both and

UNDERSTANDING THE VITAL LINK BETWEEN *both* THE ARTS *and* CAREER TECHNICAL EDUCATION IN CALIFORNIA PUBLIC SCHOOLS

CALIFORNIA ALLIANCE FOR ARTS EDUCATION

both and

INTRODUCTION

In recent years, Americans have witnessed the rapid evolution of expectations surrounding public education—an evolution that continues as the Obama administration puts its own stamp on the purpose of American schools through the current reauthorization of the Elementary and Secondary Education Act (U.S. Department of Education, 2010).

Given the increasingly competitive nature of the global economy, schools are expected to set higher expectations in academic achievement for all students. At the same time, schools are experiencing an unprecedented dropout crisis (Center for Labor Market Studies, 2009), in part due to a failure to engage students in learning opportunities that they find personally meaningful and relevant.

In addition, schools are dealing with the impact of an information technology revolution around the world, altering our lives on a daily basis, and challenging our education system to respond to the evolving demands of employers who expect more skill and sophistication from new hires. The old format of a teacher lecturing and students reading in a textbook is simply no longer sufficient to engage students, nor to prepare them for the real world.

The California Alliance is part of the Kennedy Center Alliance for Arts Education Network. Support for this publication was provided by the William and Flora Hewlett Foundation and the James Irvine Foundation.

Middle and high schools in California face ever-increasing demands from government, parents, and the public to provide a learning experience that prepares every student for a successful transition from school into the world, whether that means joining the workforce, continuing on to post-secondary education, or some combination of the two. Yet, "California is not succeeding in preparing students for ongoing education and employment in the twenty-first century" (CDE, 2009, p. 1). This is the context within which Career Technical Education (CTE) is gaining recognition as a strategy for preparing students for the jobs and opportunities that await them after high school.

Why does CTE matter to the California Alliance for Arts Education?

The California Alliance for Arts Education promotes, supports, and advocates Visual and Performing Arts (VAPA) education for preschool through post-secondary students in California schools, and believes that our schools must provide every student with a comprehensive, standards-based educational experience that encompasses all adopted courses of study. As detailed in this paper, several CTE sectors are rooted in the VAPA content standards and develop arts career capacities in students—the Alliance, therefore, has a vested interest. The interrelationship between VAPA and the arts-related sectors within CTE sparks questions within the education community about what this means in practical terms for California schools. For example:

- With the current budget crisis, how do districts and schools make decisions about the allocation of arts resources across VAPA and related CTE courses?
- Does an investment in CTE shortchange or deplete a school's commitment to more traditional arts education?
- Given the choice, do students find a course in game design, for example, more appealing than a course in advanced drawing or painting?
- If students lack a solid foundation of arts education in their K-8 experience, are they ready for high school CTE courses that demand and are built upon foundational knowledge and skills in the arts?

VAPA and CTE have been placed at odds in recent policy and program debates, creating an ***either/or*** perception that is unfounded and counterproductive. Through this either/or lens, the arts and career technical education are seen as distinct silos of knowledge and skills, and students are seen as either college bound or career bound.

Through the forum of this paper, we aim to articulate and advocate a more advantageous ***both/and*** perspective based on three key facts:

- There are fundamental standards common to ***both*** Visual and Performing Arts ***and*** Career Technical Education.
- Visual and Performing Arts and Career Technical Education are interwoven and complementary courses of study that afford students ***both*** content knowledge and the practical skills to apply that knowledge in a variety of academic ***and*** career contexts.
- Policies and programs that promote ***both*** Visual and Performing Arts ***and*** Career Technical Education give all students the best advantage in pursuing a broad range of post-secondary opportunities.

The purpose of this paper is to clarify the relationship between VAPA and CTE; to address some of the confusion and misunderstanding around the role that these subjects play in our education system; and to suggest a framework for policymaking that ensures the benefit to students is our highest priority.



both and

CURRENT CONTEXT

To frame the relationship between VAPA and CTE, it is helpful to understand the current context of these two subjects in California's education system.

About the Visual and Performing Arts

Visual and Performing Arts are considered a core academic subject in No Child Left Behind (NCLB, 2002, p. 1958), and are included in the state-adopted course of study in grades K-12. California's Visual and Performing Arts Content Standards were adopted in 2001 and augmented by the Visual and Performing Arts Framework in 2004. Together, these documents provide a blueprint for arts education in California public schools, and clearly define what every student should know and be able to do at each grade level in arts education. VAPA includes four disciplines (dance, music, theatre, and visual arts), and the standards for these disciplines at all grade levels are framed by five Component Strands: Artistic Perception; Creative Expression; Historical and Cultural Context; Aesthetic Valuing; and Connections, Relationships, and Applications.

The arts are a required course of study in California schools. However, student access to quality, standards-based arts instruction is highly

inconsistent (Woodworth, et al., 2007, p. 6). At the elementary level, arts instruction is intended to be provided by certificated educators (in compliance with NCLB guidelines for core subjects), but is also provided by non-credentialed teaching artists and volunteers. And although multiple subject teachers are considered "highly qualified" to teach the arts under the NCLB definition (NCLB, 2002, p. 1959-1960), California's elementary teachers have a history of inadequate pre-service preparation, in-service training, and instructional materials when it comes to teaching the arts (Guha et al., 2008; Powell, 2001; Woodworth, et al., 2007).

At the secondary level, NCLB also requires that the arts be taught by "highly qualified" teachers, that is, those certificated to teach dance, music, theatre, and visual arts. VAPA instruction typically takes place only at the school site, with offerings before, during, and/or after school. In addition to these core VAPA offerings, more advanced instruction and study in the arts takes place through Advanced Placement and International Baccalaureate programs throughout the state.

While the arts are an optional high school graduation requirement in California, students who wish to attend the University of California (UC) and California State University (CSU) are required to complete one yearlong, two-semester, sequential course in dance, music, theatre, or visual arts. For this reason, many districts and charter schools have adopted the UC/CSU admissions requirements, and provide access to a yearlong sequential course in at least one arts discipline for their students.

About Career Technical Education

In 2005, the California State Board of Education adopted the California Career Technical Education Model Curriculum Standards, followed by the adoption of the Career Technical Education Framework in 2007. These two documents define California's plan to prepare secondary students for careers that reflect and support the state and global economies.

At the first Career Technical Education summit in 2007, Governor Schwarzenegger said, "Career tech education addresses two very important issues. It fulfills the needs of the workforce, and also it fulfills the needs of the students by giving them multiple pathways to success." The goal of Career Technical Education, as stated in the 2008-2012 California State Plan for Career Technical Education is to "increase education and career options for all students through career awareness, exploration, and occupational training programs." Career technical courses and programs are designed to prepare students for careers, many of which require post-secondary study, in 15 Industry Sectors.

Within each Industry Sector are multiple Career Pathways that further specify the knowledge, skills, and understandings required to succeed in that field. Pathway standards "are concise statements that reflect the essential knowledge and skills students are expected to master to be successful in the career pathway" (CDE, 2005, p. viii). These standards are based upon existing career educational standards, academic content standards that relate to a particular industry, and the standards of quality that are established by specific industries.

CTE teachers can hold either a single-subject teaching credential or a specific CTE credential. The CTE credential requires a combination of professional experience and teacher preparation coursework in the industry sector they teach. Some controversy surrounds the overlap between CTE and VAPA courses and faculty on some high school campuses, as documented in a recent report on the designation of Career Technical Education courses (CDE, 2009a).

One of the major obstacles encountered by the researcher was trying to determine whether or

not a specific course was actually taught by a CTE teacher. In the areas of Agriculture Education and Home Economics Careers and Technology, courses are tracked by those disciplines within the CDE and, therefore, are by and large taught by CTE teachers. However, in the areas of Arts, Media and Entertainment, Business Education, Health Careers, Industrial and Technology Education, and other Industry Sectors, no such tracking occurs via course titles. (p. 2)

This lack of clarity in teaching assignments has generated concern that the "highly qualified" teacher requirements defined by NCLB are not consistently upheld when it comes to the arts.

Currently in California there are 71 Partnership Academies focused on the Arts, Media, and Entertainment Industry Sector. Located on high school campuses throughout the state, these academies offer courses designed to follow a sequence that builds the skills of the student from Introductory to Concentration to Capstone. By the end of the capstone course, the intention is that the student should have an exemplary portfolio of work to show.

A component of Career Technical Education designed to respond to the needs of students seeking training for specific jobs is the Regional Occupational Centers and Programs (ROCP). These programs respond to the specific needs of the regional job market and train students who intend to go directly to work in specific jobs. ROCP teachers come from the industry, with a minimum of five years of industry experience, and are expected to be familiar with not just content for a particular job, but also how that fits into the larger industry. One-third of these programs are located on high school campuses throughout the state. All ROCP classes must be approved by a local advisory board comprised of representatives of students, the community, industry, post-secondary education, and special populations.

Designation of Arts-Related Courses as VAPA or CTE

Because several CTE industry sectors have their roots in the arts, there can be confusion surrounding the classification of high school courses as VAPA or CTE, particularly in the Arts, Media, and Entertainment Sector. At a basic level, curriculum content determines whether an arts course is designated as VAPA or CTE. That being said, districts determine what code they will use within the California Basic Educational Data System (CBEDS) when submitting course data to the State.

District level administrators may also submit a given CTE course for UC/CSU approval as an A-G subject requirement for freshman admissions. A recent study reports that the percentage of CTE courses approved by UC/CSU has increased dramatically in the past 10 years from .8% to 32.4% (CDE, 2009a, p. 5). The following table shows the number of CTE courses from various industry sectors that were approved under the Visual and Performing Arts requirement in 2009-2010 (p. 7).

Significantly more CTE courses are approved under the Visual and Performing Arts "F" requirement than under any other A-G subject area, reinforcing the link between CTE and the arts (p. 7). Because courses are submitted individually in both the CBEDS and UC/CSU systems, it is not uncommon for arts-related courses with similar content to be designated differently from one district to another.

Finally, guidance counselors inform students about which district, UC/CSU, and State graduation requirements each course meets. In other words, the system is complex and, some argue, leaves room for inconsistent interpretation. ■

CTE COURSES APPROVED UNDER THE UC/CSU ARTS SUBJECT REQUIREMENT "F" (2009-2010)

COURSE CATEGORIES (WITH COURSE EXAMPLES)	# OF COURSES APPROVED
Agriculture Education Courses (Floral Design)	72
Business Education Courses (Advertising Design, Multimedia Communication Design, Portfolio Development)	32
Home Economics Careers and Technology Courses (Art and History of Fashion, Creative Design and Merchandising, Environmental Design)	54
Industrial and Technology Education Courses (Architectural Design, Furniture Design, Photojournalism)	193
Arts, Media, and Entertainment Courses (Stage Design and Lighting, Music Engineering, Visual Technology)	3,346
Total	3,697

SUMMARY TABLE OF EXISTING POLICIES AND INFRASTRUCTURE

	VAPA	CTE
STATE EDUCATION CODE	**51210:** Requires VAPA as an adopted course of study for grades 1-6. **51220:** Requires VAPA as an adopted course of study for grades 7-12. **51225.3:** Requires one yearlong course in VAPA or foreign language for high school graduation. **60605.1:** Calls for the adoption of VAPA content standards.	**51220:** Requires CTE as an adopted course of study for grades 7-12. **51225.3:** Allows local governing boards to adopt CTE among "other coursework requirements" for high school graduation. **51228(b):** Specifies that districts shall offer students a course of study that provides an opportunity for pupils to attain entry level employment skills in business and industry upon graduation from high school.
CONTENT STANDARDS & FRAMEWORKS	Standards Adopted: 2001 Framework Adopted: 2004 **4 Disciplines** Dance Music Theatre Visual Arts **5 Component Strands** 1.0 Artistic Perception 2.0 Creative Expression 3.0 Historical and Cultural Context 4.0 Aesthetic Valuing 5.0 Connections, Relationships, and Applications	Model Standards Adopted: 2005 Framework Adopted: 2007 **15 Industry Sectors** Agriculture and Natural Resources Arts, Media, and Entertainment Building Trades and Construction Education, Child Development, and Family Services Energy and Utilities Engineering and Design Fashion and Interior Design Finance and Business Health Science and Medical Technology Hospitality, Tourism, and Recreation Information Technology Manufacturing and Product Development Marketing, Sales, and Service Public Services Transportation **11 Foundation Standards** 1.0 Academics 2.0 Communications 3.0 Career Planning and Management 4.0 Technology 5.0 Problem Solving and Critical Thinking 6.0 Health and Safety 7.0 Responsibility and Flexibility 8.0 Ethics and Legal Responsibilities 9.0 Leadership and Teamwork 10.0 Technical Knowledge and Skills 11.0 Demonstration and Application Career Pathway Standards Specific to each of the 58 pathways within the 15 Industry Sectors *(above)*

SUMMARY TABLE OF EXISTING POLICIES AND INFRASTRUCTURE

	VAPA	CTE
HIGH SCHOOL GRADUATION REQUIREMENTS	Optional requirement at state level *(per Education Code Section 51225.3)*, but increasingly required by individual districts and charter schools to ensure that all students meet UC/CSU admissions requirements *(see below)*.	Not required at state level *(per Education Code Section 51225.3)*.
UC/CSU ADMISSIONS REQUIREMENTS (A-G COURSES)	F Course Requirement: A single, yearlong approved arts course from a single Visual and Performing Arts discipline: dance, drama/theatre, music, or visual art.	Some CTE courses are approved under the F Course Requirement *(defined at left)*. Some CTE courses are approved under the G Course Requirement: One year *(two semesters)*, in addition to those required in subjects A-F, chosen from the following areas: engineering, technology, visual and performing arts *(non-introductory–level courses)*, history, social science, English, advanced mathematics, laboratory science, and language other than English *(a third year in the language used for the E requirement or two years of another language)*.
MIDDLE AND HIGH SCHOOL TEACHER PREPARATION	Requires single-subject credential in Music, Visual Arts, English *(for Theatre)*, or Physical Education *(for Dance)*. All secondary VAPA teachers must meet the federal definition of "highly qualified teacher."	Requires single-subject credential in related subject, or CTE credential *(3 years' experience in the field during the past 10 years—demonstrating "maintained employment" and capability—plus 2 teacher preparation courses in subject, delivered through university or university extension)*. Not all CTE teachers meet the federal definition of "highly qualified teacher."
INFRASTRUCTURE AND DELIVERY SYSTEM	**Elementary School:** VAPA coursework taught by credentialed, non-credentialed, and volunteer educators. **Middle and High School:** VAPA courses typically taught by single-subject credentialed teachers, and sometimes by CTE teachers. VAPA instruction typically takes place on the school site.	Taught by single-subject or CTE credentialed teachers. **Middle School:** Career awareness and beginning exploration. **High School:** Career pathways, exploration, and beginning preparation. **Regional Occupational Centers and Programs:** Above, plus technical occupational and advanced technical training for specific jobs. **Workplace:** Paid, on-the-job training.



both and

A SHARED FOUNDATION

At their core, VAPA and several CTE sectors share common ground, encompassing knowledge, skills, and aptitudes that lay the foundation for post-secondary study and careers in the arts. In fact, the Visual and Performing Arts are integral to the CTE standards, from the Industry Sector level with regard to problem solving, critical thinking, and arts-specific academics, to the Career Pathway level, where dance, music, theatre, and visual arts standards are widely represented. This body of shared knowledge, skills, and understandings are at the heart of the both/and argument.

Foundation Level Connection

Foundation Standard 5.0: Problem Solving and Critical Thinking is a strand that runs through every industry sector and career pathway of the CTE standards (CDE, 2005).

- 5.0 Students understand how to create alternative solutions by using critical and creative thinking skills such as logical reasoning, analytical thinking, and problem-solving techniques:

- 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
- 5.2 Understand the systematic problem-solving models that incorporate input, outcome, and feedback components.
- 5.3 Use critical thinking skills to make informed decisions and solve problems.

A significant and growing body of research in neuroscience and education supports the strong relationship between arts learning and the kinds of problem-solving and critical-thinking skills presented in CTE Standard 5.0 (Damasio & Damasio, 2006; Deasy, 2002; Eisner, 2004; Gazzaniga, et al., 2009).

For example, a team from Harvard's Project Zero set out to study and articulate the cognitive skills that are promoted through high-quality visual arts learning experiences, presented in the book Studio Thinking (Hetland, et al., 2007). The following eight habits of mind were observed:

- Learning to develop craft: using art tools, materials, and concepts
- Learning to engage and persist: committing and following through
- Learning to envision: planning beyond seeing
- Learning to express: finding personal visions
- Learning to observe: seeing beyond the ordinary
- Learning to reflect: thinking metacognitively
- Learning to stretch and explore: beyond the familiar
- Learning to understand the artists' worlds: navigating domain and field

Students with a strong standards-based K-12 education in the Visual and Performing Arts would have an incoming advantage in further developing and applying these cognitive skills in the CTE context.

Industry–Sector Level Connections

Five of the 15 CTE industry sectors explicitly include VAPA standards in their Foundation standards. This translates to 18 individual CTE career pathways in which students are expected to master VAPA knowledge and skills. As part of the CTE Foundation Standards, these arts standards are not merely related to CTE, they actually help form the basis of student learning across all career pathways within each industry sector. For example, the introduction of the Arts, Media, and Entertainment Industry Sector states:

Core arts sector occupations demand constantly varying combinations of artistic imagination, metaphoric representation, symbolic connections, and technical skills. Successful career preparation involves both in-depth and broad academic preparation as well as the cultivation of such intangible assets as flexibility, problem-solving abilities, and interpersonal skills…. The foundation and pathway standards make explicit the appropriate knowledge, skills, and practical experience students should have to pursue their chosen profession through whatever course of postsecondary, collegiate, and graduate training or apprenticeship it may require. (CDE, 2005, p. 38)

The following table lists the specific VAPA standards that have been adopted within the CTE standards.

VISUAL AND PERFORMING ARTS STANDARDS IN CAREER TECHNICAL EDUCATION

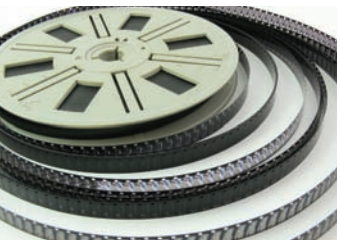
CTE SECTORS AND PATHWAYS	FOUNDATION STANDARDS FROM VAPA
Arts, Media, and Entertainment ■ Media and Design Arts ■ Performing Arts ■ Production and Managerial Arts	**Proficient:** Dance 4.1 **Advanced:** Dance 5.3; Music 5.1; Theatre 4.2, 5.3; Visual Arts 5.2, 5.3
Building Trades and Construction ■ Cabinetmaking and Wood Products ■ Engineering and Heavy Construction ■ Mechanical Construction ■ Residential and Commercial Construction	**Proficient:** Visual Arts 1.4, 1.5, 2.1, 2.6 **Advanced:** Visual Arts 2.1, 2.2, 4.6
Engineering and Design ■ Architectural and Structural Engineering ■ Computer Hardware, Electrical, and Networking Engineering ■ Engineering Design ■ Engineering Technology ■ Environmental and Natural Science Engineering	**Advanced:** Visual Arts 1.1, 1.3, 1.7, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 4.3, 4.6, 5.1, 5.3
Fashion and Interior Design ■ Fashion Design, Manufacturing, and Merchandising ■ Interior Design, Furnishings, and Maintenance	**Proficient:** Visual Arts 1.1, 1.2, 1.3, 2.1, 3.1, 3.3, 4.1, 5.2 **Advanced:** Visual Arts 1.1, 1.6, 2.2, 2.3, 2.4, 3.1, 3.2, 3.3, 5.3
Manufacturing and Product Development ■ Graphic Arts Technology ■ Integrated Graphics Technology ■ Machine Forming Technology ■ Welding Technology	**Proficient:** Visual Arts 2.3 **Advanced:** Visual Arts 5.3

It is important to note that this correlation is not accidental, but rather was the result of deliberate, insightful, and forward-thinking collaboration between the VAPA and CTE divisions of the California Department of Education during the development of the model standards for CTE.

Career Pathway Level Connections

In addition to the industry sector–level foundation standards listed in the table above, the career pathway–level standards for Media and Design Arts and Performing Arts draw heavily upon the existing VAPA standards in dance, music, theatre, and visual arts. As noted earlier, there was a deliberate and meaningful effort to identify and apply existing VAPA standards within the CTE standards as appropriate for learning and instruction in this particular career pathway. The standards within the individual Fashion Design and Interior Design career pathways, while not specifically "cut and pasted" from the VAPA standards, do clearly overlap with the Visual Arts standards with regard to student understanding and application of the elements and principles of design (CDE, 2005, p. 180 and 183).

These clear VAPA connections at the foundation, industry, and career levels of the CTE standards reinforce the ***both/and*** relationship of these subjects in the curriculum.

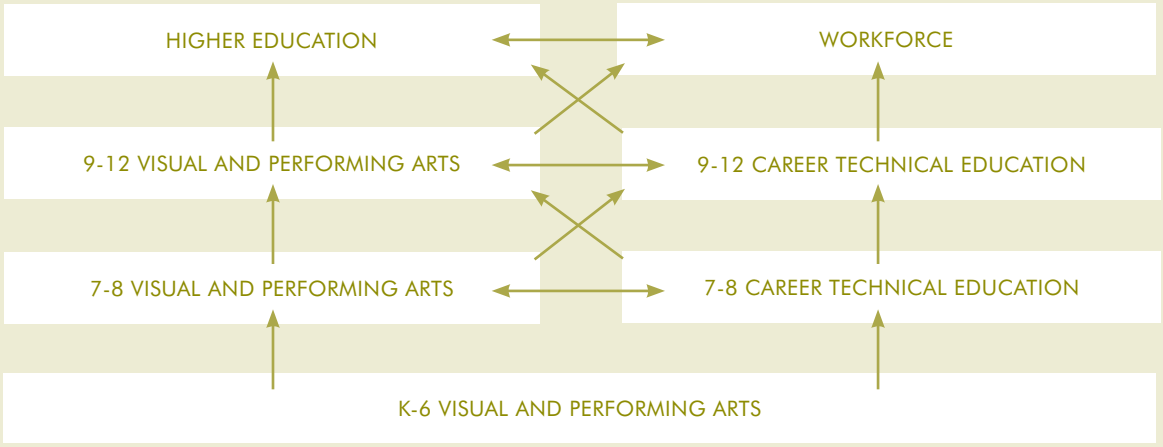


both and

INTERRELATIONSHIP OF VAPA AND CTE

It is imperative to identify a key underlying assumption of the Career Technical Education standards: By establishing that the academic foundation of multiple CTE sectors requires proficient and advanced work in the arts, the assumption is made that incoming CTE students already have achieved the K-8 standards in the Visual and Performing Arts. It is important to point out that K-8 VAPA instruction is clearly not being delivered in accordance with the adopted standards and framework, in terms of quality, equity, or access (CAAE, 2005; CDE, 2004; Woodworth, et al., 2007). Success in CTE is, therefore, contingent upon a foundation of high-quality standards-based VAPA instruction in elementary and middle school that does not yet exist. In policy and budget debates, CTE cannot logically be pitted against the arts and expect to meet its own goals. The following diagram illustrates the relationship of VAPA and CTE, and their interwoven academic and career paths.

INTERRELATIONSHIP OF VAPA AND CTE



For many students, the benefits of arts education have an indirect but significant impact on both the careers they choose and the direction of their lives. Arts education cultivates inquisitive thinking, social and collaborative capacity, discipline, and self-motivation—all skills that are considered essential by today's workforce standards. Ideally building upon a solid K-12 foundation in the Visual and Performing Arts, Career Technical Education plays a vital role in providing the specialized skills and training arts students may require in pursuing their choice of careers.

The Alliance is not the only education stakeholder making the case for ***both/and***. In its Multiple Pathways to Student Success report (2009), the California Department of Education asserts that:

Given the earning limitations of students without some education or training beyond high school, it is important that pathways be designed to ensure that all…students have curriculum choices that will prepare them with the knowledge and skills necessary for successful career entry immediately after high school—***and***—successful participation in, and completion of, education after high school. (Emphasis in the original, CDE, 2009b, p. 8)

Waiting at the end of these pathways, for many students, is California's creative sector. In Los Angeles County alone, "nearly 1 million direct and indirect jobs—one in every six in the area" is considered part of the creative economy (Kyser, et al., 2009). Cities throughout California are cited as hubs for the emerging "creative class" of professionals (Florida, 2003). Further, the skills and aptitudes generated through arts learning are well-aligned with the current and future workforce demands of the global economy (Cheng, 2004; Pink, 2006). In light of the cumulative political, educational, and socioeconomic factors influencing California schools, as well as the interrelationship of VAPA and CTE as highlighted in this paper, the ***both/and*** approach serves the best interests of California's students.

both}
and}

PRINCIPLES FOR FUTURE POLICY

As we move forward with a clearer understanding of the roles that both VAPA and CTE play in preparing our students for a range of opportunities, the California Alliance for Arts Education recommends the following framework of principles to guide state and local policymaking:

The needs of the students are paramount.

Our primary responsibility is to ensure that all policy decisions are based upon what most benefits the education and development of students—what increases their knowledge, skills, capacities, and opportunities in and beyond school.

The immediate goal is to deepen and expand student knowledge.

Courses in the Visual and Performing Arts must be strengthened and expanded so that all students have a sequential pathway to deepen their knowledge and skills, not just an isolated elective course. All secondary courses would be well-served by integrating the core values of Career Technical Education, and by helping students gain the knowledge and skills they need in order to succeed in the real world.

The ultimate goal is to maximize post-secondary opportunities for students.

The education system must allow for flexibility in meeting student needs and cultivating their interests, and should not limit student options or trap them within a career focus that minimizes choice. Secondary education should prepare students to apply their arts knowledge, skills, and capacities in a variety of ways after high school, whether through higher education or the workforce.

K-12 arts learning must be realized as fundamental to success in both higher education and careers.

In order for all students to experience the full benefit of the learning in and through the arts, VAPA must be realized as a core subject in the educational system and should not be isolated from the rest of the educational experience. As evidenced by the content standards and frameworks for both subjects, the arts are not merely related to Career Technical Education, they are essentially a prerequisite for success in five Industry Sectors and 18 Career Pathways.

The California Alliance for Arts Education believes that quality education cannot be achieved through an ***either/or*** approach. Quality education—learning that inspires, expands, and fulfills the academic and career potential of all students—is rooted in policies and practices that grow from a fundamental belief in the power of ***both/and***.

REFERENCES

California Alliance for Arts Education. (2005). *Quality, equity, and access: A status report on arts education in California public schools grades preK-12.* Pasadena, CA: California Alliance for Arts Education.

California Department of Education. (2004). *Visual and performing arts framework for California public schools: Kindergarten through grade twelve.* Sacramento: California Department of Education.

California Department of Education. (2005). *California career technical education model curriculum standards: Grades seven through twelve.* Sacramento: California Department of Education.

California Department of Education. (2007). *Career technical education framework for California public schools: Grades seven through twelve.* Sacramento: California Department of Education.

California Department of Education. (2009a). *California high school Career Technical Education courses meeting University of California "a-g" admission requirements for 2009-10.* Sacramento: California Department of Education.

California Department of Education. (2009b). *Multiple pathways to success: Envisioning the new California high school (Executive summary).* Sacramento: California Department of Education.

California Education Code §§ 51210, 51220, 51225.3, 51228(b), and 60605.1. Retrieved April 2010 from: http://www.leginfo.ca.gov/calaw.html.

Center for Labor Market Studies. (2009). *Left behind in America: The nation's dropout crisis.* Boston: Center for Labor Market Studies.

Cheng, K. M. (2004). Arts in education for a knowledge society. In Ellie Meleisea (Ed.). *Educating for Creativity: Bringing Arts and Culture into Asian Education.* Report of the UNESCO Asian Regional Symposia on Arts Education. January 9-11, 2004: Measuring the Impact of Arts in Education, Hong Kong SAR, China, p. 30-33.

Damasio, A., and Damasio, H. (2006, March). *Brain, art, and education.* Keynote address presented at the UNESCO First World Conference on Arts Education, Lisbon, Portugal.

Deasy, R. J. (2002). L*earning in the arts and student academic and social development.* Washington, D.C.: Arts Education Partnership.

Eisner, E. W. (2004, October 14). What can education learn from the arts about the practice of education? *International Journal of Education & the Arts, 5(4).* Retrieved May 14, 2010, from http://ijea.asu.edu/v5n4/.

Florida, R. (2003). *The rise of the creative class: And how it's transforming work, leisure, community and everyday life.* New York: Basic Books.

Gazzaniga, M., Asbury, C., and Rich, B. (Eds.). (2008). *Learning, arts, and the brain.* New York: Dana Press.

Guha, R., Woodworth, K.R., Kim, D., Malin, H., & Park, J. (2008). *An unfinished canvas. Teacher preparation, instructional delivery, and professional development in the arts.* Menlo Park, CA: SRI International.

Hetland, L., Winner, E., Veenema, S., and Sheridan, K. M. (2007). Studio thinking: *The real benefits of visual arts education.* New York: Teachers College Press.

Kyser, J., Sidhu, N. D., Ritter, K., Guerra, F. and Poghosyan, M. (2009). *Otis report on the creative economy of the Los Angeles region.* Los Angeles: Los Angeles County Economic Development Corporation.

No Child Left Behind Act of 2001. 20 U.S.C. § 6301 (2002).

Pink, D. K. (2006). *A whole new mind: Why right-brainers will rule the future.* New York: Penguin Group.

Powell, D. L. (2001). Relationships among elementary generalist teachers' experiences, beliefs, and practices in visual arts education. Doctoral dissertation, University of San Francisco. (UMI No. 3030218)

United States Department of Education (2010). *A Blueprint for Reform: Reauthorization of the Elementary and Secondary Education Act.* Accessed May 9, 2010: http://www2.ed.gov/policy/elsec/leg/blueprint/index.html.

University of California Office of the President (2010). Undergraduate Admissions, Required A-G Courses. Retrieved April 2010 from: http://www.universityofcalifornia.edu/admissions/undergrad_adm/paths_to_adm/freshman/subject_reqs.html.

Woodworth, K. R., Gallagher, H. A., & Guha, R. (2007). *An unfinished canvas. Arts education in California: Taking stock of policies and practices. Summary Report.* Menlo Park, CA: SRI International.

Suggested Citation:
Landon, J., and Powell Russell, D. L. (2010). Both/and: Understanding the vital link between the arts and career technical education in California schools. Pasadena, CA: California Alliance for Arts Education.

CALIFORNIA ALLIANCE FOR ARTS EDUCATION

ACKNOWLEDGEMENTS

AUTHORS
Joe Landon
Policy Director
California Alliance for Arts Education

Dana Powell Russell, Ed.D.
Consultant
www.danapowell.org

ADVISORS
Kristine Alexander
Executive Director
The California Arts Project

Jack Mitchell
Arts, Media, and Entertainment Consultant
California Department of Education

Laurie T. Schell
Executive Director
California Alliance for Arts Education

Mark Slavkin
Vice President for Education
Music Center/
Performing Arts Center of Los Angeles County

Anne B. Stanton
Program Director, Youth
The James Irvine Foundation

Susan Wuerer
President
California Art Education Association

DESIGNER
Ronni Kass
www.o2sf.com

STAFF
Laurie T. Schell
Executive Director

Joe Landon
Policy Director

Sibyl O'Malley
Communications Manager

Lynn Grimm
Office Administrator

BOARD OF DIRECTORS
Tom DeCaigny
Executive Director
Performing Arts Workshop
San Francisco, CA

Ed Honowitz
School Board Member
Pasadena Unified School District
Pasadena, CA

Rebecca Hawley-Cooper
Program Supervisor, Early Head Start
Department of Human Services, City of Oakland
Oakland, CA

Suzanne Isken
Director of Education
Museum of Contemporary Art
Los Angeles, CA

Leslie Johnson
Director, Education & Outreach
Center Theatre Group
Los Angeles, CA

Carol Kocivar
President Elect
California State PTA
San Francisco, CA

Sarah Murr
Global Corporate Citizenship, Community Investor
The Boeing Company
Seal Beach, CA

Frances Phillips
Senior Program Officer
Walter & Elise Haas Fund
San Francisco, CA

Mark Slavkin
Vice President for Education
Music Center/
Performing Arts Center of Los Angeles County
Los Angeles, CA

Jim Thomas
Coordinator, Visual and Performing Arts
Orange County Department of Education
Costa Mesa, CA

CALIFORNIA ALLIANCE FOR ARTS EDUCATION

495 E. Colorado Blvd., Pasadena, CA 91101 ■ 626-578-9315
caae@artsed411.org ■ www.artsed411.org
http://twitter.com/artsed411 ■ http://www.facebook.com/ArtsEd411