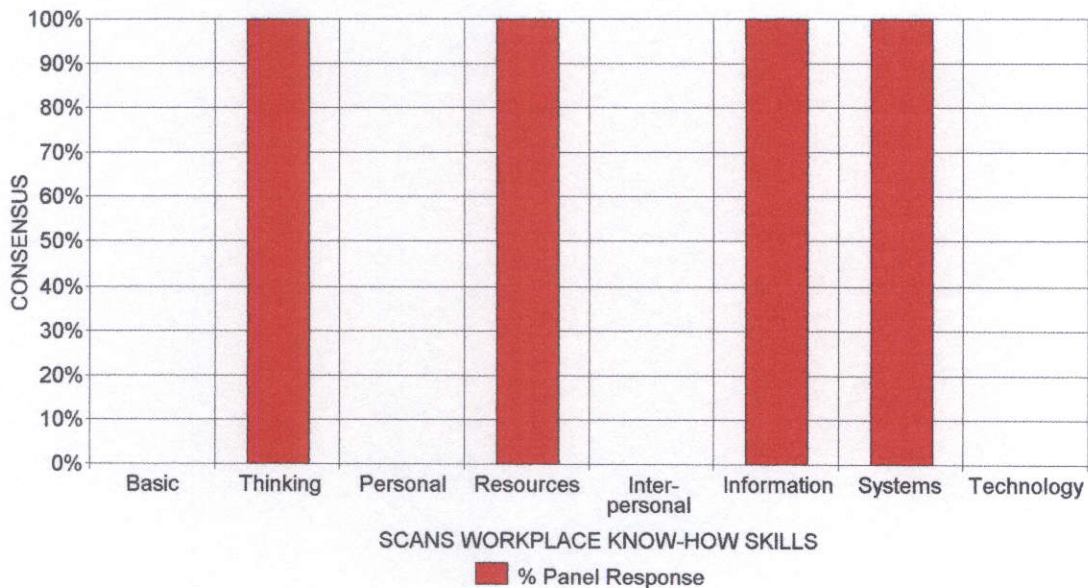


Performance Standard #25

Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

Figure 45 illustrates the Delphi panel's 100% consensus that four of the eight SCANS skills would be achieved by students fulfilling the learning objectives for Performance Standard 25. SCANS skills included Thinking skills, Resources skills, Information skills, and Systems skills. The Delphi data did not support a relationship for Basic skills, Personal skills, Interpersonal skills, or Technology skills for this Performance Standard.

Figure 45. Delphi Panel's Perceived Percentage of SCANS Skills Achieved Through Performance Standard 25.



Research Question 2 Synopsis

The findings for Research Question 2 were presented so that the perceptions of the national Delphi panel were reported in regard to each of the 25 Performance Standards. Only relationships, between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education, where the Delphi panel reached a consensus of 50% or greater have been considered.

The national panel determined that SCANS Thinking skills and Information skills could be developed by all 25 of the Performance Standards. Systems skills were perceived to be developed by 19 of the 25 Performance Standards. The national panel believed that 15 of 25 Performance Standards could develop Basic skills and Resources skills could be developed by 12 of 25. Interpersonal skills were perceived to be developed by only 7 of the 25 Performance Standards. Personal skills were believed to be developed by 6 of 25 and Technology skills were perceived to be developed by only 5 of the 25 Performance Standards.

It was important that the panel was able to achieve consensus as to the skills which could be developed by each Performance Standard. The aim of the Delphi Technique was to attempt to achieve consensus from individuals on the SCANS skills which would be developed through the National Standards for [Visual] Arts Education Performance Standards.

Research Question 3: If there is a relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education, can this relationship be validated by a national Delphi panel?

Table 2 shows the data which was collectively reviewed for research question 3 in order to determine if the National Panel was able to validate the relationship between the

Table 2. *Summary of Response Percentages from the National Delphi Study.*

- PS indicates Performance Standard
- CS indicates Content Standard
- Total indicates the average of all Content Standards and Performance Standards

National Panel Delphi Study Results								
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 1	0%	100%	100%	100%	0%	100%	100%	100%
PS 2	0%	100%	0%	100%	0%	100%	100%	100%
PS 3	100%	100%	100%	100%	100%	100%	0%	80%
PS 4	0%	100%	0%	0%	0%	100%	0%	0%
CS 1	25%	100%	50%	75%	25%	100%	50%	70%
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 5	100%	100%	0%	0%	0%	100%	100%	0%
PS 6	0%	100%	0%	0%	0%	100%	100%	0%
PS 7	0%	100%	0%	100%	0%	100%	100%	0%
PS 8	100%	100%	100%	0%	100%	100%	100%	0%
PS 9	0%	100%	0%	0%	0%	100%	100%	0%
CS 2	40%	100%	20%	20%	20%	100%	100%	0%
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 10	100%	100%	0%	0%	100%	100%	0%	0%
PS 11	100%	100%	100%	100%	100%	100%	100%	100%
PS 12	100%	100%	90%	100%	100%	100%	0%	0%
PS 13	100%	100%	100%	0%	0%	100%	0%	0%
CS 3	100%	100%	73%	50%	75%	100%	25%	25%
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 14	0%	100%	0%	0%	0%	100%	80%	0%
PS 15	100%	100%	0%	0%	100%	100%	100%	0%
PS 16	0%	100%	0%	100%	100%	100%	90%	0%
PS 17	100%	100%	0%	100%	0%	100%	100%	0%
PS 18	100%	100%	0%	100%	0%	100%	90%	0%
CS 4	60%	100%	0%	60%	40%	100%	92%	0%
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 19	100%	100%	0%	0%	0%	100%	0%	0%
PS 20	100%	100%	0%	0%	0%	100%	70%	0%
PS 21	0%	100%	0%	0%	0%	100%	60%	0%
PS 22	100%	100%	0%	0%	0%	100%	100%	0%
CS 5	75%	100%	0%	0%	0%	100%	58%	0%
	Basic	Thinking	Personal	Resources	Interpersonal	Information	Systems	Technology
PS 23	100%	100%	0%	100%	0%	100%	100%	100%
PS 24	100%	100%	0%	100%	0%	100%	100%	0%
PS 25	0%	100%	0%	100%	0%	100%	100%	0%
CS 6	67%	100%	0%	100%	0%	100%	100%	33%
Total	61%	100%	24%	51%	27%	100%	71%	21%

SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education. Table 2, which is a data summary table, shows visually the relationships validated through the national Delphi panels' consensus of opinion.

In the actual study the panel considered 200 relationships between the SCANS Workplace Know-How and the National Standards of [Visual] Arts Education. The national panel reached a consensus of 50% or greater in connection with 114 of those relationships.

Research Question 3 Synopsis

The findings for Research Question 3 were presented so that the perceptions of the national Delphi panel were reported to assess the validity of the relationship between the SCANS Workplace Know-How and the National Standards of [Visual] Arts Education. Only Delphi data where the national panel reached a consensus of 50% met the study's methodological criteria.

One of the purposes of the Delphi Technique was to determine if the relationship between the SCANS skills and the National Standards for [Visual] Arts Education could be validated by the Delphi panel.

In the study the panel considered 200 relationships between the SCANS Workplace Know-How skills and the National Standards of [Visual] Arts Education. The panel reached consensus on 114 of the possible 200 relationships.

Summary

In this Chapter, the data from the national Delphi study has been analyzed and presented in relation to each of the research questions. The data has been examined in order to identify relationships between the SCANS Workplace Know-How and the National Standards of [Visual] Arts Education. The national panel found a relationship

of 100% between the SCAN Workplace Know-How Thinking skills and Information skills. They also identified a 71% overall relationship for Systems skills. Basic skills were determined to have a 61% relationship while Resources skills were perceived to have a 51% relationship as a whole. The panel perceived that Interpersonal skills had a 27% relationship, Personal skills had a 24% relationship and Technology skills had a 21% relationship.

The Delphi data has also been examined to determine which SCANS skills could be developed as result of the achievement of the Performance Standards from the National Standards of [Visual] Arts Education. The national panel determined that SCANS Thinking skills and Information skills could be developed by all 25 of the Performance Standards. Systems skills were perceived to be developed by 19 of the 25 Performance Standards. The national panel believed that 15 of 25 Performance Standards could develop Basic skills and Resources skills could be developed by 12 of 25. Interpersonal skills were perceived to be developed by only 7 of the 25 Performance Standards. Personal skills were believed to be developed by 6 of 25 and Technology skills were perceived to be developed by only 5 of the 25 Performance Standards.

Finally the data was examined in order to determine if the panel responses actually validated the relationships which were the subject of the study. The panel considered 200 relationships between the SCANS Workplace Know-How skills and the National Standards of [Visual] Arts Education. The panel reached consensus on 114 of the possible 200 relationships.

It was important that the panel was able to achieve consensus as to the skills which could be developed by the Performance Standards. The aim of the Delphi Technique was to attempt to achieve consensus from individuals on the SCANS skills

which would be developed through the National Standards for [Visual] Arts Education Performance Standards.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

A goal of this investigation was to provide an empirical foundation for understanding among Tech Prep and School-to-Work change agents, educational leaders, and business representatives, of the role that DBAE can perform as a part of the core curriculum, within the framework of these reform movements. A review of the literature revealed the trends and dynamics which have influenced the U.S. economy and workforce and pointed to a need for an educated populous to remain competitive in the world marketplace. It also revealed current philosophies on training the workforce which have been driving education reform movements like Tech Prep and School-to-Work. Information gleaned from the literature indicated that the Tech Prep and School-to-Work reform initiatives were not acquainted with DBAE reform and, therefore, had no ideas about the possible worth visual art has as an education core component. Visual Arts education was not acquainted with Tech Prep and School-to-Work and, therefore, had established no common terminology to communicate the power of what they do in a manner which was relevant to this audience. Also, art educators did not seem to be aware of the full scope of their potential in this respect.

The six Getty funded Regional Institutes were contacted in order to identify potential study participants and to obtain phone and mail contact information. The North Texas Institute provided 10 participants; five for the instrument reviews and five for the pilot study. Each of the other five Discipline-Based Institutes from various parts of the

country provided two participants each for the national study. The national Delphi study utilized 10 individuals to develop the tools of the study and a national panel of 10, secondary level DBAE experts to participate in the actual study.

The study was completed in three stages. Stage 1 consisted of the construction and development of an instrument and identification and formation of the items which are the subject of the study's comparison. In stage 2 the instrument was clarified and validated through interaction with a review panel and through a pilot study. The two Rounds of the national Delphi study comprised stage 3 of the methodological process. Each participant was contacted by phone and agreed verbally to take part in the study. They were then mailed a cover letter, background information, and a questionnaire with a stamped self-addressed envelope in each of the two Rounds of the study. Telephone follow-up calls were needed to encourage timely responses.

Two questionnaires were utilized to develop consensus among the national participants. Each questionnaire contained items which focused on the relationship between the SCANS Workplace Know-How skills and the secondary level performance standards from the National Standards for [Visual] Arts Education. The national Delphi panel responded to the two questionnaires to develop consensus on the various aspects of this relationship. Their responses were utilized to address the three research questions related to this study.

Findings from the Delphi study showed that the national panel reached 100 % consensus that every Content Standard and every Performance Standard could develop SCANS Thinking and Information skills. They also agreed that Basic skills, Resources skills, and Systems skills could also be developed by the visual art National Standards as a whole. Personal skills, Interpersonal skills and Technology skills were determined to

be least developed. However, even these skills achieved 100% consensus that they could be developed through achievement of certain specific Performance Standards.

Conclusions

The purpose of this study was to determine if secondary level curriculum experts in visual arts education believed that SCANS Skills could be developed by art education students when they achieved the National Visual Arts Education Content and Performance Standards. The national Delphi study was utilized to serve as a consensus building process which could assist in the development of curriculum and instruction in art education programs, Tech Prep programs, and School-to-Work programs in secondary and postsecondary institutions in the United States.

Based on the findings in Chapter 4, the following conclusions are provided for this study:

- 1) There is a relationship between the Content Standards and Performance Standards taken from the National Standards for [Visual] Arts Education and the SCANS skills as determined by the national Delphi panel.

- 2) The following SCANS Skills could be developed through the achievement of the Performance Standards of the National Standards for [Visual] Arts Education: Basic skills; Thinking skills; Resources skills; Information skills; and Systems skills.

- 3) The relationship between the SCANS Workplace Know-How skills and the National Standards for [Visual] Arts Education was validated by a national Delphi panel.

Recommendations

The following recommendations are made based on the results of the study, and comments from the respondents to the study. They are addressed to specific stakeholder groups.

Tech Prep and School-to-Work

1) Create a national advisory panel that includes personnel from Tech Prep and School-to-Work, secondary and postsecondary visual arts educators as well as employers and a cross section of communities to develop:

- Core competencies based on the results of this study,
- Specific art related career pathways,
- Career orientation and awareness for careers in art and art related occupations, and
- Professional development for Tech Prep, School-to-Work and DBAE change agents;

2) Encourage the inclusion of art courses, which meet the Discipline-Based Art Education criteria, as a part of the core curriculum to assist in the development of SCANS Basic skills, Thinking skills, Resources skills, Information skills, and Systems skills among students;

3) Solicit involvement from art educators in Tech Prep and School-to-Work initiatives for development of curriculum and instruction;

Discipline-Based Art Education

4) Reevaluate the SCANS Personal skills, Interpersonal skills, and Technology skills which were perceived by the national panel to have few relationships to the Performance

Standards for [Visual] Arts Education. There is a possibility that the art educators involved in this study were somewhat conservative in their responses. Sometimes even though we agree with and join into the rhetoric of reform we have not always made the essential creative shift from the old paradigm. It would be interesting to see how the DBAE visionaries respond to such a study;

5) Create a national project in DBAE which would develop curriculum and instruction to satisfy the SCANS skills;

6) Arts educators should develop curriculum and instruction utilizing tools such as David Kolb's Learning Styles Inventory and an experiential learning curriculum development system. These would fulfill the need to integrate art competencies and SCANS competencies;

7) Make business, industry, educators, and the community aware that visual arts can teach Workplace Know-How.

Future Research Studies

8) Conduct research studies to identify ways for utilizing visual arts education outcomes as general education components in Tech Prep and School-to-Work curricula.

9) Conduct research studies to identify specific career pathway programs in visual art.

10) Art educators who are proponents of DBAE should conduct a research study to improve the National Standards for Arts Education. The Content Standards and Performance standards need to be more inclusive of:

- The components which can be delivered by a comprehensive arts education--specifically aesthetics,
- Criteria for development of curriculum and instruction,
- Criteria for writing goals,
- Criteria for the development of objectives,
- Goals and objectives which are measurable, observable and attainable,
- Performance Standards which address only a single performance; and

11) Conduct a Delphi study concentrating on the development of SCANS Personal skills, Interpersonal skills, and Technical skills through the achievement of the National Standards for [Visual] Arts Education.

Concluding Statement

This study, has provided an analysis of DBAE experts' perceptions toward the relationship of the learning outcomes within the National Standards for [Visual] Arts Education and SCANS Workplace Know-How skills. The national Delphi panel reached a consensus that there is a relationship between the National Standards for [Visual] Arts Education, at the secondary level, and SCANS skills. Hopefully, this study can be used to assist art education personnel and Tech-Prep and School-to-Work change agents in developing workforce education programs utilizing the art education learning outcomes which were the focus of this research effort.

APPENDIX A

SCANS WORKPLACE KNOW-HOW

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:Basic Skills:

Reading
Writing
Arithmetic/Mathematics
Listening
Speaking

Thinking Skills:

Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's Eye
Knowing How to Learn
Reasoning

Personal Qualities:

Responsibility
Self-Esteem
Sociability
Self-Management
Integrity/Honesty

Five Competencies:Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a Team
Teaches Others New Skills
Serves Clients/Customers
Exercises Leadership
Negotiates
Works with Diversity

Information:

Acquires and Evaluates Information
Organizes and Maintains Information
Interprets and Communicates Information
Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

APPENDIX B

NATIONAL STANDARDS FOR [VISUAL]
ARTS EDUCATION (SECONDARY LEVEL)

VISUAL ARTS

In grades 9-12, students extend their study of the visual arts. They continue to use a wide range of subject matter, symbols, meaningful images, and visual expressions. They grow more sophisticated in their employment of the visual arts to reflect their feelings and emotions and continue to expand their abilities to evaluate the merits of their efforts. These standards provide a framework for that study in a way that promotes the maturing students' thinking, working, communicating, reasoning, and investigating skills. The standards also provide for their growing familiarity with the ideas, concepts, issues, dilemmas, and knowledge important in the visual arts. As students gain this knowledge and these skills, they gain in their ability to apply knowledge and skills in the visual arts to their widening personal worlds.

The visual arts range from the folk arts, drawing, and painting, to sculpture and design, from architecture to film and video--and any of these can be used to help students meet the educational goals embodied in these standards. For example, graphic design (or any other field within the visual arts) can be used as the basis for creative activity, historical and cultural investigations, or *analysis throughout the standards. The visual arts involve varied *tools, *techniques, and *process--all of which also provide opportunities for working toward the standards. It is the responsibility of practitioners to choose from among the array of possibilities offered by the visual arts to accomplish specific educational objectives in specific circumstances.

To meet the standards, students must learn vocabularies and concepts associated with various types of work in the visual arts. As they develop greater fluency in communicating in visual, oral, and written form, they must exhibit greater artistic competence through all of these avenues.

In grades 9-12, students develop deeper and more profound works of visual art that reflect the maturation of their creative and problem-solving skills. Students understand the multifaceted interplay of different *media, styles, forms, techniques, and processes in the creation of their work.

Students develop increasing abilities to pose insightful questions about *contexts, processes, and criteria for evaluation. They use these questions to examine works in light of various analytical methods and to express sophisticated ideas about visual relationships using precise terminology. They can evaluate artistic character and *aesthetic qualities in works of art, nature, and human-made environments. They can reflect on the nature of human involvement in art as a viewer, creator, and participant.

Students understand the relationships among art forms and between their own work and that of others. They are able to relate understandings about the historical and cultural contexts of art to situations in contemporary life. They have a broad and in-depth understanding of the meaning and importance of the visual world in which they live.

1. Content Standard: Understanding and applying media, techniques, and processes.

Achievement Standard, Proficient:

Students

- a. apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

- b. conceive and *create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.

Achievement Standard, Advanced:

Students

- c. communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.
- d. initiate, define, and solve challenging *visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

2. Content Standard: Using knowledge of *structures and functions.

Achievement Standard, Proficient:

Students

- a. demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.
- b. evaluate the effectiveness of artworks in terms of organizational structures and functions.
- c. create artworks that use *organizational principles and functions to solve specific visual arts problems.

Achievement Standard, Advanced:

Students

- d. demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.
- e. create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

3. Content Standard: Choosing and evaluating a range of subject matter, symbols, and ideas.

Achievement Standard, Proficient:

Students

- a. reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.
- b. apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.

Achievement Standard, Advanced:

Students

- c. describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.
- d. evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the student' works and in significant works by others.

4. Content Standard: Understanding the visual arts in relation to history and cultures.

Achievement Standard, Proficient:

Students

- a. differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.
- b. describe the function and explore the meaning of specific art objects within varied cultures, times, and places.
- c. analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

Achievement Standard, Advanced:

Students

- d. analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians, and arts.
- e. analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

5. Content Standard: Reflecting upon and assessing the characteristics and merits of their work and the work of others.

Achievement Standard, Proficient:

Students

- a. identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.
- b. describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.
- c. reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

Achievement Standard, Advanced:

Students

- d. correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

6. Content Standard: Making connections between visual arts and other disciplines.**Achievement Standard, Proficient:**

Students

- a. compare the materials, *technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.
- b. compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

Achievement Standard, Advanced:

Students

- c. synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

APPENDIX C

PILOT STUDY QUESTIONNAIRE

SCANS Workplace Know-How Developed Through the National Standards for [Visual] Arts Education

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

Reading
Writing
Arithmetic/Mathematics
Listening
Speaking

Thinking Skills:

Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's Eye

Knowing How to Learn
Reasoning

Personal Qualities:

Responsibility
Self-Esteem
Socialability
Self-Management
Integrity/Honesty

Five Competencies:

Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a Team
Teaches Others New Skills
Serves Clients/Customers
Exercises Leadership
Negotiates
Works with Diversity

Information:

Acquires and Evaluates Information
Organizes and Maintains Information
Interprets and Communicates Information
Uses Computers to Process Information

Systems:

Understands Systems
Monitors and Corrects Performance
Improves or Designs Systems

Technology:

Selects Technology
Applies Technology to the Task
Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

BACKGROUND INFORMATION

For over a decade educational reform movements such as Tech Prep, School-to-Work, and Discipline-Based Art Education (DBAE) have been prominent in secondary education. These movements continue to grow in popularity, affecting systematic curriculum shifts in schools throughout the nation. Discipline-Based Art Education advocates the teaching of art as a component of the general education core. Tech Prep and School-to-Work advocate the integration of academic and technical education as a means of preparing students for the world of work and as life-long learners. However, the courses which they have established as necessary components of the curriculum do not include the arts.

Tech Prep and School-to-Work programs develop graduation plans which outline a coherent sequence of courses. Students must follow these plans through high school and college. Ideally, academic and technical courses, with direct relevance to students' career pathways or which develop SCANS skills, are included in the plans.

Published and released in June 1991, the report of the Secretary's Commission on Achieving Necessary Skills (SCANS) recommended the foundation skills and competencies it had identified as essential to high school graduates or persons entering the workforce. In practice, many of these skills are taught through academic disciplines which are a part of the core curriculum-- math, English, science, and occasionally social science.

Tech Prep and School-to-Work programs do not currently utilize art in the core curriculum to develop SCANS skills. However, information in literature indicates that the arts can also successfully develop Workplace Know-How. Comprehensive art programs, such as those associated with Discipline-Based Art Education reform efforts, evidence success in developing skills which are similar to those advocated by SCANS, Tech Prep, and School-to-Work.

As Tech Prep and School-to-Work movements gain momentum to create systematic education reform, there is a real threat that art will be completely left out of secondary education. The purpose of this investigation is to promote understanding among Tech Prep and School-to-Work change agents, educational leaders, and business representatives, of the role that comprehensive art education can perform as a part of the core curriculum, within the framework of these reform movements. This study will determine the scope of Workplace Know-How which can be developed in relation to the National Standards for [Visual] Art Education from the perspective of experts in Discipline-Based Art Education. In the process, it will communicate to art educators the value of what they do in terms of Tech Prep and School-to-Work systems.

NATIONAL STANDARDS FOR [VISUAL] ARTS EDUCATION

The secondary visual arts performance standards used in conjunction with this study are taken as published from the following source.

(Consortium of National Arts Education Associations. (1994). *National standards for arts education*. Reston, Virginia: Music Educators National Conference.)

SCANS Workplace Know-How Developed Through the National Standards for [Visual] Arts Education

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

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Listening
Speaking

Thinking Skills:

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Decision Making
Problem Solving
Seeing Things in the Mind's
Eye

Knowing How to Learn
Reasoning

Personal Qualities:

Responsibility
Self-Esteem
Sociability
Self-Management
Integrity/Honesty

Five Competencies:

Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a
Team
Teaches Others New Skills
Serves Clients/Customers
Exercises Leadership
Negotiates
Works with Diversity

Information:

Acquires and Evaluates
Information
Organizes and Maintains
Information
Interprets and Communicates
Information
Uses Computers to Process
Information

Systems:

Understands Systems
Monitors and Corrects
Performance

Improves or Designs Systems

Technology:

Selects Technology
Applies Technology to the
Task
Maintains and Troubleshoots
Equipment

(Secretary's Commission on
Achieving Necessary Skills,
1991)

INSTRUCTIONS

This research instrument contains the twenty-five (25) performance standards for secondary visual arts as identified and published in the National Standards for Arts Education. Also presented, in the yellow column on the left side of each page, is the set of Workplace Know-How foundation and competency skills identified by the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS).

The twenty five (25) visual art performance standards are listed in the following pages. Each of these numerically distinguished standards is followed by a box which lists the SCANS foundations and competencies. Each foundation or competency which is preceded by a solid red square has been preliminarily identified as being developed through the accomplishment of the corresponding numbered visual art performance standard.

For your review, a reference guide to the SCANS Workplace Know-How is available in the yellow column on the left side of each page. Please feel free to refer to this list as needed in answering the questions.

Please consider the relationship between the numbered visual art performance standards and the SCANS Workplace Know-How and then perform the following tasks:

- 1) If you do not agree that a SCANS foundation or competency which is marked in red is achieved through attainment of a particular numbered visual art performance standard, draw a line through that SCANS foundation and competency skill.
- 2) If you think other SCANS foundations or competencies are achieved through attainment of a particular visual art performance standard, check the box preceding the appropriate SCANS skills.

This procedure should be repeated for each of the twenty-five (25) visual arts performance standards.

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

Performance Standard #2

Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye
- Knowing How to Learn
- Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input type="checkbox"/> Thinking Skills <input checked="" type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
--	---

Performance Standard #4

Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
---	---

Performance Standard #5

Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
--	--

Performance Standard #6

Students evaluate the effectiveness of artworks in terms of organizational structures and functions.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
---	--

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye
- Knowing How to Learn

Reasoning:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #7

Students create artworks that use organizational principles and functions to solve specific visual arts problems.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
--	--

Performance Standard #8

Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input checked="" type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input checked="" type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
--	--

Performance Standard #9

Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
--	---

Performance Standard #10

Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input checked="" type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
---	---

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:
 Reading
 Writing
 Arithmetic/Mathematics
 Listening
 Speaking

Thinking Skills:
 Creative Thinking
 Decision Making
 Problem Solving
 Seeing Things in the Mind's Eye
 Knowing How to Learn
 Reasoning

Personal Qualities:
 Responsibility
 Self-Esteem
 Sociability
 Self-Management
 Integrity/Honesty

Five Competencies:

Resources:
 Time
 Money
 Material and Facilities
 Human Resources

Interpersonal:
 Participates as a Member of a Team
 Teaches Others New Skills
 Serves Clients/Customers
 Exercises Leadership
 Negotiates
 Works with Diversity

Information:
 Acquires and Evaluates Information
 Organizes and Maintains Information
 Interprets and Communicates Information
 Uses Computers to Process Information

Systems:
 Understands Systems
 Monitors and Corrects Performance
 Improves or Designs Systems

Technology:
 Selects Technology
 Applies Technology to the Task
 Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #11

Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input checked="" type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input checked="" type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #13

Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the student's works and in significant works by others.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input checked="" type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:
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Thinking Skills:
 Creative Thinking
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 Problem Solving
 Seeing Things in the Mind's Eye
 Knowing How to Learn
 Reasoning

Personal Qualities:
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 Self-Esteem
 Sociability
 Self-Management
 Integrity/Honesty

Five Competencies:

Resources:
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 Material and Facilities
 Human Resources

Interpersonal:
 Participates as a Member of a Team
 Teaches Others New Skills
 Serves Clients/Customers
 Exercises Leadership
 Negotiates
 Works with Diversity

Information:
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 Interprets and Communicates Information
 Uses Computers to Process Information

Systems:
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 Monitors and Corrects Performance
 Improves or Designs Systems

Technology:
 Selects Technology
 Applies Technology to the Task
 Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #15

Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input checked="" type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #17

Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians and arts.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

SCANS Workplace Know-How Developed:

Foundations	Competencies
<ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

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Basic Skills:

- Reading
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- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye
- Knowing How to Learn

Resources:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #19

Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
---	--

Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
---	--

Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology
--	--

Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

SCANS Workplace Know-How Developed:

<p><u>Foundations</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p><u>Competencies</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
--	---

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

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 Reasoning

Personal Qualities:
 Responsibility
 Self-Esteem
 Sociability
 Self-Management
 Integrity/Honesty

Five Competencies:

Resources:
 Time
 Money
 Material and Facilities
 Human Resources

Interpersonal:
 Participates as a Member of a Team
 Teaches Others New Skills
 Serves Clients/Customers
 Exercises Leadership
 Negotiates
 Works with Diversity

Information:
 Acquires and Evaluates Information
 Organizes and Maintains Information
 Interprets and Communicates Information
 Uses Computers to Process Information

Systems:
 Understands Systems
 Monitors and Corrects Performance
 Improves or Design Systems

Technology:
 Selects Technology
 Applies Technology to the Task
 Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input checked="" type="checkbox"/> Technology
---	--

Performance Standard #24

Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
---	--

Performance Standard #25

Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

SCANS Workplace Know-How Developed:

<p>Foundations</p> <ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<p>Competencies</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology
---	---

APPENDIX D

PILOT STUDY AND ROUND ONE COVER LETTER

(LETTER HEAD)

date

«Name»

«Address1»

«Address2»

«CSZ»

Dear «Name»:

Thank you for agreeing to participate in this Delphi study to determine if SCANS Workplace Know-How Can Be Developed through the Achievement of the National Standards for [Visual] Arts Education. You will find more information on SCANS, the National Standards for [Visual] Arts, and the purpose of this study on the enclosed background information page.

You were recommend by «Director» to respond to this study because of your expertise in Discipline-Based Art Education, strong foundation in curriculum, and understanding of secondary student skill levels. These qualifications uniquely qualify you to distinguish the SCANS Workplace Know-How which are developed as a result of the performance of the National Standards for [Visual] Arts Education. The average person is not familiar with the capacity of the visual art discipline to develop higher level competencies through an art curriculum.

The art performance standards you will be responding to are stated in their published form. You may or may not entirely agree with the form or content of these statements. However, please make every effort to respond to each of the statements as written. Feel free to add any comments you believe are pertinent.

The questionnaire will require approximately one hour to complete in each round of the Delphi process. In order to achieve the results of the study, you will probably be responding to two or three survey instruments over the next few weeks. The nature of this study is highly abstract and can become frustrating at times. Because of this, you may wish to take breaks between questions so that you remain focused. Please keep in mind that you cannot give an incorrect answer since the objective of the study is a consensus of expert opinions.

Thank you in advance for your commitment to making this study a success.

Sincerely,

Jan Crews

APPENDIX E

NATIONAL DELPHI QUESTIONNAIRE (ONE)

SCANS Workplace Know-How Developed Through the National Standards for [Visual] Arts Education

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

Reading
Writing
Arithmetic/Mathematics
Listening
Speaking

Thinking Skills:

Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's
Eye

Knowing How to Learn
Reasoning

Personal Qualities:

Responsibility
Self-Esteem
Socialability
Self-Management
Integrity/Honesty

Five Competencies:

Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a
Team
Teaches Others New Skills
Serves Clients/Customers
Exercises Leadership
Negotiates
Works with Diversity

Information:

Acquires and Evaluates
Information
Organizes and Maintains
Information
Interprets and Communicates
Information
Uses Computers to Process
Information

Systems:

Understands Systems
Monitors and Corrects
Performance
Improves or Designs Systems

Technology:

Selects Technology
Applies Technology to the
Task
Maintains and Troubleshoots
Equipment

(Secretary's Commission on
Achieving Necessary Skills,
1991)

BACKGROUND INFORMATION

For over a decade educational reform movements such as Tech Prep, School-to-Work, and Discipline-Based Art Education (DBAE) have been prominent in secondary education. These movements continue to grow in popularity, affecting systematic curriculum shifts in schools throughout the nation. Discipline-Based Art Education advocates the teaching of art as a component of the general education core. Tech Prep and School-to-Work advocate the integration of academic and technical education as a means of preparing students for the world of work and as life-long learners. However, the courses which they have established as necessary components of the curriculum do not include the arts.

Tech Prep and School-to-Work programs develop graduation plans which outline a coherent sequence of courses. Students must follow these plans through high school and college. Ideally, academic and technical courses, with direct relevance to students' career pathways or which develop SCANS skills, are included in the plans.

Published and released in June 1991, the report of the Secretary's Commission on Achieving Necessary Skills (SCANS) recommended the foundation skills and competencies it had identified as essential to high school graduates or persons entering the workforce. In practice, many of these skills are taught through academic disciplines which are a part of the core curriculum-- math, English, science, and occasionally social science.

Tech Prep and School-to-Work programs do not currently utilize art in the core curriculum to develop SCANS skills. However, information in literature indicates that the arts can also successfully develop Workplace Know-How. Comprehensive art programs, such as those associated with Discipline-Based Art Education reform efforts, evidence success in developing skills which are similar to those advocated by SCANS, Tech Prep, and School-to-Work.

As Tech Prep and School-to-Work movements gain momentum to create systematic education reform, there is a real threat that art will be completely left out of secondary education. The purpose of this investigation is to promote understanding among Tech Prep and School-to-Work change agents, educational leaders, and business representatives, of the role that comprehensive art education can perform as a part of the core curriculum, within the framework of these reform movements. This study will determine the scope of Workplace Know-How which can be developed in relation to the National Standards for [Visual] Art Education from the perspective of experts in Discipline-Based Art Education. In the process, it will communicate to art educators the value of what they do in terms of Tech Prep and School-to-Work systems.

NATIONAL STANDARDS FOR [VISUAL] ARTS EDUCATION

The secondary visual arts performance standards used in conjunction with this study are taken as published from the following source.

(Consortium of National Arts Education Associations. (1994). *National standards for arts education*. Reston, Virginia: Music Educators National Conference.)

SCANS Workplace Know-How Developed Through the National Standards for [Visual] Arts Education

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye

Knowing How to Learn:

Reasoning:

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociality
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

INSTRUCTIONS

This research instrument contains the twenty-five (25) performance standards for secondary visual arts as identified and published in the National Standards for Arts Education. Also presented, in the yellow column on the left side of each page, is the set of Workplace Know-How foundation and competency skills identified by the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS).

The twenty five (25) visual art performance standards are listed in the following pages. Each of these numerically distinguished standards is followed by a box which lists the SCANS foundations and competencies. Each foundation or competency which is preceded by a solid red square has been preliminarily identified as being developed through the accomplishment of the corresponding numbered visual art performance standard.

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- 2) If you think other SCANS foundations or competencies are achieved through attainment of a particular visual art performance standard, check the box preceding the appropriate SCANS skills.

This procedure should be repeated for each of the twenty-five (25) visual arts performance standards.

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #2

Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Minds

- Eye
- Knowing How to Learn
- Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

SCANS Workplace Know-How Developed:	
Foundations	Competencies
<ul style="list-style-type: none"> ■ Basic Skills ■ Thinking Skills ■ Personal Qualities 	<ul style="list-style-type: none"> ■ Resources ■ Interpersonal ■ Information □ Systems □ Technology

Performance Standard #4

Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

SCANS Workplace Know-How Developed:	
Foundations	Competencies
<ul style="list-style-type: none"> □ Basic Skills ■ Thinking Skills □ Personal Qualities 	<ul style="list-style-type: none"> □ Resources □ Interpersonal ■ Information □ Systems □ Technology

Performance Standard #5

Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.

SCANS Workplace Know-How Developed:	
Foundations	Competencies
<ul style="list-style-type: none"> ■ Basic Skills ■ Thinking Skills □ Personal Qualities 	<ul style="list-style-type: none"> □ Resources □ Interpersonal ■ Information ■ Systems □ Technology

Performance Standard #6

Students evaluate the effectiveness of artworks in terms of organizational structures and functions.

SCANS Workplace Know-How Developed:	
Foundations	Competencies
<ul style="list-style-type: none"> □ Basic Skills ■ Thinking Skills □ Personal Qualities 	<ul style="list-style-type: none"> □ Resources □ Interpersonal ■ Information ■ Systems □ Technology

REFERENCE GUIDE

SCANS WORKPLACE
KNOW-HOW

Three Part Foundation:

Basic Skills:

Reading
Writing
Arithmetic/Mathematics
Listening
Speaking

Thinking Skills:

Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's
Eye

Knowing How to LearnReasoningPersonal Qualities:

Responsibility
Self-Esteem
Sociability
Self-Management
Integrity/Honesty

Five Competencies:Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a
Team
Teaches Others New Skills
Serves Clients/Customers
Exercises Leadership
Negotiates
Works with Diversity

Information:

Acquires and Evaluates
Information
Organizes and Maintains
Information
Interprets and Communicates
Information
Uses Computers to Process
Information

Systems:

Understands Systems
Monitors and Corrects
Performance
Improves or Designs Systems

Technology:

Selects Technology
Applies Technology to the
Task
Maintains and Troubleshoots
Equipment

(Secretary's Commission on
Achieving Necessary Skills,
1991)

Performance Standard #7

Students create artworks that use organizational principles and functions to solve specific visual arts problems.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

Performance Standard #8

Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

Performance Standard #9

Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

Performance Standard #10

Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
 Thinking Skills
 Personal Qualities

Competencies

- Resources
 Interpersonal
 Information
 Systems
 Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundations:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye
- Knowing How to Learn
- Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors or Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #11

Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #13

Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the student' works and in significant works by others.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

REFERENCE GUIDE

SCANS WORKPLACE
KNOW-HOW

Three Part Foundation:

Basic Skills:

Reading
Writing
Arithmetic/Mathematics
Listening
Speaking

Thinking Skills:

Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's
Eye

Knowing How to Learn
Reasoning

Personal Qualities:

Responsibility
Self-Esteem
Sociability
Self-Management
Integrity/Honesty

Five Competencies:

Resources:

Time
Money
Material and Facilities
Human Resources

Interpersonal:

Participates as a Member of a
Team
Teaches Others New Skills
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Exercises Leadership
Negotiates
Works with Diversity

Information:

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Information
Organizes and Maintains
Information
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Information
Uses Computers to Process
Information

Systems:

Understands Systems
Monitors and Corrects
Performance
Improves or Designs Systems

Technology:

Selects Technology
Applies Technology to the
Task
Maintains and Troubleshoots
Equipment

(Secretary's Commission on
Achieving Necessary Skills,
1991)

Performance Standard #15

Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #17

Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians and arts.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
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- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye

- Knowing How to Learn
- Reasoning

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- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

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- Participates as a Member of a Team
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- Works with Diversity

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- Acquires and Evaluates Information
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Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #19

Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.

SCANS Workplace Know-How Developed:

<u>Foundations</u>	<u>Competencies</u>
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

SCANS Workplace Know-How Developed:

<u>Foundations</u>	<u>Competencies</u>
<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

SCANS Workplace Know-How Developed:

<u>Foundations</u>	<u>Competencies</u>
<ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input type="checkbox"/> Systems <input type="checkbox"/> Technology

Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

SCANS Workplace Know-How Developed:

<u>Foundations</u>	<u>Competencies</u>
<ul style="list-style-type: none"> <input type="checkbox"/> Basic Skills <input checked="" type="checkbox"/> Thinking Skills <input type="checkbox"/> Personal Qualities 	<ul style="list-style-type: none"> <input type="checkbox"/> Resources <input type="checkbox"/> Interpersonal <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Systems <input type="checkbox"/> Technology

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

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- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye

Knowing How to Learn

Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

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- Organizes and Maintains Information
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Systems:

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- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

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Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #24

Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

Performance Standard #25

Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

SCANS Workplace Know-How Developed:

Foundations

- Basic Skills
- Thinking Skills
- Personal Qualities

Competencies

- Resources
- Interpersonal
- Information
- Systems
- Technology

APPENDIX F

NATIONAL DELPHI QUESTIONNAIRE (TWO)

SCANS Workplace Know-How Developed Through the National Standards for [Visual] Arts Education

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

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Listening
Speaking

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Decision Making
Problem Solving
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- Speaking

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- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye
- Knowing How to Learn
- Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
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(Secretary's Commission on Achieving Necessary Skills, 1991)

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- 2) If you think other SCANS foundations or competencies are achieved through attainment of a particular visual art performance standard, check the box preceding the appropriate SCANS skills.

This procedure should be repeated for each of the twenty-five (25) visual arts performance standards.

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
<input type="checkbox"/> Thinking Skills	
<u>Response %</u> 60 %	<u>Response #</u> 6 of 10

Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
	<input type="checkbox"/> Technology
<u>Response %</u> 50 %	<u>Response #</u> 5 of 10

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's Eye

Knowing How to Learn Reasoning:

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
<input type="checkbox"/> Personal Qualities	
<u>Response %</u>	<u>Response #</u>
60 %	6 of 10

Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
	<input type="checkbox"/> Systems
<u>Response %</u>	<u>Response #</u>
50 %	5 of 10

Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
	<input type="checkbox"/> Systems
<u>Response %</u>	<u>Response #</u>
50 %	5 of 10

Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u>
	<input type="checkbox"/> Systems
<u>Response %</u>	<u>Response #</u>
60 %	6 of 10

REFERENCE GUIDE

SCANS WORKPLACE KNOW-HOW

Three Part Foundation:

Basic Skills:

- Reading
- Writing
- Arithmetic/Mathematics
- Listening
- Speaking

Thinking Skills:

- Creative Thinking
- Decision Making
- Problem Solving
- Seeing Things in the Mind's

- Eye
- Knowing How to Learn
- Reasoning

Personal Qualities:

- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Five Competencies:

Resources:

- Time
- Money
- Material and Facilities
- Human Resources

Interpersonal:

- Participates as a Member of a Team
- Teaches Others New Skills
- Serves Clients/Customers
- Exercises Leadership
- Negotiates
- Works with Diversity

Information:

- Acquires and Evaluates Information
- Organizes and Maintains Information
- Interprets and Communicates Information
- Uses Computers to Process Information

Systems:

- Understands Systems
- Monitors and Corrects Performance
- Improves or Designs Systems

Technology:

- Selects Technology
- Applies Technology to the Task
- Maintains and Troubleshoots Equipment

(Secretary's Commission on Achieving Necessary Skills, 1991)

Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u> <input type="checkbox"/> Systems
<u>Response %</u> 50 %	<u>Response #</u> 5 of 10

Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

SCANS Workplace Know-How Developed:	
<u>Foundations</u>	<u>Competencies</u> <input type="checkbox"/> Systems
<u>Response %</u> 50 %	<u>Response #</u> 5 of 10

Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

SCANS Workplace Know-How Developed:	
<u>Foundations</u> <input type="checkbox"/> Basic Skills	<u>Competencies</u>
<u>Response %</u> 50 %	<u>Response #</u> 5 of 10

Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

SCANS Workplace Know-How Developed:	
<u>Foundations</u> <input type="checkbox"/> Basic Skills	<u>Competencies</u>
<u>Response %</u> 50 %	<u>Response #</u> 5 of 10

APPENDIX G

COVER LETTER (TWO)

(LETTER HEAD)

date

«Name»

«Address 1»

«CSZ»

Dear «Name»:

Thank you for first round responses on this delphi study to determine if SCANS Workplace Know-How Can Be Developed through the Achievement of the National Standards for [Visual] Arts Education. You will again find information on SCANS, the National Standards for [Visual] Arts, and the purpose of this study on the enclosed background information page.

Fifteen (15) of the original twenty-five(25) questions about visual art performance standards have been eliminated from the round two questionnaire. This is because you and the other panel members either reached one hundred percent (100%) consensus about the SCANS foundations and competencies associated with the standards or less than 50% of you selected the foundations or competencies for inclusion.

The survey instrument now contains ten (10) of the twenty-five (25) original performance standards for secondary visual arts as identified and published in the National Standards for Arts Education. For each of these ten (10) standards, at least 50% but less than 100% of your national panel selected the listed SCANS foundations or competencies as achieved through attainment of a particular visual art performance standard. The percentage and frequency of the first round panel responses associated with the remaining foundations or competencies are displayed on the questionnaire.

Our goal is to attempt to achieve one hundred percent (100%) consensus on the SCANS foundations or competencies the panel believes are achieved through attainment of the related visual art performance standard.

Completion of this questionnaire should take only a few minutes. Review the enclosed second round survey instrument and make your final selections with regard to the items included. Feel free to add any comments as to why you did or did not select a particular foundation or competency. Keep in mind that you cannot give an incorrect answer since the objective of the study is a consensus of expert opinions based one your perception of the existing information.

Thank you again for your commitment to making this study a success. I would appreciate prompt return of your responses as the final results of this study must be compiled and submitted in a few short weeks.

Sincerely,

Jan Crews

APPENDIX H

DELPHI FIRST ROUND DATA

DELPHI STUDY ROUND ONE RESULTS

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
10%	1	Basic Skills	100%	10	Resources
60%	6	Thinking Skills	0%	0	Interpersonal
100%	10	Personal Qualities	100%	10	Information
			100%	10	Systems
			100%	10	Technology

Performance Standard #2

Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
10%	1	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	0%	0	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			100%	10	Technology

Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
100%	10	Personal Qualities	100%	10	Information
			20%	2	Systems
			50%	5	Technology

Performance Standard #4

Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
30%	3	Basic Skills	30%	3	Resources
100%	10	Thinking Skills	0%	0	Interpersonal
20%	2	Personal Qualities	100%	10	Information
			40%	4	Systems
			10%	1	Technology

Performance Standard #5

Students demonstrate the ability to form and defend judgments about the characteristics and structures to accomplish commercial, personal, communal, or other purposes of art.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	10%	1	Resources
100%	10	Thinking Skills	30%	3	Interpersonal
30%	3	Personal Qualities	100%	10	Information
			100%	10	Systems
			10%	1	Technology

Performance Standard #6

Students evaluate the effectiveness of artworks in terms of organizational structures and functions.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
20%	2	Basic Skills	10%	1	Resources
100%	10	Thinking Skills	30%	3	Interpersonal
0%	0	Personal Qualities	100%	10	Information
			100%	10	Systems
			0%	0	Technology

Performance Standard #7

Students create artworks that use organizational principles and functions to solve specific visual arts problems.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
20%	2	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	0%	0	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			10%	1	Technology

Performance Standard #8

Students demonstrate the ability to compare two or more perspectives about the use of organizational principles and functions in artwork and to defend personal evaluations of these perspectives.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	10%	1	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
100%	10	Personal Qualities	100%	10	Information
			100%	10	Systems
			10%	1	Technology

Performance Standard #9

Students create multiple solutions to specific visual arts problems that demonstrate competence in producing effective relationships between structural choices and artistic functions.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
20%	2	Basic Skills	40%	4	Resources
100%	10	Thinking Skills	20%	2	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			20%	2	Technology

Performance Standard #10

Students reflect on how artworks differ visually, spatially, temporally, and functionally, and describe how these are related to history and culture.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	10%	1	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
20%	2	Personal Qualities	100%	10	Information
			40%	4	Systems
			0%	0	Technology

Performance Standard #11

Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
100%	10	Personal Qualities	100%	10	Information
			100%	10	Systems
			100%	10	Technology

Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
60%	6	Personal Qualities	100%	10	Information
			20%	2	Systems
			0%	0	Technology

Performance Standard #13

Students evaluate and defend the validity of sources for content and the manner in which subject matter, symbols, and images are used in the student' works and in significant works by others.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	20%	2	Resources
100%	10	Thinking Skills	40%	4	Interpersonal
100%	10	Personal Qualities	100%	10	Information
			40%	4	Systems
			10%	1	Technology

Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
30%	3	Basic Skills	0%	0	Resources
100%	10	Thinking Skills	20%	2	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			50%	5	Systems
			0%	0	Technology

Performance Standard #15

Students describe the function and explore the meaning of specific art objects within varied cultures, times, and places.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	20%	2	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
20%	2	Personal Qualities	100%	10	Information
			100%	10	Systems
			0%	0	Technology

Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
40%	4	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	100%	10	Interpersonal
40%	4	Personal Qualities	100%	10	Information
			50%	5	Systems
			0%	0	Technology

Performance Standard #17

Students analyze and interpret artworks for relationships among form, context, purposes, and critical models, showing understanding of the work of critics, historians, aestheticians and arts.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	40%	4	Interpersonal
20%	2	Personal Qualities	100%	10	Information
			100%	10	Systems
			0%	0	Technology

Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	30%	3	Interpersonal
20%	2	Personal Qualities	100%	10	Information
			60%	6	Systems
			0%	0	Technology

Performance Standard #19

Students identify intentions of those creating artworks, explore the implications of various purposes, and justify their analyses of purposes in particular works.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	20%	2	Resources
100%	10	Thinking Skills	30%	3	Interpersonal
30%	3	Personal Qualities	100%	10	Information
			40%	4	Systems
			10%	1	Technology

Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	30%	3	Resources
100%	10	Thinking Skills	20%	2	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			50%	5	Systems
			20%	2	Technology

Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
40%	4	Basic Skills	0%	0	Resources
100%	10	Thinking Skills	0%	0	Interpersonal
0%	0	Personal Qualities	100%	10	Information
			50%	5	Systems
			0%	0	Technology

Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
50%	5	Basic Skills	30%	3	Resources
100%	10	Thinking Skills	30%	3	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			20%	2	Technology

Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
50%	5	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	10%	1	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			100%	10	Technology

Performance Standard #24

Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	10%	1	Interpersonal
10%	1	Personal Qualities	100%	10	Information
			100%	10	Systems
			10%	1	Technology

Performance Standard #25

Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences.

SCANS Workplace Know-How Developed:

<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
10%	1	Basic Skills	100%	10	Resources
100%	10	Thinking Skills	10%	1	Interpersonal
0%	0	Personal Qualities	100%	10	Information
			100%	10	Systems
			20%	2	Technology

APPENDIX I

DELPHI SECOND ROUND DATA

DELPHI STUDY ROUND TWO RESULTS

Performance Standard #1

Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks.

SCANS Workplace Know-How Developed:			
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>
100%	10	Thinking Skills	<u>Frq (#)</u>
			<u>Competencies</u>

Performance Standard #3

Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium.

SCANS Workplace Know-How Developed:			
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>
80%	8	Technology	<u>Frq (#)</u>
			<u>Competencies</u>

Performance Standard #12

Students describe the origins of specific images and ideas and explain why they are of value in their artwork and in the work of others.

SCANS Workplace Know-How Developed:			
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>
90%	9	Personal Qualities	<u>Frq (#)</u>
			<u>Competencies</u>

Performance Standard #14

Students differentiate among a variety of historical and cultural contexts in terms of characteristics and purposes of works of art.

SCANS Workplace Know-How Developed:			
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>
80%	8	Systems	<u>Frq (#)</u>
			<u>Competencies</u>

Performance Standard #16

Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making.

SCANS Workplace Know-How Developed:			
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>
90%	9	Systems	<u>Frq (#)</u>
			<u>Competencies</u>

Performance Standard #18

Students analyze common characteristics of visual arts evident across time and among cultural/ethnic groups to formulate analyses, evaluations, and interpretations of meaning.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
90%	9				Systems

Performance Standard #20

Students describe meanings of artworks by analyzing how specific works are created and how they relate to historical and cultural contexts.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
70%	7				Systems

Performance Standard #21

Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
60%	6				Systems

Performance Standard #22

Students correlate responses to works of visual art with various techniques for communicating meanings, ideas, attitudes, views, and intentions.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills			

Performance Standard #23

Students compare the materials, technologies, media, and processes of the visual arts with those of other arts disciplines as they are used in creation and types of analysis.

SCANS Workplace Know-How Developed:					
<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Foundations</u>	<u>Pct (%)</u>	<u>Frq (#)</u>	<u>Competencies</u>
100%	10	Basic Skills			

APPENDIX J

PANEL COMMENTS

NATIONAL PANEL COMMENTARY ON THE DELPHI STUDY

The Delphi technique encourages commentary by respondents in order to help them clarify their ideas and perceptions. Therefore, participants on the national panel for this study were encouraged in cover letters and by phone to provide commentary. As a part of this process, the panel volunteered informal comments in relation to their reasons for selecting certain SCANS Workplace Know-How skills. Their comments are organized according to specific SCANS skills.

Basic Skills

Basic skills were utilized to receive and perceive art related assignments. Also, when reading, writing, or speaking about historical, critical, or aesthetic relationships. Mathematics was sighted as integral to such functions as calculating spatial relationships, achieving pictorial balance and constructions in various media.

Thinking Skills

The national panel believed that thinking skills were an inherent part of the achievement of each performance standard. On a basic level for instance, students make conscious choices of materials and techniques. Higher level Thinking skills are used when a student makes a critical or aesthetic analysis of why a specific choice was made or when the motives behind the artwork of others is extrapolated.

Personal Skills

There were not a great deal of comments made in relation to personal qualities. One individual noted that the ability to build self-esteem was one of the major assets of arts education. Students have a feeling of success when they exercise personal creativity and when they experience acceptance based on their ability to express and justify their creative motives.

Resource Skills

Students can develop resource management skills as they allocate their time to complete projects according to specified due dates. Students must work within monetary guidelines when purchasing materials from their own sources. Material resources must be scrutinized in the production process. An example would be maintaining the correct type, quantity, and color of paint to complete a project of a specific size.

Interpersonal Skills

Students exercise interpersonal leadership qualities when they communicate their ideas in manner which win over others. The panel suggested that an art education also helps students to work with diversity by helping them understand and appreciate divergent cultural systems through historical and aesthetic exploration.

Information Skills

Information is acquired and manipulated in many ways. Sometimes it is utilized in very basic ways such as receiving, assessing, and executing an assignment. Other times it might be gleaned from reading or hearing historical information and the applied at a later date in critical analysis or aesthetic deliberation. These critiques might be a part of classroom discourse or could be the subject of a paper processed on the computer.

Systems Skills

Several examples of systems were sighted. These systems are an everyday part of a comprehensive art education program. History, culture, religion, and time or artistic principles such as balance and unity, as well as design elements such as line and color scheme are all systemic organizational motives. Students might find application for these in art production or in written or spoken discourse.

Technology Skills

The panelists stated that the utilization of Technology implies choice and knowledgeable use of media, procedures, techniques, tools, and equipment. In a simple way any standard that requires a product would involve a technological application, even if only paper and pencil. Some of the more main stream concepts of technological application that were mentioned included computer graphics and the video medium. Technology also could apply for example to such things as new processes or materials for art restoration.

Though they do not cover the entire spectrum of possibilities the comments provide insight into the rationale for some of the responses recorded in the Delphi study.

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