



Research-Based Communication

TOOL KIT

Introduction and Table of Contents

Return to [Tool kit home page](#)

Sherry Brown, Rhode Island

Mary Campbell-Zopf, Ohio

Jeffrey Hooper, Ohio

David Marshall, Massachusetts

Beck McLaughlin, Montana

JANUARY 2007

DEAR MANAGERS OF STATE ARTS AGENCY EDUCATION PROGRAMS:

Increasingly, scientifically-based research findings are becoming the basis for our policy and program decisions and a centerpiece in our efforts to persuade and educate a number of different publics regarding the importance for children and youth of learning in and through the arts. Knowing that state arts agency education managers often do not have the luxury of time to locate and review pages of research before making a decision or creating various advocacy communications, we hope that you will find the enclosed Tool Kit helpful in your work.

This Tool Kit is meant to provide a research and communications framework that can be used quickly and effectively. State arts agency education managers from around the country have used the research and talking points outlined here to create a variety of examples of research-based communications. This diverse sampling illustrates how we can use the same research to address various policy issues, depending on the values of the community and the particular issues we are addressing.

If you wish to read further about how this Tool Kit came to be, or want further help with incorporating research into your work, we suggest reading “*An Introduction to Scientifically-Based Research*,” a monograph commissioned by the National Endowment for the Arts and National Assembly of State Arts Agencies and co-authored by Debra Ingram and Michael Sikes. The monograph was part of a professional development initiative to help us as arts education managers meet the ever increasing demands of our work. Reflection on that publication led to this Tool Kit. The monograph is a wonderful companion piece to the Tool Kit, and we urge you to review it if you find yourself needing to use research on a regular basis and/or wishing to renew your skills in using research effectively.

For feedback on the Tool Kit, please contact: Mary Campbell-Zopf or Sherry Brown. We would love to know in what ways it supported you, our valuable peer, in the work we all share. We also would welcome suggestions for improvement.

THE RESEARCH-BASED COMMUNICATIONS WORKING GROUP

Sherry Brown, Rhode Island Arts Council

Mary Campbell-Zopf, Ohio Arts Council

Camillia El-Entably, Wyoming Arts Council

Jeffrey Hooper, Ohio Arts Council

David Marshall, Massachusetts Cultural Council

Beck McLaughlin, Montana Arts Council

Sharon Morgan, Oregon Alliance for Arts Education

Table of Contents

Introduction..... 1

Section I

The Arts and the Creative Workforce 3

Information Sheet

The Arts and the Creative Workforce 4

Annotated Bibliography

The Arts and the Creative Workforce 5

Samples

The Arts and the Creative Workforce 9

 Short Newsletter Articles 9

 Letter to the Editor
 (tailored to a local context) 10

 Article for a State Context 11

 Making the Case in Wyoming 15

 Testimony to Legislators 15

 Short Advocacy Piece 16

 Workforce Skills and the Arts 18

 Making a Case for the Arts and
 Workforce Development..... 49

Arts Facts to Go

The Arts and the Creative Workforce 50

Section II

The Arts and Literacy Development..... 51

Information Sheet

The Arts and Literacy Development 53

Annotated Bibliography

The Arts and Literacy Development 54

Samples

The Arts and Literacy Development

 Brief Newsletter Article 58

 Article for Parent or Citizen Newsletter 59

Arts Facts to Go

The Arts and Literacy Development 60

Section III

The Arts, Cognition, and Social Development..... 61

Information Sheet

The Arts, Cognition, and Social Development 63

Annotated Bibliography

The Arts, Cognition, and Social Development 65

Samples

The Arts, Cognition, and Social Development 70

 Newsletter Article 70

 Letter to the Superintendent..... 70

 Testimony to Legislators 73

Arts Facts to Go –

The Arts, Cognition, and Social Development 75

Introduction

Significant research over the last decade has built a strong case for the value of arts learning. Major summaries, including *Schools, Communities, and the Arts* (1995); *Champions of Change* (2000); *The Arts in Education: Evaluating the Evidence for a Causal Link* (2000); *Critical Links* (2002); and now *Critical Evidence: How the Arts Benefit Student Achievement* (2006), have focused serious attention on researchable questions regarding arts learning. These summaries represent a mass of incremental evidence confirming that the arts develop valuable, even essential intellectual and academic skills, as well as other positive attributes. Some of those summaries, along with the works of individual scholars, also have provoked controversy about what we know—actually a healthy sign in any discipline.

Daily, arts administrators at the state and local levels must make sense of and apply research to their work. Several years ago, the NASAA Arts Education Advisory Committee identified a common interest in learning more about scientific research and its influence on educational policy, which led to the development of the monograph *An Introduction to Scientifically-Based Research*.¹ Following publication of the monograph, the Advisory Committee decided to explore how to disseminate information based on the ever-increasing body of research related to arts learning.

To accomplish this task, the Monograph Extension Sub-Committee was formed and charged with developing several concrete advocacy examples based on the information found in a section of the monograph “*Disseminating Research: A Planning Guide*.”

This Tool Kit brings together several components that advocates at state and local levels can use in crafting individualized messages for specific audiences and local contexts. Components are research-based, drawing on careful reviews and analyses of research literature that confirm, explain, and clarify the role of the arts in various significant policy contexts. The materials in the Tool Kit are meant to be “boilerplate” to some extent so that arts advocates can adapt them to their contexts and needs, quickly creating targeted, personalized advocacy messages. For instance, SAA professionals will find it easy to add relevant state arts data from grant-making and state education initiatives.

KEY AREAS OF EMPHASIS

Based on responses from the Arts Education Advisory Committee, the Sub-Committee for Monograph Extension outlined a basic format that can be re-used for various topics. The current emphasis, based on widespread interest and relevance to policy discussions, consists of the following policy areas:

- The arts and the creative workforce
- The arts and literacy development
- The arts, cognition, and social development

Future versions of the Tool Kit will explore additional policy areas, based upon expressed needs of stakeholders.

¹ Ingram, D. & Sikes, M. (2005). *An introduction to scientifically-based research*. Washington, D.C.: National Assembly of State Arts Agencies. http://www.nasaa-arts.org/publications/arts_ed_monograph.pdf

Explanation of Components

Each section of the Tool Kit consists of four major components.

An Information Sheet

The Information Sheet is a set of bulleted talking points that provides the raw material for crafting targeted messages to identified stakeholders.

An Annotated Bibliography

The Annotated Bibliography reflects the substantive and scholarly data base from which the Information Sheet is drawn. Each bibliography was designed to be a representative sample of recent and current research findings. The Ohio Arts Council developed each bibliography in partnership with interns from The Ohio State University and with guidance from the Sub-Committee for Monograph Extension and education consultant Michael Sikes. National-level research scholars have reviewed the bibliography for representation, inclusion, and balance.

Each bibliography draws from a variety of sources, including:

- Research compilations, such as *Critical Evidence: How the Arts Benefit Student Achievement, Champions of Change, and Critical Links*
- Original research from peer reviewed publications, including books from mainstream educational publishers (Association for Supervision and Curriculum Development, Jossey-Bass, Teachers College Press, etc.) and journals published by major educational or research organizations (e.g., *Studies in Art Education from the National Art Education Association and Educational Leadership* from ASCD)
- Advocacy and policy documents that reflect and are based on research
- Press coverage that summarizes research

Sample Messages

Sample Messages derived from the Information Sheet and the Annotated Bibliography and presented in different formats that target particular audiences or contexts: a press release, a newsletter article, a letter to the editor, etc. Arts advocates can personalize these messages for their specific contexts and audiences.

Art Facts to Go

Concise statements about the value of arts learning to carry with you.





Research-Based Communication

TOOL KIT

Introduction and Table of Contents

Return to [Tool kit home page](#)

Sherry Brown, Rhode Island

Mary Campbell-Zopf, Ohio

Jeffrey Hooper, Ohio

David Marshall, Massachusetts

Beck McLaughlin, Montana

JANUARY 2007

DEAR MANAGERS OF STATE ARTS AGENCY EDUCATION PROGRAMS:

Increasingly, scientifically-based research findings are becoming the basis for our policy and program decisions and a centerpiece in our efforts to persuade and educate a number of different publics regarding the importance for children and youth of learning in and through the arts. Knowing that state arts agency education managers often do not have the luxury of time to locate and review pages of research before making a decision or creating various advocacy communications, we hope that you will find the enclosed Tool Kit helpful in your work.

This Tool Kit is meant to provide a research and communications framework that can be used quickly and effectively. State arts agency education managers from around the country have used the research and talking points outlined here to create a variety of examples of research-based communications. This diverse sampling illustrates how we can use the same research to address various policy issues, depending on the values of the community and the particular issues we are addressing.

If you wish to read further about how this Tool Kit came to be, or want further help with incorporating research into your work, we suggest reading “*An Introduction to Scientifically-Based Research*,” a monograph commissioned by the National Endowment for the Arts and National Assembly of State Arts Agencies and co-authored by Debra Ingram and Michael Sikes. The monograph was part of a professional development initiative to help us as arts education managers meet the ever increasing demands of our work. Reflection on that publication led to this Tool Kit. The monograph is a wonderful companion piece to the Tool Kit, and we urge you to review it if you find yourself needing to use research on a regular basis and/or wishing to renew your skills in using research effectively.

For feedback on the Tool Kit, please contact: Mary Campbell-Zopf or Sherry Brown. We would love to know in what ways it supported you, our valuable peer, in the work we all share. We also would welcome suggestions for improvement.

THE RESEARCH-BASED COMMUNICATIONS WORKING GROUP

Sherry Brown, Rhode Island Arts Council

Mary Campbell-Zopf, Ohio Arts Council

Camillia El-Entably, Wyoming Arts Council

Jeffrey Hooper, Ohio Arts Council

David Marshall, Massachusetts Cultural Council

Beck McLaughlin, Montana Arts Council

Sharon Morgan, Oregon Alliance for Arts Education

Table of Contents

Introduction..... 1

Section I

The Arts and the Creative Workforce 3

Information Sheet

The Arts and the Creative Workforce 4

Annotated Bibliography

The Arts and the Creative Workforce 5

Samples

The Arts and the Creative Workforce 9

 Short Newsletter Articles 9

 Letter to the Editor
 (tailored to a local context) 10

 Article for a State Context 11

 Making the Case in Wyoming 15

 Testimony to Legislators 15

 Short Advocacy Piece 16

 Workforce Skills and the Arts 18

 Making a Case for the Arts and
 Workforce Development..... 49

Arts Facts to Go

The Arts and the Creative Workforce 50

Section II

The Arts and Literacy Development..... 51

Information Sheet

The Arts and Literacy Development 53

Annotated Bibliography

The Arts and Literacy Development 54

Samples

The Arts and Literacy Development

 Brief Newsletter Article 58

 Article for Parent or Citizen Newsletter 59

Arts Facts to Go

The Arts and Literacy Development 60

Section III

The Arts, Cognition, and Social Development..... 61

Information Sheet

The Arts, Cognition, and Social Development 63

Annotated Bibliography

The Arts, Cognition, and Social Development 65

Samples

The Arts, Cognition, and Social Development 70

 Newsletter Article 70

 Letter to the Superintendent..... 70

 Testimony to Legislators 73

Arts Facts to Go –

The Arts, Cognition, and Social Development 75

Introduction

Significant research over the last decade has built a strong case for the value of arts learning. Major summaries, including *Schools, Communities, and the Arts* (1995); *Champions of Change* (2000); *The Arts in Education: Evaluating the Evidence for a Causal Link* (2000); *Critical Links* (2002); and now *Critical Evidence: How the Arts Benefit Student Achievement* (2006), have focused serious attention on researchable questions regarding arts learning. These summaries represent a mass of incremental evidence confirming that the arts develop valuable, even essential intellectual and academic skills, as well as other positive attributes. Some of those summaries, along with the works of individual scholars, also have provoked controversy about what we know—actually a healthy sign in any discipline.

Daily, arts administrators at the state and local levels must make sense of and apply research to their work. Several years ago, the NASAA Arts Education Advisory Committee identified a common interest in learning more about scientific research and its influence on educational policy, which led to the development of the monograph *An Introduction to Scientifically-Based Research*.¹ Following publication of the monograph, the Advisory Committee decided to explore how to disseminate information based on the ever-increasing body of research related to arts learning.

To accomplish this task, the Monograph Extension Sub-Committee was formed and charged with developing several concrete advocacy examples based on the information found in a section of the monograph “*Disseminating Research: A Planning Guide*.”

This Tool Kit brings together several components that advocates at state and local levels can use in crafting individualized messages for specific audiences and local contexts. Components are research-based, drawing on careful reviews and analyses of research literature that confirm, explain, and clarify the role of the arts in various significant policy contexts. The materials in the Tool Kit are meant to be “boilerplate” to some extent so that arts advocates can adapt them to their contexts and needs, quickly creating targeted, personalized advocacy messages. For instance, SAA professionals will find it easy to add relevant state arts data from grant-making and state education initiatives.

KEY AREAS OF EMPHASIS

Based on responses from the Arts Education Advisory Committee, the Sub-Committee for Monograph Extension outlined a basic format that can be re-used for various topics. The current emphasis, based on widespread interest and relevance to policy discussions, consists of the following policy areas:

- The arts and the creative workforce
- The arts and literacy development
- The arts, cognition, and social development

Future versions of the Tool Kit will explore additional policy areas, based upon expressed needs of stakeholders.

¹ Ingram, D. & Sikes, M. (2005). *An introduction to scientifically-based research*. Washington, D.C.: National Assembly of State Arts Agencies. http://www.nasaa-arts.org/publications/arts_ed_monograph.pdf

Explanation of Components

Each section of the Tool Kit consists of four major components.

An Information Sheet

The Information Sheet is a set of bulleted talking points that provides the raw material for crafting targeted messages to identified stakeholders.

An Annotated Bibliography

The Annotated Bibliography reflects the substantive and scholarly data base from which the Information Sheet is drawn. Each bibliography was designed to be a representative sample of recent and current research findings. The Ohio Arts Council developed each bibliography in partnership with interns from The Ohio State University and with guidance from the Sub-Committee for Monograph Extension and education consultant Michael Sikes. National-level research scholars have reviewed the bibliography for representation, inclusion, and balance.

Each bibliography draws from a variety of sources, including:

- Research compilations, such as *Critical Evidence: How the Arts Benefit Student Achievement*, *Champions of Change*, and *Critical Links*
- Original research from peer reviewed publications, including books from mainstream educational publishers (Association for Supervision and Curriculum Development, Jossey-Bass, Teachers College Press, etc.) and journals published by major educational or research organizations (e.g., *Studies in Art Education from the National Art Education Association* and *Educational Leadership* from ASCD)
- Advocacy and policy documents that reflect and are based on research
- Press coverage that summarizes research

Sample Messages

Sample Messages derived from the Information Sheet and the Annotated Bibliography and presented in different formats that target particular audiences or contexts: a press release, a newsletter article, a letter to the editor, etc. Arts advocates can personalize these messages for their specific contexts and audiences.

Art Facts to Go

Concise statements about the value of arts learning to carry with you.





Research-Based Communication

TOOL KIT

Section I

Return to [Arts & Learning home page](#)

Return to [Tool kit home page](#)

Sherry Brown, Rhode Island

Mary Campbell-Zopf, Ohio

Camillia El-Entably, Wyoming

Jeffrey Hooper, Ohio

David Marshall, Massachusetts

Beck McLaughlin, Montana

Sharon Morgan, Oregon



SECTION

I

The Arts and the Creative Workforce

In a global economy that is driven by knowledge and ideas, arts education belongs at the forefront.

Increasingly:

- Creative industries are growing rapidly in number and playing a powerful economic and social role.
- The best paying jobs require workers with creativity and higher order thinking and communication skills.
- American businesses follow the creative workforce when seeking locations.
- Nations that have been focusing on increasing their ranks of scientists and engineers are now seeking ways for schools to foster greater innovation and creativity.

Return to [Arts & Learning home page](#)

Return to [Tool kit home page](#)

Information Sheet – The Arts and the Creative Workforce

- Arts education develops the precise set of skills that are most competitive in the emerging global economy. Students who engage in high-quality arts learning will have an advantage in competing for high-paying jobs in growth industries.
 - According to Sir Ken Robinson, economic progress requires “education that values different modes of intelligence and sees relationships between disciplines.” To achieve this requires a different balance of priorities between the arts, sciences, and humanities in education and in the forms of thinking they promote.”
 - Research has shown that companies will choose to move to a state or region because of the creativity of its workers. As Chief Executive Officer of Bath and Body Works Neil Fiske states, “economic development and success is about competing for talent People no longer follow jobs—instead they move to the most livable places, and jobs and companies follow them.” John D. Ong, chairman emeritus of the BF Goodrich Company states, “People who create in our companies – whether they be scientists, marketing experts or business strategists – benefit from exposure to the arts.”
 - Today’s knowledge-based economy requires workers who can think creatively, solve problems, exercise individual responsibility, and interact effectively with others. Sociability and high self-esteem are key components of these abilities. These workforce skills are nurtured through an education in the arts. Governor Mike Huckabee, who also was Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige both have asserted that the arts are a vital part of developing workforce skills. According to Huckabee, “The future ability of our economy and this country will be based on the fact that we have students who are able to be more creative with what they’ve learned than anyone else.”
- 
- A photograph showing a person in a bright yellow raincoat and a grey bucket hat, holding a large bouquet of red flowers. They are standing in a field of green plants with red flowers. In the background, other people in yellow raincoats are visible, suggesting a group activity or harvest in a field.
- A 2001 survey of 6,000 executives, conducted by researchers from McKinsey & Company, revealed that of all the challenges businesses will face in the future, one of their greatest concerns is finding employees able to “make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change.”
 - Communities that want to remain economically strong should strive for a high level of arts learning.

Annotated Bibliography – The Arts and the Creative Workforce

-
- 1) Abeles, H., Burton, J.M. & Horowitz, R. (2000). Learning in and through the arts: The question of transfer. *Studies in Art Education*, 41(3), 228-257.

Investigates a constellation of complex ways of thinking connected to arts learning and finds that students who have experiences in the arts improve on measures of several dimensions of creativity, including elaborative and creative thinking, fluency, originality, focused perception, imagination, assuming multiple perspectives, and understanding.

-
- 2) Americans for the Arts. (2005). *Creative industries: Business and employment in the arts*. Washington, DC: Americans for the Arts.

http://www.americansforthearts.org/information_resources/research_information/services/creative_industries/default.asp

Reports growth in creative industries by state.

-
- 3) Armstrong, K. (2000). *The war for talent: Department of Defense and private sector battle for survival*. McKinsey & Company, LLP.

<http://www.ndu.edu/sdcfp/McKinseyReport.doc>

Discusses a survey in which 6,000 executives were asked about the challenges of attracting, recruiting and retaining top talent. Discusses demands of the new economy for workers who are flexible and able to adapt quickly.

-
- 4) Birch, T.L. (2002). The arts in public policy: An advocacy agenda. *The NASAA Advocate*, 6(1).

http://www.nasaa-arts.org/publications/advocate_policy.pdf

Examines the impact of the arts on education, youth at risk, business, tourism, and economic development, noting that participation in the arts leads to the development of skills needed to compete in today's marketplace. Cites America's creative industries, which account for over \$60 billion annually in overseas sales, as its leading source of exports.

-
- 5) Catterall, J., Chapleau, R. & Iwanaga, J. (1999). Involvement in the arts and human development: General involvement and intensive involvement in music and theatre arts. In E.B. Fiske (Ed.), *Champions of change: The impact of the arts on learning*. Washington, DC: Arts Education Partnership and the President's Committee on the Arts and the Humanities.

Analyzes the National Educational Longitudinal Survey (NELS:88), a ten-year panel study following more than 25,000 students between the eighth and twelfth grades. Links sustained involvement in theatre arts by low SES youth with improved self-concept and greater motivation, as well as with higher levels of empathy and tolerance for peers. In addition, students consistently involved in instrumental music were shown to have higher levels of mathematics proficiency than their non-music peers, regardless of SES.

<http://www.gseis.ucla.edu/faculty/files/catterall/catterall.involvement.pdf>



Annotated Bibliography – The Arts and the Creative Workforce

- 6) Davidson, B. (Ed.). (1999). *Allies, arguments, and actions: Making a case for arts education advocacy. Americans for the Arts Monographs.*

[http://www.americansforthearts.org/NAPD/files/12000/Allies,%20Arguments,%20and%20%20Actions%20\(May%20'99\).pdf](http://www.americansforthearts.org/NAPD/files/12000/Allies,%20Arguments,%20and%20%20Actions%20(May%20'99).pdf)

Discusses the function of arts education in preparing students for today's "economy of ideas" and presents potential methods for building support for arts education. Describes successful models in Florida, New York, Minnesota, and Oklahoma in which the arts were promoted as an integral part of the core curriculum.

- 7) Franz Peeler, J. & Steuer, G. (2001). The benefits to business of participating in the arts. *Arts & Business Quarterly*, Spring 2001.

<http://www.artsandbusiness.org/images/Spring%202001.pdf>

Discusses the need for innovative, team-oriented workers in today's industries. Illustrates the value corporations place on creativity by including highlights from speeches made by CEOs of General Electric, Bravo Networks, Corning Incorporated, and Verizon.

- 8) Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century.* New York: Farrar, Straus and Giroux.

Examines the far-reaching impact of globalization. Includes a discussion of how developing nations are recognizing not only the need for scientific and technical knowledge but also the need to improve the creativity of their workers.

- 9) Galligan, A.M. (2001). *Creativity, culture, education, and the workforce.* Washington, DC: Center for Arts and Culture.

<http://www.culturalpolicy.org/pdf/education.pdf>

Suggests that arts education provides students with the traits needed to compete in an economy driven by technological advances and globalization. Examines growth of creative industries in the United States, concluding that "the U.S. needs a comprehensive strategy that links education and workforce development at the federal, state, and local levels."

- 10) Huckabee, M. & Paige, R. (2005). *Putting Arts Education Front and Center.* Washington, DC: Americans for the Arts.

http://ww3.artsusa.org/services/arts_education/arts_education_012.asp

Presents commentary by Governor Mike Huckabee, who also was Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige promoting arts education's influence on the development of critical analysis skills. Introduces "The Arts: A Lifetime of Learning," a program implemented by the Education Commission of the States that aims to use public awareness, research, analytical tools, and leadership efforts to "increase the arts' stature in education."

Annotated Bibliography – The Arts and the Creative Workforce

- 11) Luftig, R.L. (2000). An investigation of an arts infusion program on creative thinking and academic achievement of children at three grade levels. *Studies in Art Education*, Vol. 41, No. 3 (Spring 2000), pp. 208-227.

Details the finding from the SPECTRA+ research that, based on data from pre- and post-administrations of the Torrance Test of Creative Thinking, a group of students receiving a systematic instructional program in the arts made greater gains than either of two control groups on several dimensions, including total creativity, fluency, and originality. The author concludes that “there was a strong indication that creative thinking...was facilitated by involvement in the arts.”

- 12) Meyer, L. (2003). The complete curriculum: Ensuring a place for the arts and foreign languages in America’s schools. Washington, D.C.: National Association of State Boards of Education.

<http://www.menc.org/information/legislationpolicy/CompleteCurriculumSummary.pdf>

Describes how the arts and foreign languages are becoming marginalized as schools focus on compliance with No Child Left Behind.



- 13) Murfee, E. (1995). Eloquent evidence: Arts at the core of learning. Washington, DC: National Assembly of State Arts Agencies.

<http://www.nasaa-arts.org/publications/eloquent.pdf>

Details a variety of national programs in which arts education was shown to have a positive impact on student achievement. Stresses the growing importance of communication and problem-solving skills in the modern workplace. References the Secretary’s Commission on Achieving Necessary Skills (SCANS), a study in which arts education was shown to nurture “foundation” skills such as “thinking creatively, problem-solving, exercising individual responsibility, sociability and self-esteem.”

- 14) National Governors Association Center for Best Practices. (2002). The impact of arts education on workforce preparation. Washington, DC: National Governors Association.

<http://www.nga.org/cda/files/050102ARTSED.pdf>

Examines arts education’s role in the development of knowledge-based skills valued in the New Economy. Includes examples of successful arts programs throughout the United States in which participating at-risk and incarcerated youth, as well as youth from the general population, have shown improved skills in communication, personal relationship, problem solving, management, and organization. Provides a brief list of strategies and policy options available to governors interested in implementing the arts in their workforce development programs.

Annotated Bibliography – The Arts and the Creative Workforce

- 15) Ohio Senate. (2005). Finance and Financial Institutions Committee. Testimony of Neil Fiske, Chief Executive Officer of Bath and Body Works, Limited, Inc.

Discusses corporate need for creative individuals, noting that “economic development and success is about competing for talent. People no longer follow jobs—instead they move to the most livable places, and jobs and companies follow them.”

- 16) Robinson, K. (2005). How creativity, education and the arts shape a modern economy. Denver, CO: Education Commission of the States.

<http://www.ecs.org/clearinghouse/60/51/6051.pdf>

Examines the value placed on creativity in the modern economy using statistics from the business sector. Contrasts this demand for innovative employees with the standardization movement in schools, noting that the low priority placed on arts education may hinder America’s ability to remain competitive in the global markets of the 21st century.

- 17) Robinson, K. (2001). *Out of our minds: Learning to be creative*. West Sussex, England: Capstone Publishing Ltd.

Discusses how lack of creativity is threatening organizations in business and academia. Makes a case for increasing the role of the arts in education.

- 18) Weiss, S. (2004). The arts in education. *The Progress of Education Reform*, 5(1).

<http://www.ecs.org/clearinghouse/49/91/4991.pdf>

Summarizes four studies (*Champions of Change: The Impact of the Arts on Learning; Critical Links: Learning in the Arts and Student Academic and Social Development; Creativity, Culture, Education and the Workforce; and The National Assessment of Educational Progress 1997 Arts Report Card*). In these studies, arts education is shown to provide positive learning opportunities for at-risk youth, improve the academic and social skills of students, and prepare students for the new “creative workforce.”



Samples – The Arts and the Creative Workforce

Short Newsletter Articles

Version 1. Could be used in newsletters geared to legislators or any audiences interested in development of workforce skills, business, jobs, etc.

Arts education develops the precise set of skills that employers in the emerging global economy are seeking. In fact, companies often choose to move to a state or region because of the creativity of its workers, new research shows.

A review of research on learning and creativity conducted by the Ohio Arts Council finds that the set of skills most required by today's knowledge-based economy includes a combination of creative thinking, problem-solving, individual responsibility, sociability, and self-esteem. These

and other aspects of cognitive growth are nurtured through an education in the arts.

Many business experts recognize that these findings have serious implications for America's position in global trade. A 2001 survey of 6,000 executives conducted by researchers from McKinsey & Company revealed that of the challenges businesses will face in the future, one of their greatest concerns is finding employees able to

“make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change.”

Furthermore, the creativity of a region or community can boost its ability to compete against other regions and

leverage its economic growth. As Bath and Body Works Chief Executive Officer Neil Fiske states, “economic development and success is about competing for talent People no longer follow jobs—instead they move to the most livable places, and jobs and companies follow them.”

The important implication of these findings is that communities that want to remain economically strong should strive for a high level of arts learning. Governor Mike Huckabee, who also was Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige both have asserted that the arts are a vital part of developing workforce skills.

Version 2. Could be used in newsletters to parents.

If you are helping your children with their math homework, reading to them every evening, and taking them to the science museum on Saturday, you are equipping them to compete for the most sought-after and highest-paying jobs emerging in today's global economy. But don't focus solely on the number of flash cards they get right, the size of their vocabulary, or their fascination with rockets.

Based on a review of new and current research on learning and creativity, the Ohio Arts Council finds that the skills most required by today's knowledge-based economy include thinking creatively, solving complex problems, communicating effectively, and working collaboratively. Individual responsibility, sociability, and self-esteem also are vital. These and other important strengths are nurtured through an education in the arts.

“Education in the visual and performing arts,” according to Ann Galligan of the Center for Arts and Culture, “provides management skills in the allocation of time, money, space, and staff; communicating skills in conveying meaning;



Samples – The Arts and the Creative Workforce



problem solving discipline” and other widely recognized ingredients of workplace success. Whether conducting a symphony, designing computer software, or heading a construction crew, workers need these qualities. Governor Mike Huckabee, who also was Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige both have asserted that the arts are a vital part of developing such workforce skills.

Research also suggests that the arts can help develop good leadership skills. A 2001 survey of 6,000 executives conducted by researchers from McKinsey & Company revealed that of the challenges businesses will face in the future, one of their greatest concerns is finding employees able to “make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change.” Those abilities cannot be taught but are routinely experienced in creating or performing works of art.

Sir Ken Robinson, an internationally known expert in creativity, education, and training, has said that “creativity should now be as important a priority for education in America and everywhere else as literacy” both because it is important in all the “intellectual industries” and because the economic growth of regions depends increasingly on the cultural resources they offer. Robinson, as well as Pulitzer Prize winning journalist Thomas L. Friedman, have observed that other countries, such as Singapore and India, recognize the vital role of preparing workers for innovative challenges.

So don’t exchange crayons and paints for a chemistry set. Provide both. Read with your children, but also sing and dance with them. Brag about their math grades but also applaud loudly at their school play. In order for our children to compete in this new economy, we must nurture their ability to think creatively.

Letter to the Editor (tailored to a local context)

To the Editor of the Yellow Springs News:

As I consider Ohio’s economy and our local efforts to envision the future of Yellow Springs, I can’t help but wonder: What will revitalize our economy and help us stem the tide of young people leaving the Village and the state?

The answer lies in part in a defining characteristic of our Village – creativity. Cultivating creativity, in all its forms, is fundamental to leading fulfilled lives, building communities, and fostering economic well-being. Last year, during a presentation to the school board concerning the Scientist-in-Residence Program at Mills Lawn Elementary, Jim Grote from Wright Patterson Air Force Base spoke of the importance of the arts and sciences to our children’s schooling and lives.

Recent research has illuminated the value of studying the arts. Arts education not only enhances achievement in traditional academic subjects but also engenders the creativity necessary for success in an ever changing world economy. Arts and culture create environments that attract competitive businesses and competent workers.

Nowhere is the need for bolstering the economy and attracting and maintaining talented workers more relevant than in Ohio, which has lost more jobs than any other state in the nation since 2000. In his December 2004 speech to Cleveland’s 50 Club, Senator Mike DeWine underscored the need for a dramatic economic change. Among the more startling statistics mentioned in the senator’s speech is the observation that since 2000, Ohio has “led our nation in the exodus of young people.” In fact, DeWine remarks, the state “lost over 79,000 people aged 20 to 40” between 2000 and 2003, “representing a loss of thousands of the most productive people in our state.”

Part of what accounts for this departure of workers is the competition for skilled employees that exists in the business sector. According to Neil Fiske, Chief Executive Officer of the Ohio-based Bath and Body Works: “Economic development and success is about competing for talent People no longer follow jobs—instead they move to the most livable places, and jobs and companies follow them.” In order to bolster Ohio’s economy, we must ensure that all people have the opportunity to engage in the arts as part of their schooling and community life.

As Yellow Springs envisions its future, let’s ask ourselves, why do we live here and what makes this place livable? In answering those questions, I think we will see the convergence of many factors, including our legacy of creativity, our core values, and the power of arts and culture to drive economic revitalization. And maybe our children and grandchildren will consider coming home.

Mary Campbell-Zopf
Yellow Springs Board of Education



Article for a State Context

Cultivating Creativity is Good Business

It’s easy to appreciate the beauty, creativity, and emotional investment represented by the arts. But city and state leaders are starting to appreciate another aspect of the arts—their impact on the economic viability of Ohio.

Cultivating creativity is fundamental to the state’s well-being. The arts and arts education have powerful roles to play in this process. The role of arts education in the development of skills needed to compete in the new creative economy has been demonstrated through recent research. In addition to this ability to prepare students for today’s workforce, the arts have the potential to enhance economic and community development.

The 2005 “Creative Industry Report” by Americans for the Arts demonstrates that arts and creative business have an impact on Ohio that few industries can match. Creative industries provide the high-octane fuel that powers the nation’s information economy—its fastest growing segment. The results of the study are significant. Nationally, the creative industries include more than 548,000 businesses, employing nearly 3 million people. In Ohio, a total of 16,936 arts-related businesses employ 89,194 people.

Between 2004 and 2005, growth in the number of arts businesses—non-profit and for profit—outpaced total U.S. business growth by nearly 2 percent. Similarly, at a time when the total number of U.S. jobs shrank by nearly 2 percent, employment by arts businesses dropped at less than half that rate.

In Ohio the numbers are more impressive—growth in Ohio’s arts and cultural businesses within the last year was more than 6.5 percent, and their employment growth was more than 2.5 percent. The fact that this sector is bucking the national trend of decreasing employment indicates that creative industries are worth taking seriously.

Samples – The Arts and the Creative Workforce

Cultivating Creativity is Good Business *(continued)*



The Ohio Arts Council, the Ohio Department of Development, and the Ohio Department of Education with the help of local arts councils and arts leaders throughout the state have been working to position Ohio for success with “new economy” workers. Arts and culture contribute to and enhance the environment expected by these workers. An investment in the arts contributes to the health, diversity, and competitiveness of Ohio’s communities. Ohio’s arts and cultural opportunities are among the state’s most valuable resources and can be a cornerstone for economic development by attracting an educated and engaged work force.

Nowhere is the need for bolstering the economy and building communities more relevant than in Ohio, which has lost more jobs than any other state in the nation since 2000. In his December 2004 speech for Cleveland’s 50 Club, Senator Mike DeWine underscored the need for a dramatic economic change. Among the more startling statistics mentioned in the speech was the observation that since 2000, Ohio has “led our nation in the exodus of young people.” In fact, DeWine remarked, the state “lost over 79,000 people aged 20 to 40” between 2000 and 2003, “representing a loss of thousands of the most productive people in our state.”

Part of what accounts for this departure of workers is the competition for skilled employees that exists in the business sector. In the words of Neil Fiske, Chief Executive Officer of the Ohio-based Bath and Body Works: “economic development and success is about competing for talent ... People no longer follow jobs—instead they move to the most livable places, and jobs and companies follow them.” In order to bolster Ohio’s economy, we must ensure that all people have livable, vibrant communities. The arts are an essential feature of this kind of community.

Since growing companies and the talented individuals they employ have the option of moving anywhere in the world,

they often choose to locate in a particular area based on the quality of life it offers. Contributing dramatically to the overall quality of life in Ohio will be its arts and cultural industries and the quality and diversity of its arts and cultural offerings. School systems offering a curriculum in the arts also will appeal to companies and people looking for a place to locate.

Ohio has experienced significant benefits from the use of the arts across all sectors. The arts spark new ideas for technology, support small businesses, create social and economic entrepreneurship, and generate cultural tourism. But the ability of the arts to cultivate innovative thinking is what makes arts education the best preparation for the workforce of tomorrow. Every day, arts teachers ask their students to engage in complex learning and intellectual activities, often exhibiting a range of sophisticated skills simultaneously. Students engaging in arts learning analyze, compare, synthesize and form theories. They express ideas, thoughts and feelings in concrete and abstract forms. They develop and exercise judgment. Arts education is the only discipline where a young person’s mind is so fully engaged.

A review of current and new research on learning and creativity, conducted by the Ohio Arts Council, finds that the set of skills most required by today’s knowledge-based economy includes a combination of creative thinking, problem-solving, individual responsibility, sociability, and self-esteem.¹ These and other aspects of cognitive growth are nurtured through an education in the arts.²

These findings have serious implications for America’s position in global trade, as many business experts recognize. A 2001 survey of 6,000 executives conducted by researchers from McKinsey & Company revealed that of the concerns businesses will face in the future, finding employees able to “make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change” was one of their greatest challenges.³

Samples – The Arts and the Creative Workforce

Cultivating Creativity is Good Business *(continued)*

The arts help students understand other cultures, critical in a global economy. Arts and culture already have helped Ohio strengthen its global trade programs. Since 1989, the Ohio Arts Council's International Program, often in cooperation with the International Trade Division of the Ohio Department of Development, "has continuously used cultural exchanges to enhance trade relationships. As a result, the state has made cultural inroads with established trading partners and built the state's name recognition with potential new partners. In fact, Ohio's success linking economic development with arts and cultural policy has made it a standard-bearer."⁴



The arts also contribute to the development of an engaged workforce in many intangible ways. Art allows the artist to be in charge—forces the poet or potter to make decisions—and helps develop independence. Furthermore the arts teach respect for diversity—two dancers may be different but equally good. People who can communicate through the subtleties of the arts will have the skills and understanding that our global economy will require.

Innovation and imagination have always been the defining characteristics of business in Ohio—and the secrets to its success. But we don't hold the market on these traits—other states grow increasingly competitive each day. This, coupled with dramatic changes in the information and service sectors, makes our continued capacity for innovation and imagination more imperative. We must cultivate our creativity or risk being left behind. By understanding how arts and culture benefit our economy and our education system, we can keep the creative spark alive and successfully spark our economy at the same time.

This article was printed in *Columbus Business First Partners in Philanthropy*, November 2005 written by Jami Goldstein, Ohio Arts Council.

-
- 1) Weiss, S. (2004). The arts in education. *The Progress of Education Reform*, 5(1). <http://www.ecs.org/clearinghouse/49/91/4991.pdf>
 - 2) Birch, T.L. (2002). The arts in public policy: An advocacy agenda. *The NASAA Advocate*, 6(1). http://www.nasaa-arts.org/publications/advocate_policy.pdf.
 - 3) Davidson, B., ed. (1999). Allies, arguments, and actions: Making a case for arts education advocacy. *Americans for the Arts Monographs*. [http://www.americansforthearts.org/NAPD/files/12000/Allies,%20Arguments,%20and%20%20Actions%20\(May%20'99\).pdf](http://www.americansforthearts.org/NAPD/files/12000/Allies,%20Arguments,%20and%20%20Actions%20(May%20'99).pdf)
 - 4) National Governor's Association (2003). Issue Brief—How states are using arts and culture to strengthen their global trade development. *NGA Center for Best Practices, Economic & Technology Policy Studies*.

Making the Case in Wyoming

Testimony to Legislators

Testimony of the Ohio Arts Council to the House of Representatives Education Committee, Tuesday, December 5, 2006

Madam Chair and members of the House Education Committee thank you for this opportunity to speak about Substitute House Bill 565 and the importance of having a fine arts credit as part of Ohio's graduation requirements.

The legislation before us raises a number of important questions:

- How do we educate our young people for leading productive and creative lives in the 21st century?
- How do we as civic leaders imagine the future careers that Ohio's young people will assume?



- What leadership is needed, today, to pave the way toward this yet to be imagined future?

The Ohio Arts Council believes that the arts must assume a central role in education – pre-K through college—if young people are to achieve greater academic success and be prepared to contribute to Ohio's changing economy, both locally and globally. Ohio is no longer competing with Indiana; we are competing with India.

We are no longer competing with Pennsylvania; we are competing with China.

Creating and preserving an education system that prepares students to successfully compete in the world economy is crucial. Arts education develops the precise set of skills that equips students to compete for the most sought-after and highest-paying jobs of the emerging global economy. These skills are a combination of problem-solving, individual responsibility, teamwork, confidence and creative thinking.

In a speech to the Education Commission of the States, Sir Ken Robinson, internationally recognized leader in the development of creativity, innovation, and human resources said, "Throughout the world, the real growth area is the intellectual industries, including the arts, software, science and technology. These are areas where new ideas matter most. So, for example, Singapore aims to be the creative hub of Southeast Asia. China, as a compelling priority, is trying to figure out how to educate their people to be creative. Many countries recognize now that the future of national economies depends upon a steady flow of innovative ideas."

Thomas L. Friedman, author of *The World is Flat*, in a March 24, 2006 *New York Times* article, made similar observations about India and China: "Both India and China, which have mastered rote learning and have everyone else terrified about their growing armies of engineers, are wondering if too much math and science – unleavened by art, literature, music and humanities – aren't making Indira and Zhou dull kids and not good innovators. Very few global products have been spawned by India or China." Corporate leaders within one of India's premier technology companies said, "We need to encourage more incubation of ideas to make innovation a national initiative."

Closer to home, a study published in *The Journal of the American Medical Association* in 2001 has found that looking at painting and sculpture can improve medical students' observational abilities.

Samples – The Arts and the Creative Workforce

Testimony to Legislators (continued)



Three years ago, the Mount Sinai School of Medicine began an art appreciation course for medical students, joining Yale, Stanford, Cornell and a few other medical schools that are adding humanities to the usual physiology, pathology and microbiology. Dr. David Muller, Mount Sinai’s chairman of medical education, said the course provides a lesson about how important, and underrated, the art of *looking* is to the practice of medicine.

Sir Ken Robinson reports in *Out of Our Minds: Learning to be Creative* that the largest number of students, beyond premed majors, being admitted to medical school are music majors. Clearly, the arts play a powerful role in developing productive citizens today and for the future.

The research base of credible evidence is growing:

- Students who participate in arts experiences improve their academic achievement as well as their success in other realms of learning and life. In a well-documented national study using a federal database of more than 25,000 middle and high school students, researchers from the University of California at Los Angeles found students with high arts involvement performed better on standardized achievement tests than students with low arts involvement.
- These findings are supported by high school students’ SAT scores. The College Board and multiple independent studies have shown that students’ arts participation and SAT scores co-vary, meaning that the more arts classes a student has taken, the greater the likelihood that he or she will achieve high SAT scores. In 2005, students who took four years of arts coursework outperformed their peers who had a half-year or less of arts coursework by 58 points on the verbal portion and 38 points on the math portion of the SAT.

Most importantly though, the arts encourage young people to think creatively. Creativity measures for students who participated in the SPECTRA+ program in Ohio school districts were four times higher than those of their peers who did not participate in an arts curriculum. Additionally, more than 80 percent of business leaders participating in a recent survey ranked “creativity and innovation” among the top five applied skills that college graduates need to succeed in today’s workplace.

Many business experts recognize that these findings have serious implications for America’s position in global trade. Workforce skills are nurtured through an education in the arts. Arkansas Governor Mike Huckabee, who was also Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige both have asserted that the arts are a vital part of developing workforce skills. According to Huckabee, “The future ability of our economy and this country will be based on the fact that we have students who are able to be more creative with what they’ve learned than anyone else.” A 2001 survey of 6,000 executives, conducted by researchers from McKinsey & Company, revealed that of all the challenges businesses will face in the future, one of their greatest concerns is finding employees able to “make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change.” Creativity is the domain of the arts, and learning in the arts reinforces improvisation and entrepreneurship, vital skills for workers in the 21st century economy.

In conclusion, I, along with our Council Board (which passed a resolution of support this past summer), urge your support for the addition of one credit in the fine arts to Ohio’s graduation requirements as necessary to prepare Ohio high school students to be competitive in a global, knowledge-based marketplace.

Samples – The Arts and the Creative Workforce

Testimony to Legislators (continued)



In order to achieve our long-term goals of abundant lives for our children and our communities, it is paramount that we are all aware of what we may be giving up if we lose or diminish programs in the arts.

As civic leaders, we must build a strong bridge to the future for Ohio's young people, and assist them as they develop the knowledge, skills and dispositions to cross that bridge as life-long learners who are able to engage in work that we have yet to imagine.

In your deliberations please consider:

- what our business and education leaders say they need;
- what credible research reveals about learning in the arts and workforce readiness; and
- what future our young people will face in this global economy and the certainty that their reality will be significantly different than ours.

Thank you for your time and consideration of this very important issue. May your civic vision, leadership and knowledge pave the way for a promising future for Ohio's young people.

Testimony given by Mary Campbell-Zopf, OAC Deputy Director and Interim Arts Learning Director, Ohio Arts Council in support of including a graduation credit requirement in the fine arts in Substitute SB 311 and Substitute HB 565 (the Ohio Core).

This testimony was created using information and examples in this Tool Kit, and especially the next piece from the Montana Arts Council.

Short Advocacy Piece

This could be used in reports, articles, or letters to the editor responding to potential cuts in arts education budgets or recommending increased investment in arts education.

NEW ECONOMY SKILLS LINKED TO EDUCATION IN THE ARTS

“The primary aim of education is not to enable students to do well in school, but to help them do well in the lives they lead outside of school.” – Elliot Eisner, Professor of Art at Stanford

Montana Governor Brian Schweitzer told state education leaders this July, “We have to compete in the world economy. We are no longer competing with Idaho; we are competing with India. We are no longer competing with Colorado; we are competing with China.”

Creating and preserving an education system that prepares students to successfully compete in the world economy is crucial. Arts education develops the precise set of skills that equips students to compete for the most sought-after and highest-paying jobs of the emerging global economy. These skills are a combination of problem-solving, individual responsibility, team work, confidence, and creative thinking.

In a speech to the Education Commission of the States, Sir Ken Robinson said, “Throughout the world, the real growth area is the intellectual industries, including the arts, software, science and technology. These are areas where new ideas matter most. So, for example, Singapore aims to be the creative hub of Southeast Asia. China, as a compelling priority, is trying to figure out how to educate their people to be creative. Many countries recognize now that the future of national economies depends upon a steady flow of innovative ideas.”

Samples – The Arts and the Creative Workforce

New Economy Skills Linked to Education in the Arts (continued)



Thomas L. Friedman, author of *The World is Flat*, in a March 24, 2006, *New York Times* article, made similar observations about India and China. “Both India and China, which have mastered rote learning and have everyone else terrified about their growing armies of engineers, are wondering if too much math and science – unleavened by art, literature, music and humanities – aren’t making Indira and Zhou dull kids and not good innovators. Very few global products have been spawned by India or China.” Azim Premji, the chairman of Wipro, one of India’s premier technology companies said, “We need to encourage more incubation of ideas to make innovation a national initiative.”

Closer to home, a study published in *The Journal of the American Medical Association* in 2001 has found that looking at painting and sculpture can improve medical students’ observational abilities.

Three years ago, the Mount Sinai School of Medicine began an art appreciation course for medical students, joining Yale, Stanford, Cornell, and a few other medical schools that are adding humanities to the usual physiology, pathology, and microbiology. Dr. David Muller, Mount Sinai’s chairman of medical education, said the course provides a lesson about how important, and underrated, the art of looking is to the practice of medicine.

The National Governors Association Center for Best Practices states, “Programs incorporating the arts have proven to be educational, developmentally rich, and cost-effective ways to provide students the skills they need to be productive participants in today’s economy. Arts programs combine academic and workforce development skills in a manner attractive to participants of all age groups and economic backgrounds.”

Concerns are being raised about the narrowing curriculum that is a result of the No Child Left Behind Act of 2001. While the act does include the arts as part of the core curriculum, many fear that there is an unintended consequence: that states will focus their attention – and resources – on complying with the law’s primary emphasis on reading, math, and science to the detriment of other curricular areas.

In 2003, a National Association of State Boards of Education study group found that the arts and foreign languages are not necessarily “lost,” but these subject areas have often been marginalized, and are increasingly at risk of being lost as part of the core curriculum.

Time and again, arts education has been proven to enhance academic achievement, reach students on the margins of the educational system, and create an effective learning environment that impacts all social and economic groups.

In order to achieve our long-term goals of abundant lives for our children and our communities, it is paramount that we are all aware of what we may be giving up if we lose or diminish programs in the arts. Arts education is not “icing on the cake.” As the Nevada Alliance for Arts Education so succinctly states, “It’s not an education without the arts.”

Beck McLaughlin, Education and Web Services Director
Stefanie Flynn, Administrative Assistant
Montana Arts Council



Samples – The Arts and the Creative Workforce

Today there are two kinds of basics. The first- reading writing and math- is simply the pre-requisite for a second, more complex, equally vital collection of higher level skills needed to function well in today's world.

These basics include the ability to allocate resources; to work successfully with others; to find, analyze and communicate information; to operate increasingly complex systems of seemingly unrelated parts; and, finally, to use technology. The arts provide an unparalleled opportunity to teach those higher level basics....

The learning is in the doing, and the arts allow students to do. No other educational medium offers the same kind of opportunity.

Paul W. Chellgren
Former President and CEO Ashland, Inc.

Workforce Skills and the Arts

Are Schools Preparing Our Children for the Future?

How do we best educate our children for leading productive, happy and creative lives in the 21st century? During 2006 magazines and reports pointed repeatedly to the critical importance of creativity in the 21st century workforce, yet the central role of the arts in developing creativity and other essential 21st century skills is rarely mentioned, let alone explored in depth.

The Massachusetts Cultural Council believes that the arts must assume a central role in educating our young people, both in and out of school. We have created a research-based ten-point argument designed to underscore the importance of the arts in our children's lives. These advocacy points first describe the changing shape of the economy and society, both in Massachusetts and nationally. We then outline the skills necessary to thrive in that changing economy and the central role of the arts in developing those skills, both in and out of school. We have provided numerous links throughout so that you can do more in-depth reading if you choose.

1. Our society is changing from a manufacturing-based economy to a knowledge-based economy.
2. The knowledge-based economy creates jobs in the arts and arts-related industries.
3. Essential knowledge-economy workforce skills are developed by a rigorous, sequential arts education augmented by partnerships with artists and cultural organizations.
4. The arts help prepare students for living in the global society.
5. Engaged learning in other academic disciplines is stimulated by the arts.
6. At-risk students especially benefit from in-depth engagement in the arts.

7. The arts develop workforce skills both in school and out of school.
8. Achievement in science and technology is correlated with training in the arts.
9. The value of arts education to the knowledge economy has been recognized by other nations that have invested substantially in the arts.
10. To maintain their international competitiveness, the United States and Massachusetts must invest in arts education.

Conclusion What Can You Do? Advocacy Resources Essential Readings Bibliography

1. Our society is changing from a manufacturing-based economy to a knowledge-based economy.

According to a study by the National Governors' Association, *The Impact of Arts Education on Workforce Preparation*, knowledge-based work has replaced labor-intensive careers as the preferred path to economic growth and stability. This shift has profound implications for education and for society. We are no longer educating workers for the twentieth century assembly line, but for an economy that demands a complex blend of interpersonal skills and constantly evolving technical skills.

Changing Workforce The traditional manual labor-based working class has declined from 40% of the workforce in 1920 to 25% today. Economist Richard Florida's ground-breaking study of the knowledge economy, *The Rise of the Creative Class*, notes that the "creative class" during this period increased from 10% of the workforce to approximately 30% in 2002. Likewise the service sector has increased dramatically, now comprising 43% of the workforce.

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

Learning in the arts cannot be regarded as “extra,” “trivial” or possible only when the “basics” are in place.

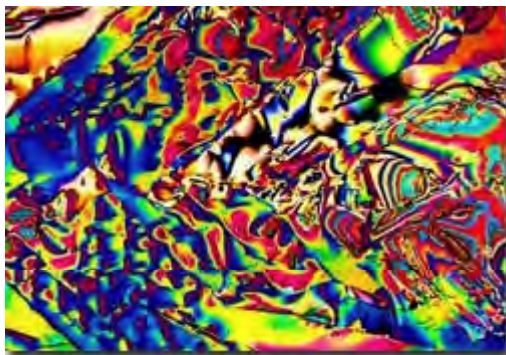
The arts are basic for they push learners to pose problems and find resolutions, to link thought and action and to recognize the consequences of individual behaviors on group interactions and achievements.

Current thinking and demands of communication in the continuing information-based workplace reveal the kinds of thinking necessary for civic, economic, technical, inventive and social challenges and point to society’s keen need for more learning of the kind elaborated here as existing within the arts....

Shirley Brice Heath, anthropologist

Men [and women] have become electronic angels

Marshall McLuhan, media scholar



Boundaries between Science, Technology and the Arts Are Blurring In the digital age, the boundaries blur among the arts, science and technology sectors. The worker of the future will need the skills and knowledge to move from one sector to another. For example, workers with art-related skills today play a critical role in software development and web site design companies, advertising firms, the motion picture and broadcast media industries, automobile design companies, architectural and engineering firms and other fields seeking employees with very high-level communications, computer, and creative problem-solving abilities. Morris Tannenbaum, a retired AT&T CFO notes, “Tomorrow’s scientists and engineers need grounding in the arts to stimulate their creativity, to help them perceive the world in new and different ways. If nothing else, a blending of the arts and sciences can cement a foundation for learning how to learn, a trait that is proving all the more critical at a time when knowledge simply won’t stay put.”

The Arts Help Define, Explore and Extend the Boundaries of the Digital Frontier Many imaging techniques now commonplace in the corporate and scientific worlds were pioneered in the art and design industries. For example, at MIT’s Edgerton Center, Artist-in-Residence Felice Frankel helped a biologist use photography to help explain his amino acids and protein studies (see left). Frankel comments, “They were producing some of their own images in black and white. They were using what they call scanning electron microscopy, which is looking at things much, much smaller than optical microscopy. But I said, ‘Have you looked at these under an optical microscope,’ and they said, ‘Not really. Just kind of in passing.’ I said, ‘Give me some of these things, and let me see what I can do with them.’ And not only did I create some really wonderful things to look at, but what happened in the process was that I captured on the images some information that they didn’t see.” (NPR Series on the Arts and Workforce Skills)

Another contemporary artist, Kenneth Snelson, has explicitly

explored the effects of digitization in the merging of art and science in his *images of atoms*. Nobel Prize-winner Robert Root-Bernstein comments, “Snelson’s work is a new perspective on structures in nature and on the nature of structures. This perspective, in turn, makes new things imaginable and therefore new things possible.”

Business Technology and the Arts Are Converging The knowledge economy features a convergence of business technology and the arts. In its *Creative Industries Strategy*, the government of Singapore cites design as the convergence point, “The new competitive advantage lies in the ability to carve out new markets and create new markets through the fusion of business, technology and the arts. Design, which functions to bring about such convergence, has emerged as the key differentiation strategy for businesses.” “Design,” the report continues, “is not just about look, feel and image. Design embraces not only aesthetics, but also market research, usability, safety, ergonomics, environmental sustainability, new technologies, logistics and consumer experience.” The *IIT Institute in Chicago* defines design as “a core methodology of innovation and as such represents the key to new inventions and innovation itself.”

Methods Used by Artists Can Be Applied to Business Practices In *Artful Making*, Rob Austin and Lee Devin make a powerful case about the benefits for managers that come from studying the characteristics of the ways artist work. The 21st century knowledge sector of the economy requires constant experimentation (iteration) and improvisation. “Artful making,” the authors contend, “is a process for creating form out of disorganized materials. It differs from ‘industrial making,’ which requires detailed planning and tight objectives. New technologies, however, allow for inexpensive iterations of design in which experience may be substituted for traditional planning. The knowledge economy work processes will rely more on emergence, iterative structures, improvisation, an unusual notion of

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

When I arrived at Google, I discovered that the founders ...had a great appreciation for letting the artists work (and play) and for the emergent character of important innovations. They had established the kind of management style and culture at Google that nurtures artful exploration and innovation, and I'm doing my best to keep that alive.

Dr. Eric Schmidt,
Chairman and CEO, Google

Seven years ago...the Alliance of Motion Picture and Television Producers asked the governor of California to “declare a state of emergency” to help Hollywood find digital artists. There were people aplenty who were computer literate, they claimed, but could not draw. In the New Economy, they argued, such talents are vital to all industries dependent on the marriage of computers and telecommunications.

http://www.govtech.com/qt/print_article.php?id=93754

www.culturalcommons.org/comment.cfm

supervision and control, and getting a lot of things wrong on the way to high quality choices.” The authors note earlier, “As business becomes more dependent on knowledge to create value, work becomes more like art. In the future, managers who understand how artists work will have an advantage over those who don’t.”

A Glimpse of the Future A vivid illustration of the profound changes at play in work, and society and even our definition of reality is captured in an article in the *Washington Post* about “Second Life,” a popular online “universe.” To excerpt from the article: “Designing attractions to capture the attention of those online ... is becoming big business as major corporations move to establish marketing footholds in 3-D virtual worlds ... Computer users easily become immersed in the action via cyber stand-ins known as avatars. Through their animated alter-egos, users can travel the simulated expanse and chat, fly, or dance. ... Five years from now it will be near-photoquality. The experience will be like stepping into a movie. *Second Life* now boasts more than 3 million registered users worldwide and estimates that 1.3 million users logged onto the realm in the past month.”

Companies such as *Millions of Us* have arisen to provide design services to individuals and corporations who use *Second Life*. “Creating a virtual destination packed with interactive content takes more than an expert in the digital stitching that keeps *Second Life* together. Artists, writers, marketing gurus and others are often needed to develop everything from the look and design of a project to event programming within the space that will keep people coming back. *Millions of Us* has 13 Author’s electronic avatar enters

“*Second Life*” full-time staffers and a stable of 60 contract artists and programmers it can hire as needed.” Another company, *Electric Sheep*, has built a site for AOL called AOL Pointe “where visitors can buy clothes for their avatars, rip it up in a skate park, and gather in an amphitheater to watch videos, among other activities.” Launched about 2 years ago, *Electric Sheep* now has 50 people on staff.

Our new electronic world will require many talented artists who will work in a wide range of professions from science to marketing. Where will they come from when arts education continues to suffer declines?



Author’s electronic avatar enters “*Second Life*”

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

Getting admitted to Harvard Business school is a cinch. At least that's what several hundred people must have taught last year after they applied to the graduate program of the UCLA Department of Art- and didn't get in. While Harvard's MBA program admitted about 10% of its applicants, UCLA's fine arts graduate school admitted only 3%. Why? An art degree is perhaps the hottest credential in the world of business. Corporate recruiters are visiting the top arts grad schools...in search of talent. And this broadened approach has often come at the expense of more traditional business graduates.

Daniel Pink, Harvard Business Review



2. The knowledge-based economy creates jobs in the arts and arts-related industries.

The Importance of the Arts in the New Economy America's creative industries comprise our nation's leading export sector with over 60 billion dollars in annual overseas sales, including the output of artists and other creative workers in publishing, audio visual, music and recording, and entertainment businesses. The American nonprofit arts industry generates \$134 billion annually in economic activity and supports 4.85 million jobs. The arts account for 6% of the US gross national product, more than the construction industry, states Public Arts Study.

The Arts Provide Job Opportunities in New England The conversion of the economy has affected New England and Massachusetts as well. The New England Council, the country's oldest regional business organization, released a study of the impact of the creative sector of the economy in New England in 2002. They refer to the "Creative Cluster" as nonprofit institutions, commercial businesses and individuals whose work is rooted in the arts and culture. The Creative Cluster will offer many job opportunities for Massachusetts workers in the future. Schools should prepare students to be both conversant in the arts, humanities and interpretative sciences *and* skilled in an arts, science or humanities discipline. Even those not directly involved in an art-making job will need to be fluent with issues of design and aesthetic choices.

The Council discovered that the Creative Cluster in New England:

- employed 247,387 people (3.5% of the region's total workforce), almost equal to the 250,264 employed by computer equipment sector in the region;
- grew at a faster rate (14%) between 1994 and 1997 than all New England industries (8%); and Museum of Fine Arts Conservator

- will experience an 18% workforce growth rate www.mfa.org between 1998 and 2008 compared with a 14% rate in all New England industry according to the U.S. Bureau of Labor Statistics.

In Massachusetts:

- the cultural sector has a total annual economic impact of \$2.56 billion per year;
- audiences for cultural events spend \$1 billion in related spending such as restaurants, hotels, parking, etc.;
- cultural organization payrolls generated \$59 million in federal and social security taxes and \$17 million in state income and sales taxes;
- non-profit cultural organizations support 45,000 jobs in Massachusetts;
- prior to the current recession cultural sector job growth exceeded that of the software and healthcare industries; and
- annual attendance at cultural events or facilities in the state is 45 million people – seven times the population of the state and nine times the attendance at sports events.

The Council's report concludes that the cultivation of a skilled creative workforce must begin at the earliest level of schooling and continue throughout the worker's career with opportunities for ongoing instruction in new technologies, processes and skills (p.21).

The arts must be involved in this process, from pre-school to adult learning.

Cultural Tourism Is a Major Industry Cultural tourism plays a critical role in the Massachusetts economy. Currently



Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts *(continued)*



Museum of Fine Arts Conservator
www.mfa.org

tourism constitutes the third largest industry in the state; by 2010 experts project that it will be the largest industry. During 1999, domestic and international travelers in Massachusetts generated \$12.1 billion in direct expenditures. These dollars supported 142,800 jobs generating nearly \$3.4 billion in payroll earnings. Traveler direct expenditures also generated \$2 billion in federal, state, and local taxes. MassMoca (pictured below), a converted factory complex dedicated to showing contemporary art, has transformed the town of North Adams. Since its founding in 1999 it has added hundreds of new jobs to the local economy and pumped tens of millions of dollars into the Massachusetts economy. Maintaining an edge in cultural tourism demands not only that investments be made in Massachusetts' arts, science, and historical properties, but also in training the curators, historians, architects, and tour guides who bring these remarkable

facilities to life and sustain them. The foundation provided by a high quality, pre-K-12 sequential arts education plays an essential role in developing specialists who can preserve, enhance, and communicate our Commonwealth's rich cultural heritage.



©MASS MoCA



Boston Ballet

<http://www.massmoca.org/>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

As chief executive of a technology company that thrives on creativity, I want to work with people whose imaginations have been unleashed and who tackle problems as challenges rather than see them as obstacles. An education enriched by the creative arts should be considered essential for everyone.

John Sculley, former Chairman and Chief Executive Officer of Apple Computer



Young Artists from RAW Arts

3. Essential knowledge economy workforce skills are developed by a rigorous, sequential arts education.

Essential 21st Century Workforce Skills In addition to teaching specific discipline-defined skills such as painting, dancing or playing an instrument, the arts help develop workforce skills. These arts-related skills were first outlined in the groundbreaking 1991 SCANS (Secretary’s Commission on Achieving Necessary Skills) Report issued by the US Department of Labor. The generalized skills that can be acquired and reinforced through systematic, sequential instruction in the arts include:

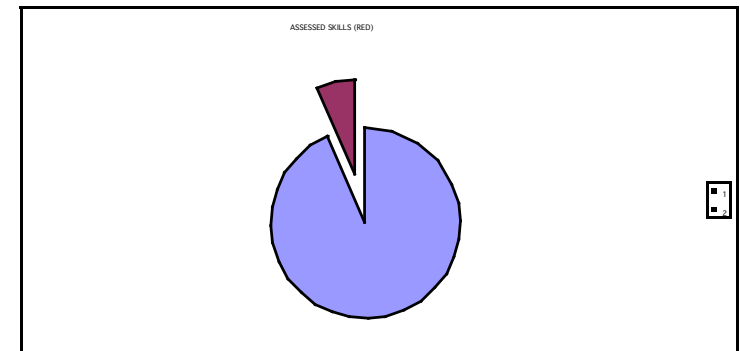
Basic Skills	Thinking Skills	Competencies
Oral Communications	Thinking Creatively	Locating Resources
Basic Arithmetic	Visualizing	Teaching
Reading	Making Decisions	Acquiring and Evaluating Information
Reasoning	Cultural Sensitivity	Technology
Understanding	Affective Skills such as self-discipline	Serving customers
Writing	Knowing How to Learn	Leading
	Team Work	Negotiating

Many Essential Workforce Skills Are Not Tested

Unfortunately testing in our schools addresses only three of the basic skills, the thinking skills only indirectly, and the competencies not at all. The *Gardner Museum* recently released the results of a three-year study of the effects of third, fourth and fifth graders observing and discussing works of art in the museum. The research concluded that the students, contrasted with those in a control group, showed statistically significant improvement in the five skills

measured: associating, comparing, flexible thinking, observing and interpreting.

SCANS, the Partnership for 21st Century Skills and the National Governors’ Association have identified 42 skills and competencies that will be required for the 21st Century (in the chart as blue; workforce skills that are assessed are in red). Remember that most of our educational systems K-12 assess only three basic skills. Because they are not (although they can be) tested, the arts are diminished as educational priorities as educators “teach to the test.” Learners must be equipped with “the basics,” but basic math and literacy skills no longer suffice. To function in a world where the amount of information doubles in months and people change jobs many times during their working life, students need a broader set of skills.



For example, in this new economy, visual literacy assumes a heightened role that approaches the dominance of print-based literacy. “Today images have become an integral part of education. The primary literacy of the 21st century will be visual: pictures, graphics, images of every kind. It is no longer enough to be able to read and write well. Our students must learn to process both words and pictures. They must be able to move gracefully and fluently between text and images, between literal and figurative worlds. ... Images carry emotions and facts simultaneously. The effect of the image is virtually instantaneous. ... In this fast-paced

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)



Common Class at Shakespeare and Company Fall Festival
<http://www.shakespeare.org/>

Arts education naturally embraces methods that are characteristic 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 continually 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.

<http://wdr.doleta.gov/SCANS/whatwork/>

world the capacity to express ideas clearly and quickly is essential. Images not only communicate rapidly, they do so with lasting effect.” In instant messaging, visual emoticons, the new hieroglyphics, challenge the dominance of written text. So pervasive has the exchange of visual symbols become in our culture that some observers refer to young contemporary learners as screenagers.

A follow-up to the original SCANS report, *Learning a Living: A Blueprint for High Performance* directly describes the role of the arts in teaching workforce skills, “The theater arts are often thought of as developing speaking, reading and listening skills. But theater people also know about another domain of the SCANS know-how: managing the resources of budgets, space layout, staffing, and interpersonal skills such as teaching others and working as a team. Technology use is another SCANS competency. Musical instruments are becoming increasingly high-tech. Some synthesized sounds come directly from sophisticated mathematical functions fed into a musical digital interface.

Other reports have subsequently built upon the skills described in SCANS. (See also the Appendix) In an essay in a recent compendium of research on arts education, [Critical Links](#), James Catterall summarizes research findings concerning the multiple ways in which the arts help develop workforce skills.

Eliot Eisner, one of the nation's leading education thinkers, outlines the *skills that the arts teach exclusively*. According to Eisner, the arts teach students to:

- *make good judgements about qualitative relationships;*
- *recognize that problems in life can have more than one solution;*
- *celebrate multiple perspectives;*
- *realize that in complex forms of problem-solving purposes are seldom fixed but change with circumstances and opportunity;*

- *understand that neither words in their literal form nor number exhaust what we can know;*
- *recognize that small differences can have large effects;*
- *think through and within a material; and*
- *say what cannot be written or spoken.*

Cross Training in the Arts One writer has even referred to training in the arts as cross training for the work world. “By learning and practicing the arts, the human brain actually rewires itself to make more and stronger connections. The arts stimulate body awareness, creativity and sense of self. The child without access to the arts is at a disadvantage from ways in which he or she can experience the world.”

Graduate Schools Recognize the Arts as a Component of Developing Professional Skills Graduate school programs have recognized that the arts are essential to developing professional workforce skills. Today at least 40 MBA programs throughout the United States feature design courses within their curriculum. Boston's Babson College starts its graduate business program with a course in the arts, a “Creativity Stream.” “What we're after is having students embrace ambiguity and take risks, try something they haven't before,” comments Mary Pinard, Associate Professor of English at Babson. Emory University's Goizuetta Business School, likewise, offers a “creativity boot camp” during January break. Arts courses do more than instill a sense of creativity in students; they also help hone students' leadership skills. Harry Vardis, who organized the Emory course, comments, “These (arts) courses teach students how to think on their feet in unfamiliar environments. School prepares them for the usual and we take them to the unusual.” Wharton School of Business has a compulsory MBA workshop entitled “Leadership through the Arts” facilitated by Pilobolus dancers who lead participants in improvisation, movement, and collaborative choreography.

In medical schools administrators have recognized a critical

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

Music majors are the most likely group of college grads to be admitted to medical school according to a study conducted by Lewis Thomas. He found that 66 percent of music majors who applied to medical school were admitted, the highest of any college major; 44% of biochemistry majors were admitted.

Peter H. Wood,
ERIC Document No. ED327480

Music is one way for young people to connect with themselves, but it is also a bridge for connecting with others. Through music we can introduce children to the richness and diversity of the human family and to the myriad rhythms of life.

Daniel A. Carp,
Eastman Kodak Company
Chairman and CEO



Artist Joe Sahlins

role for the arts in preparing doctors for their careers. According to LA Times writer Mike Anton, “... the number of future doctors taking literature, art interpretation and other humanities courses has surged over the past decade. They are trying to awaken their feelings and intuition as a way to connect with patients who feel as though they have been reduced to a collection of symptoms.”

Yale University has developed a course entitled “Visual Persuasion in the Law” that teaches students how to maximize their persuasiveness in real legal cases using images as well as words. “In a society,” the course description notes, “in which images are the coin of the realm, lawyers (no less than journalists, politicians and advertisers) need to cultivate the critical skills of visual literacy.” Universities elsewhere are increasingly recognizing the importance of the arts in the new economy. Nancy Adler, Professor of International Management at Canada’s McGill

4. The arts help prepare students for living in a global society.

The arts help prepare students for living in the global society The arts provide the ideal vehicle for exploring the cultural identity of one’s self and of others. The ability to understand and negotiate cultural difference assumes critical importance in an increasingly globalized economy. The arts, because they both express cultural difference and engage students on a universal level, provide an entry point into the examination of culture and history. Author Marjorie Manifold notes, “Art, as a way of knowing, presents a kind of knowledge that the facts and abstractions of the social studies cannot make known.”

www.ericfacility.net/ericdigests/ed393787.html

Charles Fowler notes, “There is a near miracle here because as soon as we have a glimpse of other people’s humanity, we have crossed the cultural chasm that separates us.”

A study conducted by Columbia University Professor Robert Horowitz measured the effects of an artist residency

University notes, “At the beginning of the 21st century, Denmark opened the world’s first business school-based Center for Art and Leadership. The graduates of this Copenhagen Center are now among the most highly-sought-after candidates on the European job market.”

The MFA is the New MBA Not only universities recognize the value of training in the arts. Author Daniel Pink comments in the Harvard Business Review, “Corporate recruiters have begun visiting the top arts grad schools- places such as the Rhode Island School of Design, the School of the Arts Institute of Chicago, Michigan’s Cranbrook Academy of Art- in search of talent. ... Businesses are realizing that the only way to differentiate their goods and services in today’s overstocked, materially abundant market-place is to make their offerings transcendent — physically beautiful and emotionally compelling.”

program on children’s attitudes towards, and understanding of other cultures. *The Cultural Tapestries Project* featured a series of four visits by performing artists coupled with six visits by writers to help students process what they had observed during artist performances and workshops. Students had opportunities to interview the artists. The project resulted in increased knowledge and understanding of other cultures (unpublished manuscript). These findings demonstrate how the arts not only prepare students for international citizenship but may also provide a vehicle for reduced inter-ethnic tensions. Another study in Arizona by Kay Edwards reveals that immersion in Native American music and cultural experiences were effective in diminishing fourth graders’ stereotypical views of other cultures.

In a 2002 national poll, conducted by the *Performing Arts Research Coalition*, over two-thirds of respondents either strongly agree or agree that the performing arts help them

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

The arts are one of the main ways that humans define who they are. They often express a sense of community and ethnicity. Because the arts convey the spirit of the people who created them, they can help young people to acquire inter-and intra-cultural understanding. The arts are not just multi-cultural, they are trans-cultural; they invite cross-cultural communication. They teach openness toward those who are different than we are.

Charles Fowler,
Strong Arts, Strong Schools
<http://www.highbeam.com/doc/1P3-24051761.html>

When people put on a play or a dance piece together they learn to cooperate and find they must go beyond tradition and authority if they are going to express themselves well. The sort of community created by the arts is non-hierarchical- a model of the responsiveness and interactivity that a good democracy will also foster in its political process. Moreover the element of joy— of sheer fun— can help the arts to offer a venue for exploring without crippling and counterproductive anxiety. The arts ... promote an enduring, even attractive dialogue with the prejudices of the past.

...
Martha Nussbaum
Newsweek International



Angkor Dance Company

better understand other cultures. Through engagement in a shared activity such as band practice or mural creation, students gain facility in working as a team that transcends cultural differences. Another study conducted by the British National Foundation for Education Research discovered that the “arts were considered to have an important role to perform in shaping attitudes in a multi-ethnic and multi-

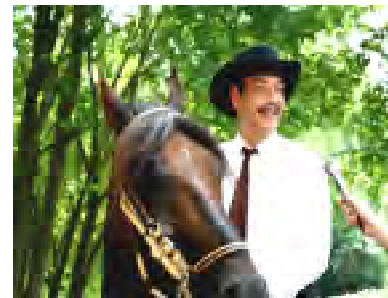
cultural society— both in schools with high proportions of children from ethnic minorities and those with very low proportions. ...” The study also found that “all of the arts forms were posited as impacting positively on young people’s cultural perspectives and awareness.” Educators perceived drama as being particularly useful when dealing with social, moral, human rights, and racial awareness.

Culturally based arts have served as the core at two innovative whole school reform projects in Chicago. The Telpocacalli Elementary School has adopted traditional Mexican cultural elements to help children develop a sense



Vejigante mask-maker Angel Ortiz

Jose Rubero, breeder of Puerto Rican horses. Paso Fino at 2006 *Explorations in Puerto Rican Culture Institute*



of identity and to learn more about their heritage. The arts are infused throughout the curriculum. The *Dr. Pedro Albizu Campos Alternative High School* has developed itself as a Puerto Rican culture-based high school.

In Springfield, under the auspices of a US Department of Education Model Development and Dissemination Grant, the Massachusetts Cultural Council is partnering with Springfield Public Schools to introduce elements of Puerto Rican culture into classrooms and to bridge the cultural chasm between students and teachers. Designed as a scientific study, this project will bring its findings to the effort to develop responsive classrooms.

<http://www.sps.springfield.ma.us/deptsites/finearts.asp>

The Arts Help Ameliorate the Challenges English Learners Face

The SUAVE program in California matches artists with classroom teachers to work with immigrant children. Teachers involved in this program, “report that music, drama, and visual arts encourage language learners in a myriad of useful ways, overcoming barriers to communication by offering a broader means of expression. A child who may not want to answer questions directly in typical teaching dialogues may open up linguistically when describing what s/he has painted. A puppet may ‘talk’ when a child is too shy to do so. Each of these situations builds confidence, and over time, leads to expressive language production in other forums. Each also increases self esteem

which has a deep impact on a student’s ability to interact and aids in unlocking other cognitive abilities. One teacher expressed the belief that arts-based assessments of progress are more far more accurate than conventional assessments, revealing not only a broader spectrum of abilities but also giving insight into how a student approaches learning.” <http://www.artcenter.org/educationsuave.htm>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

I also find what it does, is it gives you the chance to be able to be abstract so that you're not just dealing with two plus two equals four, but you get to take in these different ideas and mush them around and apply them to other things. Or like with the theater, and you're working on a character that is a hero, you can somehow apply that to other parts of your life. And as opposed to it being very concrete, like you said, not keeping you in a box, it enables you to integrate all these different positions of who you are so that you become a multi-dimensional human being, as opposed to a robot that knows the capital of Minnesota.

Student from South Egremont School

I think the arts liberate a person's mode of thinking and I think it's very healthful and conducive to perhaps increasing creativity. Because the arts are fundamentally an exploration. Science and technology are an exploration. And it's very useful for a student to have an experience in which one can explore in an unfettered way.

Nobel Laureate Jerome T. Friedman,
MIT Physics Department



5. Engaged learning in other academic disciplines is stimulated by the arts.

Most schools today use curricula that reflect the 19th century German university system of academic “disciplines.” Unfortunately No Child Left Behind has reinforced this silo mentality. Especially in middle school and high school, districts parcel out forty-five minute class periods to English, physics and civics with the result that students seldom see their studies as a whole. Educators rarely teach students how to cross a disciplinary boundary to enhance knowledge in another area. In real life, and especially in the new economy, boundaries are crossed all the time. If we are to prepare students for the 21st century, we must enhance their ability to move from discipline to discipline. Studies have shown that using the arts to enhance learning in other disciplines yields powerful results.

Critical Links Study In 2002 the Arts Education Partnership published Critical Links, a compendium of sixty-two scientific studies of the effects of the arts on learning in other academic areas and on emotional and social skills

One example of using the arts to enhance student academic performance not mentioned in Critical Links is the I.D.E.A.S. Total Literacy/ HOT Readers program. Teachers at the John Lyman Elementary School in Middlefield, Connecticut noticed that children who had problems reading also experienced difficulty keeping a steady beat. With the school's music teacher and an outside consultant, they developed a reading program that used movement and music extensively to build literacy skills in emergent readers. Children involved in the program recorded significant gains in their ability to read.

According to Critical Links scientific studies, the arts:

- engage students in their learning;
- increase comprehension through dramatizing reading material;
- help children break phonetic codes with music and dance instruction;
- develop expressive and reflective skills that enhance writing proficiency;
- create a school environment more conducive to learning; develop spatial reasoning abilities, critical to math and language facility;
- enhance performance in other areas;
- increase attendance, reduce retention;
- allow children to address and express personal issues; and
- reach children often unreachable.

Students Engaged in the Arts Perform Better Academically

Dr. James Catterall based his research on the National Educational Longitudinal Study of 1988 (NELS: 88), and ongoing study following approximately 25,000 students in 1,000 schools across the United States. Catterall used this extensive data to study the correlation between involvement in the arts and academic performance, standardized test scores, community service, and drop-out rates. He discovered that:

- young people highly engaged in the arts do better in school and
- those students showed higher academic performance, increased standardized test scores, more community service, and lower dropout rates than did those students not involved in the arts.

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)



Students learn mathematics, design and teamwork in a mosaic project.

The principal of Edgebrook, Chicago's highest-scoring non-selective elementary school, attributes her school's success with its embrace of the arts. "We were concerned that we might see a negative impact on test scores," Diane Maciejewski said, "But actually, just the opposite happened."

Nick Rabkin and Robon Redmond, Washington Post, January 8, 2005, page A-19.

Learning in the arts cannot be regarded as "extra," "trivial" or possible only when the "basics" are in place. The arts are basic for they push learners to pose problems and find resolutions, to link thought and action and to recognize the consequences of individual behaviors on group interactions and achievements. Current thinking and demands of communication in the continuing information-based workplace reveal the kinds of thinking necessary for civic, economic, technical, inventive and social challenges and point to society's keen need for more learning of the kind elaborated here as existing within the arts.... Communities that support youth-based arts organizations do more than preserve and develop their youth for the future. They engage the creative energies of youth in positive ways that enrich community life and culture today.

Shirley Brice Heath

Catterall also noted that these differences are more pronounced for students consistently involved in the arts over an extended period of time, and that these differences cross socio-economic status.

The Arts Address Learning through Multiple Intelligences

Howard Gardner of Harvard University has earned an international reputation for his groundbreaking studies on human intelligence introduced in *Frames of Mind*. He theorizes that far from being a single quality, intelligence comprises seven distinct areas of competence: linguistic, logical/mathematical, musical, spatial, bodily/kinesthetic, interpersonal and intrapersonal. His work demonstrates that by making use of all seven areas learning can be deeply enriched. Arts-based instruction is one of the best ways to engage all seven forms of intelligence.

Researchers at the University of California, Irvine, studied the power of music by observing two groups of preschoolers. One group took piano lessons and sang daily in chorus. The other did not. After eight months the musical three-year olds were expert puzzle masters, scoring 80% higher than their playmates did in spatial intelligence - the ability to visualize the world accurately. This skill later translates into complex mathematics and engineering skills.

6. At-risk students especially benefit from engagement in the arts.

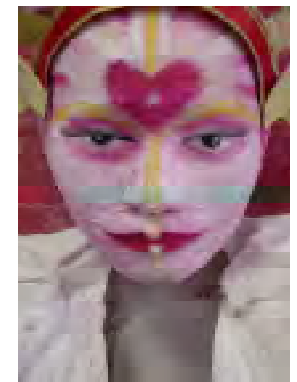
When anthropologist Shirley Brice Heath began investigating the effectiveness of after-school programs, she had no particular interest in the arts. However she discovered that arts-based after-school programs were the most successful programs across the country. After concluding her nine-year national research project on non-school youth organizations in low-income neighborhoods, Heath commented, "When young people work in the arts for at least three hours on three days of each week throughout at least one full year, they show heightened academic standing, a strong capacity for self-assessment, and a secure sense of their own ability to plan and work for a positive future for themselves and their communities."

Compared to a national sample of students of a similar age, young people in Heath's study were:

- attending schools where the potential for violence was more than twice as high;
- more than twice as likely to have parents who were divorced or had lost their jobs in the past two years; and
- over five times as likely to live in a family involved with the welfare system in the last two years.

And yet, these young people were also:

- four times more likely to have won school-wide attention for their academic achievement;
- being elected to class office within their schools more than three times as often;



RAW Art Works

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

Learning in the arts for these young people captures their imaginations, talents and social commitments. By occupying responsible roles in programs that focus on the visual, performing and media arts, young people develop skills, sound budgeting strategies and the capacity to communicate with adults in their own neighborhoods as well as in the offices and boardrooms of local businesses, corporations and foundations.

Shirley Brice Heath, with Elisabeth Soep and Adelma Roach

- *four times more likely to participate in a math and science fair;*
- *three times more likely to win an award for school attendance; and*
- *over four times more likely to win an award for writing an essay or poem.*

Anna Madison, from the University of Massachusetts, Boston, conducted an unpublished independent report on the Massachusetts Cultural Council's *YouthReach Initiative* that supports arts-based youth development programs for at-risk youths. These in-depth arts education programs teach crucial life skills that prepare young people for college, the workforce and the world beyond. Madison found that, after participating in a YouthReach program:

- *the number of students who report that they like school doubled (attitude toward school is a major indicator of academic success);*
- *young people experience an increase in life skills, self-esteem and personal self-efficacy; and*
- *the longer a young person is involved with a YouthReach program, the deeper the impact.*

The Arts Contribute to Reducing Dropout Rates Rising student drop rates have become a cause for concern in Massachusetts. Because the arts engage students in learning, they are more likely to attend school and less likely to drop out. Numerous studies have documented this effect of arts education. For example, the Texas Music Educators Association, along with the Texas Coalition for Quality Arts Education conducted a study that reported participation in fine arts courses leads to higher academic ratings and lower dropout rates in Texas middle schools and high schools http://www.tmea.org/025_Advocacy/2007ArtsDayPacket.pdf. The Pittsburgh, Pennsylvania School District analyzed its 1997 dropout rate in terms of students' musical experience. Students with no ensemble performance experience had a dropout rate of 7.4 percent. Students with one to two years of ensemble experience had a dropout rate of 1 percent, and those with three or more years of



Mural, done by Coming up Taller Awardee, Youth-Art-in-Action, a youth project of the Museum of Fine Arts, develops and reinforces ability to work in groups, to practice mathematics, and to make a commitment to the community.

<http://www.cominguptaller.org/awards-2005/program15.html>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

After-school programs have joined forces with the arts to foster a developed workforce. The programs have been successful through a simple combination of the arts, academics and social counseling, and the reinforcement of necessary soft skills. Not only have violence, drug abuse and alcohol abuse in communities decreased through arts-based prevention programs, but programs have documented increases in students' likelihood to set further educational or career goals. Gains in self-esteem, discipline, problem-solving and decision-making- all skills necessary to actively participate in today's workforce - have also been noted.

National Governors' Association



performance experience had a dropout rate of 0.0 percent.

7. The arts develop workforce skills both in school and out of school.

Leadership, self-discipline, and collaborative skills are all characteristics of effective workers. Columbia University found that among more than 2000 middle school students in four states, children receiving at least three years of in-school instruction in the arts scored significantly higher on quantitative tests of creative thinking than their peers with less arts instruction (NGA, p.3). Shirley Brice Heath concluded from her research that young people in arts-based organizations gain practice in thinking and talking as adults. “They play important roles in their organizations; they have control over centering themselves and working for group excellence in achievement. Their joint work with adults and peers on conversations that test and develop ideas, explicate processes, and build scenarios of the future.”

In 2002, young people who had participated in MCC's YouthReach-funded projects earned well over 1.2 million dollars in scholarships to support their higher education. 100% of high school seniors involved in YouthReach projects were graduated from high school in June 2002 and 82% had plans to attend college. As a result of the YouthReach experience, many youth became involved in other community activities. After holding focus groups with YouthReach participants and their parents, assessment specialist Anna Madison concluded that YouthReach participation leads to social enrichment. Parents observed that the self-confidence developed in YouthReach-funded programs led to youth assuming leadership roles, engaging in other arts activities, and becoming members of other youth groups. Life and self-esteem and personal self-efficacy all improved after participation in YouthReach programs. (Anna Madison, 1997 report)

Young people participating in in-depth arts programs “are 8 times more likely to receive a community service award than their counterparts in the national sample. Moreover, these youth have strong pro-social values toward working within their communities and striving toward correcting economic inequalities. These qualities bode well for their future roles as community members.” (Heath, op.cit., 1998) And, we might add, as productive members of the workforce.

I think the arts liberate a person's mode of thinking and I think it's very healthful and conducive to perhaps increasing creativity. Because the arts are fundamentally an exploration. Science and technology are an exploration. And it's very useful for a student to have an experience in which one can explore in an unfettered way.

Nobel Laureate Jerome T. Friedman of the MIT Physics department

Chance and fortune do indeed favor the prepared mind.

Kenneth Snelson, artist

I see technology as a traditional tool for composition like Bach used the pipe organ in his time.

Roberto Morales-Manzanares, composer

8. Achievement in science and technology is correlated with training in the arts.

Aptitude in the Arts is a Predictor of Career Success The economy of the twenty-first century generates numerous jobs involved in the creation and manipulation of symbols and sounds. This complex economy needs scientists of the

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)



highest possible quality. McArthur “Genius” prizewinner, Robert Root-Bernstein, who has dedicated his life to exploring connections between the arts and science, notes, “The arts, despite their reputation of being subjective, emotional, nonintellectual pursuits, make science and inventions possible.... Many other studies parallel ours. One found that neither mathematical nor verbal reasoning tests are useful indicators for future careers in science and technology, but high visual imaging ability is.

Another found that high aptitude in arts and music are much more predictive of career success in any field than the results of grades, IQ achievement or any other standardized measures. Business executives who head major technology firms often are very talented artists, musicians and photographers.”



The dramatists of ancient Greece had a profound knowledge of acoustics, while their modern counterparts are masters of such technologies as electronic sound, lighting, film and television. In all the arts disciplines, a wide range of technologies offer students ways to accomplish artistic, scholarly, production and performance goals. New technologies also make it possible for students to try out a vast array of solutions to artistic problems. For students, an arts education contributes to technological competence (Educating for the Workplace through the Arts). For example, using computers to create media animations in high school calls on the same competencies that industry needs to design business presentations, produce commercials or create feature length films.



Sharon Morgan, former Executive Director of the Oregon Coast Council for the Arts, insists that arts-in-technology programs impart a special kind of academic discipline. She reports that the “kids in our Animation Project find that, while the software may give them quick access to working

tools, the work is hard. When they find out how difficult it is, some naturally fall by the wayside. But it turns others around. Animation arts have introduced them to why they need a broad and content-rich education.”

Training in the arts imparts a knowledge of the physical properties of material, whether wood, metal, canvas, or computer chips, develops skill sets, and instills an ability to see a project through to completion. As play helps children build social skills as they act out roles, so the arts provide analogs of the work experience that, through repetition and sequential development, prepare children for the workforce whether in the arts, sciences, or other career paths.



Visual rendering of $g(xy)=\sin(y^2)$
Boston Globe, March 16, 2004, C3

Training in the Arts Assists in Scientific Research Many theoreticians now point to the similarity in the methods of arts and scientific research. Both involve exploration, observation, and hypothesis forming. So the sharpening of perceptual and intellectual skills that the arts provide can have an additive effect on science learning provided that the arts training is sequential, rigorous and long-term.

Training in the arts also helps scientists envision the abstract. In a contest called *Weird Fields*, dozens of MIT

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts *(continued)*

The very best engineers and technical designers in the Silicon Valley Industry are nearly, without exception, all practicing musicians.

Grant Venerable, *“The Paradox of the Silicon Savior,”* as reported in *“The Case for Sequential Music Education in the Core Curriculum of the Public Schools,”*

The Center for the Arts in the Basic Curriculum, New York, 1989

freshmen used a computer program to translate mathematical formulas for flow fields into visual images. The resultant images helped students to come to a deeper understanding of abstract forces such as the jet stream. Artist Roberto Morales-Manzanares, in residence at the University of California’s Space Sciences Laboratory, worked with physicist Janet Luhmann, to generate audio counterparts to stereo images of sun and solar explosions. Luhmann comments, “You can look at wiggly lines and you can look at spectrograms...and your eyes can give you certain feedback, but sometimes you hear patterns that you don’t see readily. ... The advantage of bringing Roberto on the project is that he is not stuck in the data. He has helped us think of different ways to make the sonification both musical and useful.” Boston CyberArts, under a National Endowment for the Arts grant, sent artists in residence into an IBM laboratory and a software company. Martin Wallenberg, an IBM researcher notes, “You can go your whole career working on something and only thinking about it in a certain way. Artists have the ability and talent to blow that wide open.” In the Bay area, a new company has

emerged, Artists at Work, which places artists on corporate campuses for two weeks to stimulate technological and cultural innovation.

The Arts Communicate Scientific Findings Physicist Chet Raymo, writing about an artist residency at MIT’s Haystack Radio Observatory, contends that the arts can be a vehicle for making contemporary science understandable to the public. “The idea of artists-in-residence at scientific research institutes strikes me as exceptionally useful. God knows, as a society we are alienated enough from science. Our tax dollars support basic scientific research to the tune of \$16.5 billion a year, but most of us have only the vaguest notion of what the money is spent on - or why it is worth spending.... Every re-search institution supported by more than \$10 million of federal funds should be required to have an artist in residence. Scientists and artists need to brush shoulders, learn from each other, pass vibes back and forth, and look for places where quarks and quasars touch the longings and passions of the human heart. “
<http://wengam.com/raymo.html>

The Japanese consider the study of music important for their engineers. Playing a musical instrument involves discipline, creativity and conceptualization. These attributes, added to engineering talent, help produce products that are not only functional but also harmonious in every way.

Shirley Young, Vice President – China Strategic Development, General Motors Corporation

9. The value of arts education to the 21st century economy has been recognized by other nations that have invested substantially in the arts.

A 1988 test administered by the International Association for the Evaluation of Educational Achievement ranked the United States fourteenth among seventeen countries in the science achievement of eighth and ninth graders (AAAS, 1989). The top three ranked countries were Hungary, Japan, and Holland. Music education holds a higher status in the curriculum of those countries whose students considerably outpace ours. Our students trailed far behind nearly every other participating country. Similar findings were made in mathematics. In Dutch secondary schools, music and art became mandatory subjects in 1968 and compulsory examinations were implemented in these subjects in 1976. In number one ranked Hungary, music education has long



been an essential and sequential program implemented nationally by composer Zoltan Kodaly. Both voice and instrumental training twice a week are compulsory throughout the first eight years of schooling.

Japan recognizes the critical importance of the arts for workforce development and makes certain that arts education occupies a central role in the curriculum. Every Japanese school has materials and instruments to teach music and a room exclusively for music instruction. Each student receives two hours of lessons a week. Such a preoccupation with the arts as a central and essential part of the curriculum is not exclusive to Japan. In

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts *(continued)*

Germany, each student receives two classes per week in the arts, kindergarten through 12th grade.

A recent study of Japanese government education policies notes that the “school education must emphasize emotional education and nurture in students the qualities and abilities to learn and think and act independently of their subjective judgement.” The arts play a critical role in developing Japan’s future workforce. The article continues, “The purpose of the New Courses of Study (implemented as Japan shifted to a five day school week) is to cultivate in children in each school a zest for living...The objective of Integrated Study is to give students the capability to find problems, learn, think, and judge for themselves... to foster an independent and creative attitude towards problem-solving and exploratory activities.... It is hoped that each school will

work on participating in artistic and cultural activities and experiencing local cultural events.”

Singapore, realizing that “the creative industries are increasingly being recognized worldwide as a significant growth engine for the economy,” has made arts education a key component of its economic development strategy after years of concentrating on the “basics.” Their Creative Industries Development Strategy report contends that arts, design, and media be embedded as learning tools for all levels of education.

In another report, *Imagination: Investing in Singapore’s Cultural Capital*, they note the critical importance of arts education as it relates to workforce skills: “The importance of the arts and culture has to be inculcated from youth, and this will constitute an important foundation for increasing cultural capacity in Singapore. By saying this we do not mean that our education system should nurture every child to become an artist...Our emphasis is, however, to instill and nurture an appreciation for the arts and culture in our young. This in turn will translate to critical skills necessary for success in the child’s chosen career.” (p.36)

Finally, China, recognizing the critical importance of creativity and innovation in the new economy, is investing \$50 million dollars in a new educational center to reinforce those skills. These and other countries will be our competitors in the 21st century. They clearly understand that “kill and drill” education will not prepare their children for the new economy. We owe it to our children to give them the competitive edge that training in the arts provides.



Students at the Worcester (MA) Arts Magnet School combine the study of color, architecture, and geometry with fine motor skills.

Workforce Skills and the Arts (continued)

In the years ahead, people’s creativity will increasingly be a key to a country’s cultural identity, to its economic success, and to the individual’s well being and sense of fulfillment. Successful societies in the 21st century will be those that nurture a spirit of creativity and foster the cultural activity that goes hand in hand with it. Governments cannot, of course, enforce creativity; but we can recognize that creativity will be central to the nation’s future and place the framework of funding and support to ensure that everyone has the opportunity and freedom to develop their creative talents.

Imagination Annex 1.1.2 i



Worcester Arts Magnet School student work

10. To maintain their international competitiveness, the United States and Massachusetts must invest in arts education.

The country that gave birth to Yankee ingenuity, the United States, must take steps to maintain its capacity for innovation. Building an education infrastructure rich in the arts will help the country to forge a competitive edge in the world economy. In a 2001-2002 report on Global Competitiveness, the World Economic Forum ranked the United States second in capacity for innovation, behind Finland and even with Japan and France; Sweden, Israel, Germany and Switzerland ranked close behind. But our position may not be secure. Writing in USA Today, Alan Webber, founding editor of the business magazine, Fast Company, points to the disturbing phenomenon of “reverse brain drain” in which the best and brightest are gravitating from the United States to other countries. He comments, “The only way for the United States to out-think, outsmart and out-innovate the competition, is to look hard at government policies that either send our best brains overseas or discourage more brains from coming here; to question business practices that increase reliance on foreign brains while “buying out” our own; and to demand more from our education system.”

Support of the arts is a workforce issue for companies and for state and national policy-makers. The arts develop the kind of thinker and manager that businesses must have if they are to remain competitive in the information rich global marketplace. But creative, problem-solving individuals do not appear overnight; they are the product of an education system that consistently creates an environment supportive of creativity and inquiry. Sustained engagement with the arts in and out of school contributes substantially to building that supportive environment.

The rapidity of innovation and the unpredictability of the directions it may take imply a need for considerable investment in human capital. Workers must be equipped not simply with technical know-how but also with the ability to create, analyze, and transform information and to interact effectively with others.

Alan Greenspan,
former Chairman of the Federal Reserve

Workforce Skills and the Arts (continued)



CONCLUSION

High quality, sequential instruction in the arts, supplemented by interaction with cultural organizations and artists, contributes in multiple ways to the development of workforce skills and the capacity to learn new skills given well-articulated and carefully implemented, standards-based curriculum. Time dedicated to the study of the arts does not work to the detriment of other academic subjects. The arts reinforce learning. The arts motivate and engage students. The arts reduce dropout rates. The arts defuse school violence. The arts help retain teachers. The arts provide meaning to academics and to life.

We need to invest in arts education to help Massachusetts and the nation keep a competitive edge in a global economy that requires cooperative work skills, creativity, and appreciation of cultural differences and traditions.

Many Americans agree on the necessity of placing the arts at the center of our children's education. A 2001 national Harris poll indicated that 9 out of 10 parents of school-age

What Can You Do to Make Sure Your Child Is Prepared for the 21st Century Workforce?

You have the power to make a difference in the lives of children by helping policy-makers and legislators understand the power of arts education to engage, inspire, and challenge students. The following are some suggestions for advocates to increase support for arts education:

- 1) Get the facts about the strength of arts education in your school district. Conduct an audit such as the one designed by the Kennedy Center Alliance for Arts Education or another by the California Department of Education. Contact the Massachusetts Cultural Council to obtain their ranking of the Commonwealth's school districts' commitment to arts education. (617-727-3668)
- 2) Make personal contacts with your state representatives, state senators, and board of education members NOW!

children oppose subjecting arts programs to budget cutbacks. A 2002 PARC poll indicated that 73% of Bostonians strongly agree that performing arts contribute to the education and development of children. In Massachusetts a stunning 92% of respondents to a 2004 DiNatale poll supported the arts in education. The critical importance of arts education has been recognized by Congress in making it one of the core subjects in *No Child Left Behind*. National organizations such as the Educational Commission on the States and the National Governor's Association have underscored the importance of the arts in education. The two most recent U.S. Secretaries of Education have written to districts across the country reaffirming the place of the arts in the core curriculum. Yet arts courses nationally continue to be chipped away at, creating concerns about our long-term economic competitiveness and about the ability of our children to find rewarding careers. We need to take action now to preserve and expand our investment in arts education. What can you do? Go here.

Send them an invitation to attend an arts event or arts class at your school.

- 3) Keep your state legislators and State Board of Education members informed about the arts education opportunities for students in your school. Include them on mailing lists for newsletters and notices about concerts, plays, art exhibits, and other school activities. Host a breakfast meeting or social gathering with the lawmakers in your area to introduce them to your colleagues, students, families, and share the power of the arts with them.
- 4) Find out if the arts programs in your school are supported by the Massachusetts Cultural Council massculturalcouncil.org or other state funds (or the state arts agency in your state), and thank lawmakers for their continued support.



Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts *(continued)*

The nation's top business executives agree that arts education programs can help repair weaknesses in American education and better prepare workers for the 21st century.

Business Week, October 1996

- 5) Keep lawmakers informed about the students or programs in your school that receive recognitions or awards in the arts. Lawmakers appreciate being on top of the good news from the schools in their district(s).
- 6) Share the information that you receive from the [Massachusetts Alliance for Arts Sciences and Humanities](#) or the [Massachusetts Alliance for Arts Education](#) (or the [advocacy organization](#) in your state) with colleagues, parents, and community leaders, and ask them to contact lawmakers with messages that support arts education.
- 7) Conduct a legislative interview with your lawmaker. It helps to gauge support for arts education among lawmakers and policy-makers, and provides opportunities for you to share information about the importance of arts education programs in your school.
- 8) Consider running for your community's school board.



Teachers from the pilot Explorations in Puerto Rican Culture Institute 2006

MORE ADVOCACY INFORMATION

American Association of School Administrators, the nations' school administrators make the case for arts education. <http://www.aasa.org/publications/content.cfm?ItemNumber=7836>

The Kennedy Center's ArtsEdge offers quotes about the arts that may prove useful. <http://artsedge.kennedy-center.org/explore/qts.cfm>

Childrens' Music Workshop provides research briefs for various constituencies- parents, teachers, etc. <http://www.childrensmusicworkshop.com/advocacy>

Keep Arts in Schools has developed a concise "fact sheet."

The Music Educators National Conference provides an excellent guide to advocating for music programs in your school or district <http://www.menc.org/resources/view/music-education-advocacy-central>

The National Art Educator Association offers another superb guide to advocacy oriented toward the visual arts, but applicable to all arts disciplines. <http://www.naea-reston.org/Agenda.pdf>

Americans for the Arts recently released a comprehensive advocacy tool kit designed especially for organizations just starting down the path of arts education advocacy. http://www.americansforthearts.org/public_awareness/artsed_facts/

Keeping Arts in Schools provides how-to's, research, and much more. <http://www.keepingartsinschools.org/Resources/index.html>

Looking for ways to involve students in real world experiences? Go to **Student Advocates for the Arts** <http://www.studentadvocatesforthearts.org/>

Workforce Skills and the Arts (continued)

WORKFORCE SKILLS AND THE ARTS BIBLIOGRAPHY

Essential Readings

Adler, Nancy, (2006). *The Arts and Leadership: Now that We Can Do Anything, What Will We Do?* Academy of Management Learning and Education, Vol. 5, No. 4, 486-499.

A recent insightful and well-researched discussion of the role of the arts and business, and artists and managers. Excellent references. Highly recommended to provide a view of the broad societal changes we swim in.

Arts Education Partnership, (2006). *Critical Links: Learning in the Arts and Student Academic and Social Development*. Washington, D.C. Retrieved 2 March 2007 from www.aep-arts.org/resources/toolkits/criticallinks/index.htm

Austin, Robert and Devin, Lee, (2003). *Artful Making: What Managers Need to Know About How Artists Work*. Indianapolis: FT Press, 1st edition.

Artful Making offers the first research-based framework for engineering ingenuity and innovation. The authors demonstrate structural similarities between theatre artistry and production and today's business projects—and show how collaborative artists have mastered the art of delivering innovation “on cue,” on immovable deadlines and budgets.

The changing workplace is changing our view of education, (October 1996). Business Week, pp. 2-16.

The CEO Forum, (2001). *Key Building Blocks for Student Achievement in the 21st Century*. Retrieved 31 January 2007. www.ceoforum.org/downloads/report4.pdf

The Conference Board, (2006). *Are They Ready to Work?: Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*. Retrieved 31 January 2007 from http://www.conference-board.org/pdf_free/BED-o6-Workforce.pdf

[conference-board.org/pdf_free/BED-o6-Workforce.pdf](http://www.conference-board.org/pdf_free/BED-o6-Workforce.pdf)

Florida, Richard, (23 December 2003). *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books. Retrieved 2 March 2007 from <http://www.creativeclass.org/>

Galligan, Ann, (2001). *Creativity, Culture, Education and the Workforce*. Boston: Center for Arts and Culture Issue Paper. Retrieved 30 November 2006 from <http://www.culturalpolicy.org/pdf/education.pdf>

Excellent summary of workforce skills and the involvement of state arts agencies.

Heath, Shirley Brice with Soep, Elisabeth and Roach, Adelma, (1998). *Living the Arts Through Language + Learning: A Report on Community-Based Youth Organizations*. Carnegie Foundation for the Advancement of Teaching. Retrieved 22 February 2007 from <http://www.americansforthearts.org/NAPD/modules/resourceManager/publicsearch.aspx?id=9603>

Huitt, W. G., (1997). *The SCANS Report Revisited*. Paper delivered at the Fifth Annual Gulf South Business and Vocational Education Conference, Valdosta: Valdosta State University. Retrieved 30 November 2006 from <http://chiron.valdosta.edu/whuitt/col/student/scanspap.html>

National Center on Education and the Economy, (2007). *Tough Choices or Tough Times*. Retrieved 31 January 2007 from <http://www.skillscommission.org/executive.htm>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

The most recent, simplistic, and perhaps most controversial, look at workforce skills.

National Governor's Association, (2002). *The Impact of Arts Education on Workforce Development*. Retrieved 5 January 2007 from <http://www.nga.org/Files/pdf/050102ARTSED.pdf>

Partnership for 21st Century Skills, (2006). *Are They Really Ready to Work?: Employers' Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce*. Retrieved 5 January 2007 from <http://search.live.com/results.aspx?mkt=en-us&q=%22Are+They+Really+REady+to+Work%3F%22&FORM=TOOLBR>

Partnership for 21st Century Skills, (July 2006). *A State Leaders Action Guide to 21st Century Skills*. Retrieved 5 January 2007 from <http://21stcenturyskills.org/documents/stateleaders071906.pdf>

Pink, Daniel, (February 2004). *The MFA is the New MBA*. Harvard Business Review.

Ruppert, Sandra S., (2006). Washington: National Assembly of State Arts Agencies. Retrieved 5 January 2007 from <http://www.nasaa-arts.org/publications/critical-evidence.shtml>

Study pointing to strong relationships between learning in the arts and fundamental cognitive skills and capacities used in mastering other school subjects, including reading, writing and mathematics.

The Secretary's Commission on Achieving Necessary Skills, (2000). *Arts and Earning a Living*. In SCANS 2000: The Workforce Skills Website. Institute for Policy Studies, Johns Hopkins University. Retrieved 17 November 2005 from <http://www.eduref.org/plweb/cgi/fastweb?getdoc+ericdb2+ericdb+1055875+229+wAAA+%28art%29>

The Secretary's Commission on Achieving Necessary Skills, (1992). *Learning a Living: A Blueprint for High Performance*. Washington: U.S. Department of Labor. Retrieved 26 September 2003 from <http://wdr.doleta.gov/SCANS/lal/LAL.HTM>

The Secretary's Commission on Achieving Necessary Skills, (June 1991). *What Work Requires of Schools: A Scans Report for America 2000*. <http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf>

The pioneering study that initiated the exploration of the relations between the arts and workforce skills.

Sylwester, Robert, (November 1998). *Art for the Brain's Sake*. Educational Leadership, Vol. 56, No. 3. Retrieved 2 March 2007 from http://imet.csus.edu/imetz/stanfillj/workshops/music_in_curriculum/articles/art_for_.htm

Winner, Ellen, (2006). *Studio Thinking: How Visual Arts Teaching Can Promote Disciplined Habits of Mind*. In P. Locher, C. Martindale, L. Dorfman and D. Leontiev (Eds.), *New Directions in Aesthetics, Creativity and the Arts*. Pp. 189-205. Amityville: Baywood Publishing Company. <http://www2.bc.edu/~winner/PDFs/StudioThinking.pdf>

Other Sources

Adams, Karyl, (September 2005). *The Sources of Innovation and Creativity*. National Center on Education and the Economy. http://www.skillscommission.org/pdf/commissioned_papers/Sources%20of%20Innovation%20and%20Creativity.pdf

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Allen, L., (2000). *Competencies that count: Strategies for assessing high-performance skills*. LAB Working Paper No. 2, Northeast and Islands Regional Educational Laboratory at Brown University. Retrieved 2 March 2007 from http://alliance.brown.edu/pubs/comp.count/comp_sahps.pdf
- Americans for the Arts, (2005). *Creative Industries 2005: The Congressional Report*. Retrieved 2 March 2007 from http://ww3.artsusa.org/information_resources/creative_industries/default.asp
- American Association of School Administrators, (2 February 1999). *Preparing Schools and School Systems for the 21st Century*, Retrieved 13 December 2002 from <http://www.america-tomorrow.com/ati/aasa9021.htm>
- American Youth Policy Forum, (2003). *Preparing Youth for the Information Age: A Federal Role for the 21st Century*. Retrieved 24 January 2003, from <http://www.aypf.org/pressreleases/pro9.htm>.
- American Youth Policy Forum, (2003). *They do it differently in England!* Retrieved 24 January 2003 from <http://www.aypf.org/pressreleases/pro9.htm>.
- American Youth Policy Forum & Center for Workforce Development, (June 2000). *Looking Forward: School-to-Work Principles and Strategies for Sustainability*. Washington, D.C: Author. Retrieved 22 February 2007 from www.aypf.org/publications/aypf_looking.pdf
- Angkor Dance Company, (n.d.). Retrieved 18 March 2007 from <http://angkordance.com>
- Antop-Gonzalez, Rene, (June 2003). *This School is My Sanctuary: The Dr. Pedro Albizu Campos Alternative High School*. University of Wisconsin-Milwaukee, Working Paper No. 57. Retrieved 2 March 2007 from <http://www.jsri.msu.edu/RandS/research/wps/wp57.html>
- Anton, Mike, (24 May 2003). *Adding a Dose of Fine Arts; More medical schools are offering courses in literature, painting and theater to improve doctors' ability to connect with patients*. Los Angeles Times.
- Arts and Business, (n.d.). *Essential Guidance & Information for the Arts*. Retrieved 7 March 2003 from <http://www.aandb.org.uk>
- Arts-Are-Essential, (n.d.). Retrieved 18 March from <http://www.aerts-are-essential.org>
- Arts Education Partnership, (2002). *An Inventory of arts-related academic and social outcomes found in Critical Links*. Washington, DC: Author. Retrieved 2 March 2007 from www.michigan.gov/documents/CLTransferChart2_103474_7.pdf
- Austin, Rob and Devin, Lee, (2003). *Artful Making*. Upper Saddle River: Prentice Hall.
- Berenguer, Xavier, (September 2002). *Art and technology: the division fades*. Retrieved 2 March 2007 from <http://www.uoc.edu/artnodes/eng/art/xberenguer0902.html>
- Birch, Tom, (2002). *The Arts in Public Policy: An Advocacy Agenda*. The NAASA Advocate: Strategies for Building Arts Support, VI (1), 1-8. Retrieved 2 March 2007 from http://www.nasaa-arts.org/publications/advocate_policy.pdf
- Boston Ballet, (n.d.). <http://www.bostonballet.org>
- Boston, Bruce, (1994). *Arts Education for the 21st Century American Economy*. New York: American Council for the Arts. Retrieved 2 March 2007 from <http://americans4thearts.stores.yahoo.net/001481.html>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Boston Cyberarts. *Artists in Residence at Technology Companies of Massachusetts*. Retrieved 13 February 2007 from <http://bostoncyberarts.org/air/>
- Boston Foundation, (n.d.). *New economy initiative: Using technology to empower community*. Retrieved 6 January 2003 from <http://www.tbf.org.current/neweconomy.html>
- Boulton, D., (1992). *Learning to Learn. New Horizons for Learning*. Retrieved 31 January 2007 from <http://www.implicit.com/Downloads/LearningtoLearn.pdf>
- Brewster, Elizabeth, (17 September 2003). *The Brave New Work Place*. Chicago Tribune. Online Edition. Retrieved 18 September 2003 from <http://www.chicagotribune.com/business/chi-030916emergent,1,2304064.story?coll=chi-h>
- Burmark, Lynell, (2001). *Visual Literacy: Learn to See, See to Learn*. Alexandria: Association for Supervision and Curriculum Development. Retrieved 22 February 2007 from shop.ascd.org/productdisplay.cfm?productid=101226
- Business Week, (1 May 2006), *It's Spring and the Students at the Nation's Top Design Schools Are Being Wooed...*
- BusinessWeek Online, (02 March 2007). *The 21st Century Corporation*. Retrieved 02 March 2007 from http://www.businessweek.com/2000/00_35/b3696001.htm
- California, State of, (n.d.) Retrieved 12 March 2007 from <http://www.musiccenter.org/education/mced-metlifereport-artstrategy.pdf>.
- California, State of, (2000). *California Workforce Development: A Policy Framework for Economic Growth*. California: Author. Retrieved 2 March 2007 from <http://www.academicssenate.cc.ca.us/Publications/Papers/Downloads/WorkForce%20Final.doc>
- California, University of, Berkley, (n.d.). *Space scientists find that solar wind becomes music in the right hands*. Physorg.com. Retrieved 11 March 2007 from <http://www.physorg.com/printnews.php?newsid=64857605>
- Catterall, James S, (December 1997). *Involvement in the Arts and Success in Secondary School: Monographs: The UCLA Imagination Project, Graduate School of Education and Information Studies, University of California at Los Angeles*. Retrieved 8 March 2007 from <http://pubs.artsusa.org/library/ARTSo42/html/1.html#pagetop>
- CEO Forum, (June 2001). *Key building blocks for student achievement in the 21st century. School Technology and Readiness Report*. Washington, D.C: Author. Retrieved 31 January 2007 from www.ceoforum.org/downloads/report4.pdf
- Chute, Eleanor, (13 April 199). *"Music and Art Lessons Do More than Complement Three R's,"* Pittsburgh Post-Gazette.
- Commonwealth of Massachusetts, (n.d.). *Department of Labor and Workforce Development: Our Offices*. Retrieved 25 October 2002 from <http://www.state.ma.us/dlwd/ouroffices.html>
- Commonwealth of Massachusetts, (October 2002). *Toward a new prosperity: Building regional competitiveness across the commonwealth*. Statewide report by the Department of Economic Development. Retrieved 22 February 2007 from www.mass.gov/Eoed/docs/Towards a New Prosperity/References.pdf
- Community Arts Education Project, (n.d.). Retrieved 18 March 2007 <http://www.artsed411.org/participate/caep.aspx>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Council on Competitiveness, (n.d.). *A bill to provide a national innovation initiative*. Retrieved 2 March 2007 from http://innovateamerica.org/pdf/National_Innovation_Act_2005.pdf
- Craft, Anna, (March 2001). *An Analysis of Research and Literature on Creativity in Education*. London: Qualifications and Curriculum Authority. Retrieved 2 March 2007 from www.ncaction.org.uk/creativity/creativity_report.pdf
- Crain Communications Inc., (2003). *Fast forward: 25 Trends that will change the way you do business*. Workforce Management, June, pp. 43-56. Retrieved 2 March 2007 from <http://www.workforce.com/section/09/feature/23/45/53/>
- Creative Learning, (n.d.). *Creativity Assessment Index*. Retrieved 6 January 2007 from <http://www.creativelearning.com/Assess/index.htm>
- Creativity Issues: A Bibliography*. University of Texas. Retrieved 4 January 2007 from <http://www.kieranhealy.org/files/drafts/creative-economy-bib.pdf>
- CSE@SSL, (n.d.). *Latest Sounds of Stereo*. Retrieved 3 March 2007 from <http://cse.ssl.berkeley.edu/impact/sounds.html>
- Cushman, Kathleen, (1998). *How the Arts Transform Schools: A Challenge for All to Share*. Challenge Journal. Vol. 3., No. 1. Providence: Brown University. Retrieved 22 February 2007 from www.annenberginstitute.org/challenge/pubs/cj/v3n1/pg4.html
- Cushman, Kathleen, (September 1997). *What's 'Essential' About Learning in the World of Work*. Horace. Vol. 14, No.1. Retrieved 23 March 2004 from http://www.essentialschools.org/cs/resources/view/ces_res/118
- Darrow, D.R., (1996). *SCANS Report: Workplace know-how*. In *Technology Education*. Retrieved 2 March 2007 from www.uni.edu/darrow/frames/scans.html
- Davis Publications, (2001). *Careers and the Arts*. Worcester: Author. Retrieved 2 February 2007 from: <http://www.davis-art.com/Portal/TeacherResources/ArtAdvocacy/Careers.pdf>
- Dede, Chris, Korte, Spence, Nelson, Robert, Valdez, Gil and Ward, David, (2005). *Transforming Learning for the 21st Century: An Economic Imperative*. Naperville: Learning Point Associates. Retrieved 22 February 2007 from www.learningpt.org/tech/transforming.pdf
- Department of Education, (August 1995). *Teaching and connecting young people to real life skills that prepare them for work and adulthood*. America Goes Back to School. Washington D.C: Author. Retrieved 2 March 2007 from <http://www.ed.gov/Family/BTS/pt9.html>
- Dryfoos, J.G., (1999). *The role of the school in children's out-of-school time*. The Future of Children: When School is Out, 9(2), pp. 117-134. Retrieved 2 March 2007 from http://www.futureofchildren.org/information2826/information_show.htm?doc_id=71938
- Easterly, W., (2002). *Barren Land*. Education Next, 2 (3). Retrieved 16 September 2002 from <http://educationnext.org/barren-land/>
- Economic Review Committee, (2002). *Creative Industries Development Strategy: Propelling Singapore's Creative Economy*. Singapore: Author. Retrieved 22 February 2007 from <http://app.mica.gov.sg/Portals/o/UNPAN011548.pdf>
- The Economist. *How to manage a dream factory*, (16 January 2003). Retrieved 21 January 2003 from http://www.economist.com/printedition/displayStory.cfm?Story_ID=1534766

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Edgebrook School, (n.d.). Retrieved 18 March 2007 from <http://www.edgebrook.cps.k12.il.us>
- Educating for the Workforce through the Arts: Why Arts Education is Basic.* In ArtsEdNet. Retrieved 13 December 2002 from <http://it.wce.wvu.edu/necc97/poster4/ArtsEdNet/WeWhacker/WW480.html>.
- Education Commission of the States, (January 2004). *An Arts-rich Education Helps Prepare Students for a Changing World.* The Progress of Education Reform 2004. Arts in Education. Vol.5, No. 1. <http://www.bcspecials.net/Article8.phtml>
- Eger, John M., (3 August 2006). *America in the Creative and Innovative Economy.* www.smartcommunities.org/article_govtech-net.pdf
- Eger, John M., (2004). *The Future of Work in the Creative Age.* Center for Arts & Culture. Retrieved 8 February 2007 from <http://www.culturalcommons.org/comment-print.cfm?ID=17>
- Eisner, Eliot, (2007). *Ten Lessons the Arts Teach.* Retrieved 5 March 2007 from <http://www.naea-reston.org/tenlessons.html>
- Fiske, Edward B., (ed.) (n.d.). *Arts Education Partnership. Champions of Change.* Retrieved 2 March 2007 from <http://artsedge.kennedy-center.org/champions/pdfs/ChampsReport.pdf>
- Florida, Richard, (March 2003). *The New American Dream.* The Washington Monthly Online. Retrieved 26 March 2003 from <http://www.washingtonmonthly.com/features/2003/0303.florida.html>
- Fowler, Charles, (1996). *Strong Arts, Strong Schools: The Promising Potential and Shortsighted Disregard of the Arts in American Schooling.* Oxford: Oxford University Press.
- Fuchs-Kittowski, K. & F., (2002). *Quality of working life and creative learning organisations: The organisational potential of telecooperation systems are not used decisively.* In: Passey, D. & Kendall, M. (Hrsg.). *TeleE-Learning: The Challenge for the Third Millennium,* IFIP 17th World Computer Congress – TC3 Stream on TeleE-Learning, IFIP Conference Proceedings 102. Kluwer Academic Publishers: Montreal, Canada. Retrieved 8 March 2007 from <http://citeseer.ist.psu.edu/fuchs-kittowskio2quality.html>
- Gage, Gail G., (January 20, 1999). *Can the Arts in Education Help Your Child to Learn?* Parents' Source. Retrieved 6 March 2007 www.parentsource.com/arts.article.asp
- Gardner, Howard, (7 March 1991). *Art Education and Human Development (Occasional Papers, Series 3).* Los Angeles: Getty Trust Publications.
- Gardner, Howard, (March 1993). *Frames of Mind: The Theory of Multiple Intelligences.* New York: Basic Books. Retrieved 8 March 2007 from <http://www.amazon.com/Frames-Mind-Theory-Multiple-Intelligences/dp/0465025102>
- Getty Education Institute for the Arts, (1997). *Arts Education for Life.* Los Angeles Getty Trust Publications.
- Gillis, D., (17 April 2001). *Training is investment in future.* Boston Globe. Retrieved 2 March 2007 from <http://www.highbeam.com/doc/1P2-8646915.html>
- Harper, Hilliard, (22 September 2006). *Dropouts and Arts Education.* Retrieved 10 October 2006 from www.signonsandiego.com/uniontrib/20060922/news_1eharper1.html

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Harvard Business Review, (February 2004). *Breakthrough Ideas for 2004*.
- Her Majesty's Government, (2005). *Common Core of Skills and Knowledge for the Children's Workforce*. Nottingham: DIES Publications. Retrieved 2 March 2007 from www.everychildmatters.gov.uk/deliveringservices/commoncore
- Holland, R., (1997). *Focus: What's wrong with school to work?* Speech delivered at the What Goals 2000 Means Conference, Capitol Hill, Washington, D.C. Retrieved 13 December 2002 from <http://www.eagleforum.org/educate/1997/may97/holland.html>
- Horowitz, Robert, (April 2005). *Beyond Arts Integration: Defining Learning in Arts Education Partnerships*. Montreal: AERA National Conference. Retrieved 2 March 2007 from <http://www.tc.columbia.edu/news/article.htm?id=4981>
- Huitt, W.G., (1999). *Success in the information age: A paradigm shift*. In *Educational Psychology Interactive*. Retrieved 24 July 2003 from <http://chiron.valdosta.edu/whuitt/col/context/infoage.html>
- I.D.E.A.S., (n.d.). Total Literacy. Retrieved 8 March 2007 from www.aeideas.com/about.cfm
- Imel, S., (1990). *Jobs in the future*. ERIC Document Reproduction Service No. 95, ED318913. Retrieved 18 December 2002 from <http://chiron.valdosta.edu/whuitt/files/jobsfut.html>
- International Association for the Evaluation of Educational Achievement, (n.d.). Retrieved 18 March 2007 from http://en.wikipedia.org/wiki/International_Association_for_the_Evaluation_of_Educational_Achievement
- Institute for Educational Leadership, (n.d.). *Center for Workforce Development*. Retrieved 24 January 24 2003 from <http://www.iel.org/programs/cwd.html>
- Isabella Stewart Gardner Museum, (12 March 2007). "Thinking Through Art" Research Reveals that Children Learn to Think Critically by Learning to Look at Art . Retrieved 12 March 2007.
- Jensen, Eric, (2001). *Arts with the Brain in Mind*. Alexandria: Association for Supervision & Curriculum Development.
- Jensen, Eric, (2001). *The science of the arts*. Principal Leadership, 2, (3). Retrieved 29 November 2005 from http://www.principals.org/s_nassp/bin.asp?TrackID=&SID=1&DID=53915&CID=998&VID=2&DOC=FILE.PDF
- Joffe, Phyllis, (1992). *The Arts and Workforce Skills* [audio tape]. National Public Radio.
- Kazis, R. & Kopp, H., (1997). *Both Sides Now: New Directions in Promoting Work and Learning for Disadvantaged Youth*. Boston: A Report to the Annie E. Casey Foundation, by Jobs for the Future. Retrieved 15 February 2007 from <http://www.jff.org/Documents/BothSidesES.pdf>
- Kleiman, Neil Scott. Ed. Zook, Kristal Brent, (11 November 2002). *The Creative Engine. Center for an Urban Future*. Retrieved 27 May 2003 from http://www.nycfuture.org/content/articles/article_view.cfm?article_id=1060
- Kraft, Anna (March 2001). *An Analysis of Research and Literature on Creativity in Education*. London: Qualifications and Curriculum Authority. www.ncaction.org.uk/creativity/creativity_report.pdf
- Laboral Art and Industrial Centre, (January 2007). *PRESS KIT o.o.1*. Giron, Spain: Universidad Laboral de Giron.

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- The Law/Media/Culture Project, (10 August 2004). *Visual Persuasion in the Law*. http://www.nyls.edu/academics/catalog_and_schedule/alpha_list/visual_persuasion_in_the_law&search=1
- Management First, (n.d.). *High-performance companies: the distinguishing profile*. Retrieved 11 December 2002 from <http://first.emeraldinsight.com/articles/performing.htm>
- Marshall, James D, (1997). *Dewey and the New "Vocationalism."* Retrieved 24 July 2003 from http://www.ed.uiuc.edu/eps/pes-yearbook/97_docs/marshall.html
- Massachusetts Tech Prep Network, (2002). *Essential Elements of the Tech Prep Program*. In *Tech Prep Massachusetts*. Retrieved 29 October 2002 from <http://www.techprepma.org>.
- MassINC, (n.d.). *Campaign goals at a glance: Next steps toward building a stronger workforce in Massachusetts*. In *MassInc*, New skills for a new economy. Retrieved 18 November 2002 from <http://www.massinc.org/index.php?id=118>
- Mass Insight, (2000). *A Call to Action: Expanding the Links between Business and Higher Education in Massachusetts*. Boston: Fifth Annual Massachusetts Business Expansion Report. Retrieved 2 March 2007 from www.massinsight.com/docs/ACalltoAction_2000Fall.pdf
- McCarthy, Kevin, (2005). *Gifts of the Muse: Reframing the Debate about the Benefits of the Arts*. RAND Corporation.
- Miller, Allan and Coen, Dorita, "The Case for Music in the Schools," *Phi Delta Kappan*, February 1, 1994. http://www.tmea.org/o27_Magazine/Special_Edition/caseformusic_r.htm
- Millions of Us, (n.d.). Retrieved 8 March 2007 from <http://www.millionsofus.com/>
- Ministry of Foreign Affairs, Japan, (n.d.). Education (Vocational Training and Guidance) (Article 28) in Education, Leisure, and Cultural Activities. Retrieved 8 March 2007 from <http://www.crnjapan.com/treaties/uncrcreport/1996/en/1996-japan-report.html>
- Ministry of Information, Communication and the Arts, (March 2002). *Imagination: A New Agenda for a Creative and Connected Nation*. Singapore. Retrieved 2 March 2007 from unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN011548.pdf
- Mitchell, William, Inouye, Alan and Blumenthal, Marjory (Eds.), (2003). *Beyond Productivity: Information Technology, Innovation and Creativity*. Committee on Information Technology and Creativity. Washington: The National Academy Press. Retrieved 8 March 2007 from http://books.google.com/books?id=KJp3xepXrh8C&dq=%22Beyond+Productivity:+Information+Technology,+Innovation+and+Creativity.%22&printsec=frontcover&source=bn&hl=en&ei=bRWjSYiCDIzRnQf-wsn8DQ&sa=X&oi=book_result&resnum=4&ct=result#PPA2,M1
- MIT News Office, (1996). *NPR's Morning Edition program highlights the arts at MIT*. Retrieved 13 March 2003 from <http://w3.mit.edu/newsoffice/tt/1996/jan31/41526.html>
- National Assembly of State Art Agencies, (n.d.). *The Arts Help Build a Better Educated Workforce for the New Economy*. Retrieved 8 February 2007 from <http://www.nasaa-arts.org/nasaanews/workforce.shtml>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- National Campaign for the Arts, (2000). *All our futures: A summary*. United Kingdom: Report by the National Advisory Committee on Creative and Cultural Education. Retrieved 2 March 2007 from www.artsmarts.ca/media/en/allourfutures.pdf
- National Foundation for Educational Research, (December 2000). *The Arts, Creativity and Cultural Education: An International Perspective*. International Review of Curriculum and Assessment Frameworks Project. <http://www.inca.org.uk/pdf/finalreport.pdf>
- National Foundation for Educational Research, (October 1998). *The Effects and Effectiveness of Arts Education in Schools*. Interim Report No.1. <http://d.scribd.com/docs/acmxz3zj4k6nasqtjxx.pdf>
- National Science Foundation, (n.d.). *Visualization: a way to see the unseen*. Retrieved 2 March 2007 from <http://nsf.gov/about/history/nsfo050/visualization/visualization.htm>
- New England Foundation for the Arts, (May 2003). *New England's Creative Economy: The Non-Profit Sector: 2000*. http://www.nefa.org/pdf/The_Nonprofit_Sector_2000.pdf
- North Central Regional Educational Laboratory, (2003). *21st Century Skills*. Retrieved 25 September 2003, from <http://www.asdk12.org/depts/itech/profdev/techleaders/resources/21stcentury.pdf>
- NGA Center for Best Practices, (2002). *The impact of arts education on workforce preparation*. Issue Brief. Washington, D.C. Retrieved 2 March 2007 from <http://www.nga.org/portal/site/nga/menuitem.9123e83a1f678644oddcbeeb501010a0/?vgnnextoid=2a5e5aa265b32010VgnVCM1000001a01010aRCRD>
- Nussbaum, Martha, (October 1996). *The Changing Workforce is Changing Our View of Education*. Business Week, The McGraw-Hill Companies.
- Packer, Arnold, (2002). *Quantitative Literacy. What Mathematics should "Everyone" know and be able to do?*. Paper delivered at the American Association for the Advancement of Science Meetings in Boston, MA. Retrieved 5 January 2007 from http://www.maa.org/ql/pgs33_42.pdf
- Partnership for 21st Century Skills, (June 2005). *Assessment of 21st Century Skills: The Current Landscape*. <http://www.21stcenturyskills.org>
- Patrick/Murray Transition, (29 November 2006). *Outcomes Report: Final Draft*. Boston: Creative Economy Working Group.
- Dr. Pedro Albizu Campos Alternative High School, (n.d.). <http://www.pedroalbizucamposhs.org/>.
- Performing Arts Research Coalition, (2002). Retrieved 18 March 2007 from <http://www.cpanda.org/data/profiles/parc.html>
- Perryman, M.R., (2001). *The catalyst for creativity and the incubator for progress: The arts, culture and the Texas economy*. In The Perryman Group. Retrieved 13 December 2002 from <http://www.perrymangroup.com/reports/ArtsImpact.pdf>.
- Pielemeier, Kate, (07 February 2007). *Human resource experts say workers could benefit more from art than from math and science*. Pittsburgh: Pittsburgh Post-Gazette. Retrieved 2 March 2007 from <http://post-gazette.com/pg/07038/759915-28.stm>

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Postrel, Virginia, (July 2003). *The Aesthetic Imperative: Why the Creative Shall Inherit the Economy*. View. Issue 11.07. Retrieved 2 March 2007 from <http://www.wired.com/wired/archive/11.07/view.html?pg=1>
- Rabkin, Nick, (November 2004). *Putting the Arts in the Picture: Reframing Education in the 21st Century*. Chicago: Columbia College.
- Raymo, Chet, (10 October 1997). *Make room for art amid the quarks*. Retrieved 8 March 2007 from <http://wengam.com/raymo.html>
- Rauscher, Frances and Shaw, Gordon, *Music Beats Computers* (February 1997. *Neurological Research*, Vol. 19. Retrieved 8 March 2007 from http://www.hornflush.com/music%2oresearch/musicaV11_dir/musicaV11_2.htm
- RawArts, (n.d.). <http://www.rawart.org>
- Relave, N., (2000). *Collaboration between the welfare and workforce development systems*. In Welfare Information Network. Retrieved 11 July 2003 from <http://www.financeprojectinfo.org/Publications/workforcecollaab.htm>.
- Renzulli, Joseph, (25 May 2005). *A Quiet Crisis is Clouding the Future of R&D*. Education Week. Retrieved 8 February 2007 from www.edweek.org/ew/articles/2005/05/25/38renzulli.h24.html.
- Root-Bernstein, Robert, (2003). *Sensual Chemistry: Aesthetics as a Motivation for Research*. International Journal for Philosophy of Chemistry, Vol.9, No. 1, pp. 33-50. Retrieved 5 January 2007. from <http://www.hyle.org/journal/issues/9-1/root-bernstein.htm>
- Rudavsky, Shari, (16 March 2003). *Fostering the Creative Side of Business Students*. The Boston Globe Online. P. C7. Retrieved 21 July 2003 from http://nl.newsbank.com/nl-search/we/Archives?p_action=print
- SCANS, (2001). SCANS Skills: Detailed List. In *SCANS 2000: Workforce Skills website*. Institute for Policy Studies, Johns Hopkins University. Retrieved 29 November 2002 from <http://www.tc.umn.edu/~jlambrec/BIE5475/SCANS%2oSkills/SCANS%2oSkills%2o-%2o-detailed%2olist.htm>.
- Schneider, J. & Raymond, J., (18 November 2002). *Training our workers for Romney's new jobs*. The Boston Globe.
- Scripp, Larry, (Summer 2000). *Introduction: The Premise of Learning through Music*. Journal of Learning through Music. <http://www.music-in-education.org/articles/1-B.pdf>
- Senders, Warren and Davidson, Lyle (Summer 2000). *Music and Multiculturalism: Dimensions, Difficulties and Delights*. Journal for Learning through Music. <http://www.music-in-education.org/articles/1-E.pdf>
- Second Life, (n.d.). Retrieved 8 March 2007 from <http://secondlife.com/>
- Shaffer, David Williamson, Squire, Kurt R., Halverson, Richard, and Gee, James P., (December 2004). *Video Games and the Future of Learning*. University of Wisconsin-Madison. Retrieved 2 March 2007 from <http://www.academiccolab.org/resources/gappspaper1.pdf>
- Sharp, Caroline and Le Métails, Joanna, (December 2000). *The Arts, Creativity and Cultural Education: An International Perspective*. International Review of

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

- Curriculum and Assessment Frameworks Project. Wales, England: National Foundation for Educational Research. Retrieved 6 March 2007 from <http://www.inca.org.uk/pdf/finalreport.pdf>
- Singapore, Government of, (2003). *Economic Contributions of Singapore's Creative Industries*. Retrieved 6 March 2007 from http://app.mica.gov.sg/Data/o/PDF/6_MTI_Creative_Industries.pdf
- Singapore, Government of, (2002). *Investing in Singapore's Cultural Capital*. Retrieved 2 March 2007 from unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN011548.pdf
- Snelson, Kenneth, (n.d.). <http://www.kennethsnelson.net/icons/atom.htm>
- Stout, C.J., (2003). *Arts in Education: Comments*. Interview. Boston: Massachusetts Cultural Council.
- Sylwester, Robert. (n.d.). *Art for the Brain's Sake*. Retrieved 2 March 2007 from http://imet.csus.edu/imetz/stanfillj/workshops/music_in_curriculum/articles/art_for_.htm
- Telpocacalli Elementary School, (n.d.). <http://www.telpochcalli.cps.k12.il.us/>
- Tepper, Steven Jay, (2002). *Creative Assets and the Changing Economy*. Vol. 32, No. 2. pp. 159-168. Retrieved 2 March 2007 from www.princeton.edu/~artspol/workpap21.html
- Thornburg, D.D., (2002). *The new basics: education and the future of work in the telematic age*. Illinois: Thornburg Center.
- Uhalde, Ray, Seltzer, Marlene, Tate, Pamela, and Klein-Collins, Rebecca, (30 June 2003). *Toward a National Workforce Education and Training Policy*. National Center for Education and the Economy. Retrieved 2 March 2007 from http://colosus.ncee.org/pdf/wfd/Training_Policy.pdf
- UNESCO, (March 2006.). *World Conference on Arts Education*. Lisbon. Retrieved 2 March 2007 from http://portal.unesco.org/culture/en/ev.php-URL_ID=26967&URL_DO=DO_TOPIC&URL_SECTION=201.html
- U.S. Department of Labor, (1993). *Teaching the SCANS Competencies*. Report by the Secretary's Commission on Achieving Necessary Skills (SCANS), Washington, D.C. Retrieved 12 January 2007 from <http://wdr.doleta.gov/SCANS/teaching/>
- University of Massachusetts, Commonwealth Corp., & MassINC, (2002). *The Forum for the 21st Century: Shaping Boston's Future*. Boston: Author.
- Veiga, Alex, (26 February 2007). *Virtual Designers Busy in Online Worlds*. Washington Post. Retrieved 26 February 2007 from <http://washingtonpost.com/wp-dyn/content/article/2007/02/26/AR2007>
- Venerable, Grant, (1989). *The Paradox of the Silicon Savior*. The Center for the Arts in Basic Curriculum.
- Venturelli, S., (2001). *From the Information Economy to the Creative Economy: Moving Culture to the Center of International Public Policy*. Washington, D.C: Center for Arts and Culture. Retrieved 2 March 2007 from culturalpolicy.org/issuepages/issuetemplate.cfm?issue=Investment

Samples – The Arts and the Creative Workforce

Workforce Skills and the Arts (continued)

Von Wastrow, Mark, (2004). *Academic Atrophy: The Condition of the Liberal Arts in America's Public Schools*. Council for Basic Education. Retrieved 5 January 2007 from <http://downloads.ncss.org/legislative/AcademicAtrophy.pdf>

Wallis, Claudia and Steptoe, Sonia, (18 December 2006). *How to Build a Student for the 21st Century*. Time Magazine. Retrieved 3.07.07 from www.time.com/time/covers/0,16641,1101061218,00.html

Webber, Alan, (23 February 2004) *Reverse brain drain threatens U.S. economy*. USA Today. Retrieved 8 March 2007 from http://www.usatoday.com/news/opinion/editorials/2004-02-23-economy-edit_x.htm

Williams, Jennifer, (2006). *Finding the Common Threads*. Centre for Creative Communities. <http://creativecommunities.org.uk/essays/130.html>

Wilson, Stephen, (1996) *Cultural Importance of Scientific Research and Technology Development*. San Francisco: San Francisco State University.

Workforce Strategy Center, (July 2001). *Workforce Development: Issues and Opportunities*. Brooklyn and San Francisco. Retrieved 2 March 2007 from http://www.workforcestrategy.org/publications/workforce_opportunities.pdf

Wyszomirski, M.J., (2003). *The creative industries and cultural profession in the 21st century: A background paper*. Paper delivered at the Fifth Barnett Symposium on the Arts and Public Policy, Ohio State University, Columbus, Ohio.

YouthReach Initiative, (n.d.). Boston: Massachusetts Cultural Council. Retrieved 12 March 2007 from <http://www.massculturalcouncil.org/programs/youthreach.html>

Citation of sources does not necessarily imply an endorsement of the organizations or programs by the Massachusetts Cultural Council, NASAA, or the state arts agencies.

Prepared by David Marshall, Education Programs Manager, Massachusetts Cultural Council, March 18, 2007.

Copyright 2007© by the Massachusetts Cultural Council.

www.massculturalcouncil.org 617.727.3668

Making a Case for the Arts and Workforce Development

A conversation between researcher Dr. Ann Galligan, and RI State Council on the Arts' Education Director Sherilyn Brown.

For those of you who want to follow along, the discussion refers to the “talking points” which are listed on the information sheet on Page two of Section I: The Arts and the Creative Workforce.

Listen to the discussion at: www.nasaa-arts.org/media/audio/rbc/audioplayer/audioplayer.html

Arts Facts to Go – The Arts and the Creative Workforce

Here's an innovative idea: A wallet-sized card with talking points about the economic impact of the arts. When conversing with colleagues or business people, you don't have to fish for the answers. You can literally reach into your wallet and say, "Wait a minute. Let me tell you what the arts can do."

Intellectual and creative industries are driving the new economy. Research indicates that learning in the arts helps develop capabilities students will need to compete:

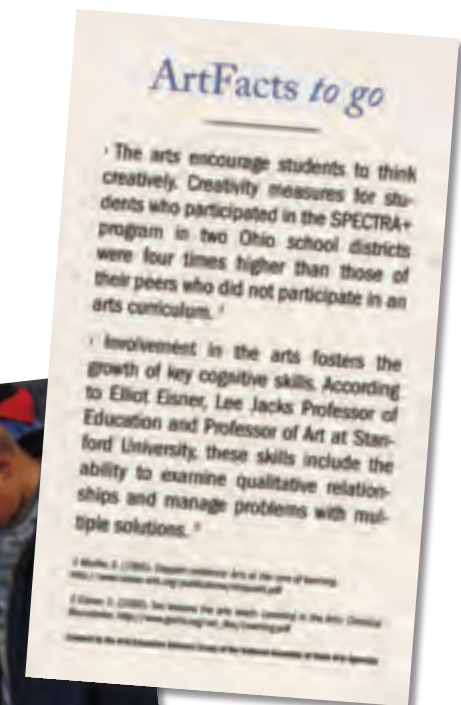
- Creative thinking, imagination, originality
- Focused perception, problem-solving, abstract reasoning
- Self-confidence and motivation
- Flexibility, adaptability, organization, decision-making
- Sociability, communication, teamwork, empathy, respect for diversity, assuming multiple perspectives

U.S. businesses and emerging economic powers, such as Singapore and China, are recognizing the need for these talents and qualities.

How to obtain additional ArtFacts cards

Download the pdf files that follow for printing additional cards. Overnight Prints, the company initially used to print them, required separate files for [front](#) and [back](#), thus the reason both sizes are provided. Any business card printing company can be used, but be aware that not all of them do full color and bleed like www.overnightprints.com does. A credit card is required when ordering with Overnight Prints.

Following the pdf files there is an [InDesign file](#) you can download and use to create your own version using pictures and research relevant to your state. The InDesign file is in InDesign CS3. It will tell you what links are missing, and potentially the fonts, based on what you have on your computer. You can certainly change the links and fonts.





Research-Based Communication

TOOL KIT

Section II

Return to [Tool kit home page](#)

Sherry Brown, Rhode Island

Mary Campbell-Zopf, Ohio

Camellia El-Antably, Wyoming

Jeffrey Hooper, Ohio

David Marshall, Massachusetts

Beck McLaughlin, Montana

Sharon Morgan, Oregon



SECTION

II

The Arts and Literacy Development

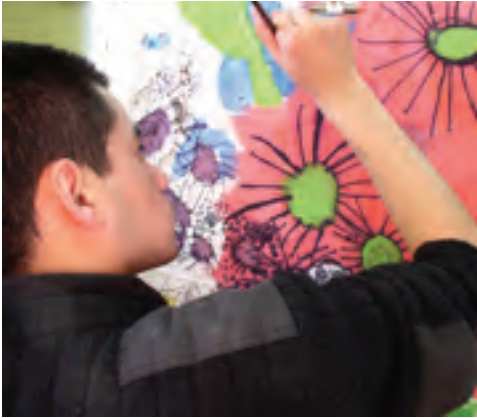
The research literature reveals exciting links between the arts and literacy development.

Through arts integrated literacy instruction:

- Students find reading and writing more meaningful and become better able to tell their own stories.
- English language learners find a powerful way to express their ideas.
- Adolescents become more committed and competent in comprehending and interpreting complex texts.

The impact of these improvements is beginning to be evident in standardized test results. Students often viewed as “at risk” show the greatest gains.

Information Sheet – The Arts and Literacy Development



- Research has shown that children who participate in classroom drama activities develop verbal skills that transfer to new materials not enacted in class.
- The arts help increase the social capital of economically disadvantaged students.
- When young children participate in dramatic enactments in the classroom, they engage in activities that have the potential to improve both their text comprehension and their writing proficiency.



- The National Household Education Survey indicates that involvement in culture-related activities by at-risk preschoolers was linked to increases in their cognitive development.
- Learning in music contributes to the development of spatial-temporal reasoning, a cognitive ability that also influences reading, verbal competence, and writing ability.
- Sustained involvement in theatre arts encourages improvement in the reading proficiency of high school students with low socio-economic status. According to the National Educational Longitudinal Survey (NELS:88), nearly 20 percent more theatre students were reading at high proficiency by the twelfth grade than were their non-theatre peers.
- Ohio State University researcher David Bloome has found that literacy is a set of social and cultural practices enacted within a group context. The forces and practices that govern the development and use of literacy are strongly conditioned by individual culture.
- According to Lauren Stevenson and Richard Deasy's comparative analysis of ten low socio-economic status arts-integrated schools that have been recognized for high performance, the arts support literacy development by increasing students' desire for and commitment to expressing personal meanings. Communicating by creating and performing in the arts often enhances students' desire to read, write, and speak.

Annotated Bibliography – The Arts and Literacy Development

-
- 1) Arts Education Partnership. (2004). *The arts and education: New opportunities for research*. Washington, DC: Arts Education Partnership.

<http://www.aep-arts.org/files/publications/OpportunitiesResearch.pdf>

Summarizes various studies, including those in *Critical Links*, that explore connections between learning in music and drama and development in literacy and language. Notes that both music and language are composed of symbol systems that possess common characteristics and that both employ spatial-temporal reasoning. Highlights the role of dramatic activities in strengthening text comprehension and writing proficiency.

-
- 2) Beasley, T.M. (2002). Influence of culture-related experiences and socio-demographic risk factors on cognitive readiness among preschoolers. *Journal of Education for Students Placed at Risk*, 7(1), 3-23.

Details the findings of the 1993 National Household Education Survey, which analyzed factors that affect the cognitive readiness of four-year-old preschool students. Of the preschoolers in the national sample considered at-risk, those who participated in culture-related activities tended to have higher levels of cognitive development and lower variability in cognitive readiness.

-
- 3) Bloome, D. (2004). What should the arts education community know about literacy? A panel representing the reading and literacy community responds. Arts Education Partnership, Forum report: June 18-19, 2004. Washington, DC: Arts Education Partnership.

http://www.aep-arts.org/files/forum_reports/ReportJune2004.htm

Explains that literacy is a complex, multilayered process for making meaning by working with various symbol systems. Each child uses those systems that are preferred or that seem most natural. No system works alone; rather, all work together in a kind of inter-textual network. In the upper grades, the opportunities that are afforded a learner to draw from experiences in one domain and apply them to another domain are critical to deep learning and understanding. Other critical issues in the upper grades include the connection of a learner's school experiences to personal identity, individual culture, and family.

-
- 4) Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Research Council.

Explains that knowledge taught in multiple contexts is likely to support the transfer of learning from one domain to another. Learning to look for, recognize, and extract underlying themes and ideas can help students to understand when and under what conditions to apply their knowledge, an aspect of expertise.

Annotated Bibliography – The Arts and Literacy Development



- 5) Catterall, J. (2002). The arts and the transfer of learning. In R.J. Deasy (Ed.), *Critical links: Learning in the arts and student academic and social development*. Washington, DC: Arts Education Partnership.

<http://www.aep-arts.org/files/publications/CriticalLinks.pdf>

Provides a compendium of research studies exploring the potential for transfer to occur in the context of arts learning. The most compelling evidence of opportunities for transfer—the theory that learning in one academic area can assist learning in another area—is cited in studies concerning the impact of drama on story understanding, reading comprehension, and topical writing and those suggesting a relationship between music and the development of spatial reasoning abilities. Suggests that more research must be done in the areas of visual arts and dance.

- 6) Catterall, J. (1998). Involvement in the arts and success in secondary school. *Americans for the Arts Monographs*, 1(9).

Details the findings of a longitudinal study begun in 1988 by the U.S. Department of Education that examines the arts involvement and academic achievement of 25,000 secondary school students. Overall, high-arts students at the eighth and tenth grade levels showed higher performance in English and reading than their low-arts peers. Similarly, students coming from low SES (socio-economic status) families that maintained higher levels of arts involvement were almost twice as likely to score in the top two quartiles in reading as students from low SES families with little arts involvement.

- 7) Catterall, J., Chapleau, R. & Iwanaga, J. (1999). Involvement in the arts and human development: General involvement and intensive involvement in music and theatre arts. In E.B. Fiske (Ed.), *Champions of change: The impact of the arts on learning*. Washington, DC: Arts Education Partnership and the President's Committee on the Arts and the Humanities.

<http://www.aep-arts.org/files/publications/ChampsReport.pdf>

Analyzes the National Educational Longitudinal Survey (NELS:88), a ten-year panel study following more than 25,000 students between the eighth and twelfth grades. Links sustained involvement in theatre arts by low SES youth to improvement in reading proficiency, noting that nearly 20 percent more were reading at high proficiency by the twelfth grade than were their non-theatre peers.

- 8) Efland, A. (2002). *Art and cognition*. New York: Teachers College.

Shows how the arts can help students develop the essential understanding of metaphors, symbols, and analogies and their potential for communication of ideas.

Annotated Bibliography – The Arts and Literacy Development



-
- 9) Heath, S., Roach, A. & Soep, E. (1998). Living the arts through language and learning: A report on community-based youth organizations. *Americans for the Arts Monographs*. 2(7).

Examines how community youth programs that specialize in the arts can encourage the development of literacy skills for at-risk children and teenagers. Stresses the fundamental role language plays in the translation and critique of art and art making, as well as the frequent opportunities for the use of language that reflects critical judgment and systematic reasoning.

-
- 10) Hetland, L. & Winner, E. (2000). The arts and academic achievement: What the evidence shows. *The Journal of Aesthetic Education*, Fall/Winter 2000.

<http://www.pz.harvard.edu/Research/Reap/REAPExecSum.htm>

Summarizes the findings of the Reviewing Education and the Arts Project (REAP) by Harvard's Project Zero. A search for all English language studies between 1950 and 1999 found that learning in the arts leads to academic improvement in other areas. Cites clear causal links demonstrated between spatial-temporal reasoning and both listening to music and learning to play music.

-
- 11) Kempe, A. (2003). The role of drama in the teaching of speaking and listening as the basis for social capital. *Research in Drama Education*, 8(1), 65-78.

Finds that drama and theatre can increase the "social capital" of learners by improving their mastery of standard English via metacognitive strategies.

-
- 12) Levine, M. (2002). *A mind at a time*. New York: Simon & Schuster.

Explains the neuro-developmental research of the author, who has found that students bring unique combinations of strengths and challenges to school. Understanding these differences can help teachers meet students' needs. Often children may be perplexed by what appears to be their failure to fit a "norm." Through a process he calls "demystification," Levine helps individual children to understand that each has a unique set of strengths, as well as areas where additional help is needed.

-
- 13) Marzano, R. J., Pickering, D. J. & Pollock, J. E. (2001). *Classroom instruction that works*. Alexandria, VA: ASCD.

Explains that learning in the arts provides students with forms of communication that transcend or differ from literal or discursive language—including such tools as visual communication, movement and gesture, and music and sound. These "nonlinguistic representations" involve not just a change in medium but a change in mode of understanding. In other words, there are concepts and ideas that can be conveyed via pictures or gestures in a way that is not possible via words. These same researchers also confirm the importance of students' learning how to understand and use metaphor as a powerful key to learning, which helps students learn and integrate new knowledge through comparison and contrast with existing or familiar knowledge.

Annotated Bibliography – The Arts and Literacy Development

-
- 14) Nierman, G. (1996). Music instruction and language skill development. *Nebraska Music Educator*, February 1996.

<http://www.menc.org/networks/genmus/litarticles.html>

Cites various studies detailed in the 1995 publication *Spin-Offs*. Studies explore the relationship between the study of music and learning in nonmusical areas of the curriculum. Included is a 1976 study in which first graders who participated in a classical music listening program were shown to have scored higher in discrimination sections of reading and language arts tests.

-
- 15) Ruppert, S. (2006). Critical evidence: How the arts benefit student achievement. Washington, DC: National Assembly of State Arts Agencies.

<http://www.nasaa-arts.org/publications/critical-evidence.pdf>

Examines how participation in the arts impacts student achievement, citing examples from *Critical Links* in which arts learning was linked to the development of literacy skills.

-
- 16) Stevenson, L. M. & Deasy, R. J. (2005). *Third space: When learning matters*. Washington, DC: Arts Education Partnership.

Reports case studies of ten schools that serve large percentages of at-risk students and use arts-integrated instruction to bring about student gains in various subjects, including English Language Arts. Researchers found that by tapping the innate desire to convey

personal meaning, these schools have helped students to understand the importance of communication and to want actively to improve their skills in reading, speaking, and writing. Connecting learning to students' background experiences is central to this process. Specifically, the research revealed three essential connections: (1) students learn to make connections between their own experiences and the ability and willingness to explain complex texts and to explore multiple perspectives; (2) students come to understand the parallels between language arts and other arts forms, such as drama and visual art, in conveying similar ideas, themes, and experiences; and (3) students' understanding of the significance and power of the writing process develops their own willingness to exercise literacy skills. These findings are supported both by naturalistic data and student gains on standardized achievement tests. See especially Chapter 4: Arts, Literacy, and Communication.

-
- 17) Winner, E., & Hetland, L. (Fall/Winter 2000). The arts in education: Evaluating the evidence for a causal link. *Journal of Aesthetic Education*, 34(3-4).

Details a meta-analysis of studies related to links between arts learning and other subjects. Indicates that causal links have been found in a few areas, such as listening to and learning to play music and spatial-temporal reasoning and between classroom drama and verbal skills, but cautions against instrumental claims about arts learning.

Samples – The Arts and Literacy Development

Brief Newsletter Article

Could be placed in newsletters for reading and language arts educators or school leaders.

Arts Integration Strengthens Literacy Instruction, Says Ohio State Professor

The scholarship of David Bloome, Professor of Language, Literacy, and Culture in The Ohio State University's College of Education, suggests that literacy development should be embedded in activities that reflect students' identities, cultures, and social relationships.



The implications of that approach for arts learning are exciting. “Integrating the arts with other subjects can be beneficial across the board,” says Dr. Bloome. “When students create or analyze a work of art—whether it is visual art or performance art—they are developing a widely useful ability to manipulate varied and complex symbol systems.”

Working with written words, visual images, music, and other symbol systems in isolation is becoming out-dated, he adds. “Students who will thrive in the workplace and as leaders will be those who are skilled in the integration of symbol systems.”

His recommendations include more integration of video and photography with the written word and the use of not only fine art but also the art found in popular culture and students' everyday lives

Approaches vary, but the key to effective integration, he says, is enthusiastic teachers: “I get inspired by teachers who understand that they need to do more than teach to standards, who want students to acquire intellectual curiosity and passion for their work, who study and reflect on how they are integrating the arts with other literacies, and who orient lessons to their specific students in ways that connect to students' lives and communities.”

From Links & Threads, an online newsletter for Ohio school leaders and their arts partners, published by the Ohio Arts Council

Samples – The Arts and Literacy Development

Article for Parent or Citizen Newsletter

Improving reading achievement for our students in the early grades is a complex undertaking. Scientific research has shown us some specific ways to help students develop the building blocks they need in order to become proficient readers. But as you know, reading and writing consist of much more than being able to decode words on a page or produce a coherent sentence.

Students must understand what they read and connect it to a wide variety of challenges they face. Instruction in the arts and use of the arts in teaching all subject areas are important ways to assist students as they make sense out of words. Research shows that drama activities help develop verbal skills that students then use in other areas of learning and that music helps develop the reasoning abilities needed for reading and writing.

Also, some of our middle school students struggle with reading the text books assigned to them. Here is what the research is saying about how we can help them continue to improve their literacy:

- Provide literacy learning experiences that are engaging, meaningful, and relevant to their culture.
- Connect their literacy learning to the identity issues they are struggling with and help them relate what they are reading to their own experiences.
- Help them make connections across different texts.
- Provide opportunities for social interaction.

The arts also play an important role in employing these strategies. Students in schools with rich arts programs are more engaged. Their creative work gives them a reason for reading and writing. They find new outlets for expressing their concerns and exploring the self. They gain new understanding of concepts and ideas. They come together and learn from each other. According to Lauren Stevenson and Richard Deasy's comparative analysis of ten low socioeconomic status arts-integrated schools that have been recognized for high performance, the arts support literacy development by increasing students' desire for and commitment to expressing personal meanings. Communicating by creating and performing in the arts, say the authors, often enhances students' desire to read, write, and speak.



Arts Facts to Go – The Arts and Literary Development



Here's an innovative idea: A wallet-sized card with talking points about the arts and literacy. When conversing with colleagues, you don't have to fish for the answers. You can literally reach into your wallet and say, "Wait a minute. Let me tell you what the arts can do."

Like text, visual art, music, theatre, and dance are symbol systems. Thus use of these symbol systems is a form of literacy and develops abilities needed for reading and writing. Benefits include:

- Greater sensitivity to metaphors, symbols, and underlying themes
- Greater commitment to expressing and finding meaning in text
- Better abstract reasoning skills, used in reading and writing
- Better spatial-temporal reasoning skills used in reading, verbal expression, and writing
- Improved comprehension

Low-income students who participate in the arts show the greatest improvement in literacy.

How to obtain additional ArtFacts cards

Download the pdf files that follow for printing additional cards. Overnight Prints, the company initially used to print them, required separate files for [front](#) and [back](#), thus the reason both sizes are provided. Any business card printing company can be used, but be aware that not all of them do full color and bleed like www.overnightprints.com does. A credit card is required when ordering with Overnight Prints.

Following the pdf files there is an [InDesign file](#) you can download and use to create your own version using pictures and research relevant to your state. The InDesign file is in InDesign CS3. It will tell you what links are missing, and potentially the fonts, based on what you have on your computer. You can certainly change the links and fonts.



Research-Based Communication

TOOL KIT

Section III

Return to [Tool kit home page](#)

Sherry Brown, Rhode Island

Mary Campbell-Zopf, Ohio

Camillia El-Entably, Wyoming

Jeffrey Hooper, Ohio

David Marshall, Massachusetts

Beck McLaughlin, Montana

Sharon Morgan, Oregon

SECTION

III

The Arts, Cognition, and Social Development

A growing body of evidence suggests that arts learning and arts integration help develop key cognitive skills needed for academic success, as well as promote the social and emotional strengths that lead to academic achievement and positive behaviors and relationships.

- Learning in and through the arts:
- Provides another point of entry to ideas and concepts
- Helps students to see other perspectives and make connections
- Requires complex analysis and judgment
- Contributes to self-awareness and self-esteem
- Provides opportunities for collaboration and builds community within the school

The Arts and Cognitive Skills

- Involvement in the arts fosters the growth of key cognitive skills. According to Elliot Eisner, Lee Jacks Professor of Education and Professor of Art at Stanford University, these skills include the ability to examine qualitative relationships and manage problems with multiple solutions.
- According to the 1993 National Household Educational Survey, participation in culture-related activities was associated with higher levels of cognitive development in at-risk preschoolers.
- An interest in a performing art leads to a high state of motivation that produces the sustained attention necessary to improve performance and the training of attention that leads to improvement in other domains of cognition.
- Learning to dance by effective observation is closely related to learning by physical practice, both in the level of achievement and also the neural substrates that support the organization of complex actions. Effective observational learning may transfer to other cognitive skills.
- Training in acting appears to lead to memory improvement through the learning of general skills for manipulating semantic information.
- Learning to make music strengthens spatial-reasoning abilities. Research shows that a strong causal link exists between learning how to play music and the development of spatial-temporal reasoning skills, which can play an important role in mathematics and science education.



The Arts, Creative Thinking and Academic Learning

- The arts encourage children to think creatively. Creativity measures for students who participated in the SPECTRA+ program in two Ohio school districts were four times higher than those of their peers who did not participate in an arts curriculum.
- The arts are inherently aligned with the attributes of brain-based learning. Research in this area indicates that the brain learns best in rich, complex, and multi-sensory environments and that emotion and social interaction play a vital role in learning.
- Correlations exist between music training and both reading acquisition and sequence learning. One of the central predictors of early literacy, phonological awareness, is correlated with both music training and the development of a specific brain pathway.

Continued on next page

Information Sheet – The Arts, Cognition, and Social Development

The Arts and Social Development

- Participation in the arts helps students improve social skills. Students with lower socio-economic status who had sustained involvement in theatre arts were shown over time to have greater self-confidence, motivation, and empathy than did their non-arts peers, according to a ten-year national study of over 25,000 high school students.
- According to Lauren Stevenson and Richard Deasy's comparative analysis of ten low socioeconomic status arts-integrated schools that have been recognized for high performance, the arts help create an inclusive community where students are more motivated to contribute positively.
- Evidence from a wide range of school- and community-based arts programs suggests that arts experiences can be instrumental in resolving conflicts, deterring problems with attendance and disruptive behavior, and building self-respect, self-efficacy, resilience, empathy, collaborative skills, and other characteristics and capacities that are linked to high student achievement.



Annotated Bibliography—The Arts, Cognition, and Social Development



-
- 1) Arts Education Partnership. (2004). *The arts and education: New opportunities for research*. Washington, DC: Arts Education Partnership.

<http://www.aep-arts.org/files/publications/OpportunitiesResearch.pdf>

Summarizes various studies, including those in Critical Links, that explore connections between learning in music and the development of spatial-temporal reasoning skills. Notes that mathematics and language are composed of symbol systems that possess common characteristics and that both employ spatial-temporal reasoning.

-
- 2) Asbury, C. & Rich, B. (2008). *Learning, Arts, and the Brain*. New York/Washington, D.C.: Dana Press.

<http://www.dana.org/news/publications/publication.aspx?id=10760>

Brought together by the Dana Arts and Cognition Consortium, this three-year study is the result of research by cognitive neuroscientists from seven leading universities across the United States. They grappled with the question of why arts training has been associated with higher academic performance. Of particular interest in these reports are the state-of-the-art brain imaging tools, such as Near Infrared Spectroscopy (fNIRS) and Functional Magnetic Resonance Imaging (fMRI). The consortium reports findings that allow for a deeper understanding of how to define and evaluate the possible causal relationships between arts training and the ability of the brain to learn in other cognitive domains.

-
- 3) Beasley, T.M. (2002). Influence of culture-related experiences and sociodemographic risk factors on cognitive readiness among preschoolers. *Journal of Education for Students Placed at Risk*, 7(1), 3-23.

Details the findings of the 1993 National Household Education Survey, which analyzed factors that affect the cognitive readiness of four-year-old preschool students. Of the preschoolers in the national sample considered at-risk, those who participated in culture-related activities were associated with higher levels of cognitive development and lower variability in cognitive readiness.

-
- 4) Bloome, D. (2004). What should the arts education community know about literacy? A panel representing the reading and literacy community responds. Arts Education Partnership, Forum Report: June 18-19, 2004. Washington, DC: Arts Education Partnership.

http://www.aep-arts.org/files/forum_reports/June%202004%20Forum%20Reports.doc

Explains that literacy is a complex, multilayered process for making meaning by working with various symbol systems. Each child uses those systems that are preferred or seem most natural. No system works alone; rather, all work together in a kind of inter-textual network. In the upper grades, the opportunities that are afforded to a learner to draw from experiences in one domain and apply them to another domain are critical to deep learning and understanding. Other critical issues in the upper grades include the connection of a learner's school experiences to personal identity, individual culture, and family.

-
- 5) Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Research Council.

Establishes that knowledge taught in multiple contexts is likely to support the transfer of learning from one domain to another. Says learning to look for, recognize, and extract underlying themes and ideas can help

Annotated Bibliography—The Arts, Cognition, and Social Development

students to understand when and under what conditions to apply their knowledge, an aspect of expertise.

-
- 6) Caine, R.N. & Caine, G. (1994). *Making connections: Teaching and the human brain*. Menlo Park, CA: Innovative Learning Publications.

Examines brain-based learning. Describes how the brain functions during learning experiences and how this knowledge can influence teaching strategies. The brain has an infinite number of possibilities for making connections and constantly seeks meaning by identifying patterns, according to the authors.

-
- 7) Catterall, J. (2002). The arts and the transfer of learning. In R.J. Deasy (Ed.), *Critical links: Learning in the arts and student academic and social development*. Washington, DC: Arts Education Partnership.

<http://www.aep-arts.org/files//publications/CriticalLinks.pdf>

Provides a compendium of research studies exploring the potential for transfer to occur in the context of arts learning. Compelling evidence of opportunities for transfer—the theory that learning in one academic area can assist learning in another area—is found in studies involving the relationship of music to the development of spatial reasoning abilities. Suggests that more research must be done in the areas of visual arts and dance.

-
- 8) Catterall, J., Chapleau, R. & Iwanaga, J. (1999). Involvement in the arts and human development: General involvement and intensive involvement in music and theatre arts. In E.B. Fiske (Ed.), *Champions of*

change: The impact of the arts on learning. Washington, DC: Arts Education Partnership and the President's Committee on the Arts and the Humanities.

<http://www.gseis.ucla.edu/faculty/files/catterall/catterall.involvement.pdf>

Analyzes the National Educational Longitudinal Survey (NELS:88), a ten-year panel study following more than 25,000 students between the eighth and twelfth grades. Links sustained involvement in theatre arts by low SES youth with improved self-concept and greater motivation, as well as with higher levels of empathy and tolerance for peers. In addition, students consistently involved in instrumental music were shown to have higher levels of mathematics proficiency than their non-music peers, regardless of SES.

-
- 9) College Board. (2005). 2005 College-bound seniors: Total group profile.

Shows that students' arts participation and SAT scores co-vary, meaning that the more arts classes a student has taken, the greater the likelihood that he or she will achieve high SAT scores.

-
- 10) Education Commission of the States. (2006). *Governors Commission on the Arts in Education: Findings and recommendations*. Denver, CO: Education Commission of the States.

<http://www.ecs.org/clearinghouse/69/42/6942.pdf>

Reviews research findings on the benefits of arts education and outlines recommended actions for states.

Annotated Bibliography—The Arts, Cognition, and Social Development

-
- 11) Efland, A. (2002). *Art and cognition*. New York: Teachers College.

Shows how the arts can help students develop the essential understanding of metaphors, symbols, and analogies and their potential for communication of ideas.

-
- 12) Eisner, E. (2000). Ten lessons the arts teach. *Learning in the Arts: Crossing Boundaries*. (Proceedings for an invitational meeting of education, arts, and youth funders held Jan. 12-14, 2000 in Los Angeles). Geraldine R. Dodge Foundation, J. Paul Getty Trust, and John D. and Catherine T. MacArthur Foundation.

http://www.giarts.org/usr_doc/Learning.pdf

Details the intellectual, developmental, and creative skills identified by Elliot Eisner, Lee Jacks Professor of Education at Stanford University, that are strengthened through arts learning. Among the key cognitive skills revealed in the article, participation in the arts teaches children to examine qualitative relationships, manage problems with multiple solutions, take advantage of unexpected opportunities, and create within the confines of a material.

-
- 13) Hetland, L. & Winner, E. (2000). The arts and academic achievement: What the evidence shows. *The Journal of Aesthetic Education*, Fall/Winter 2000.

<http://www.pz.harvard.edu/Research/Reap/REAPExecSum.htm>

Summarizes the findings of the Reviewing Education and the Arts Project (REAP) by Harvard's Project Zero. A search for all English language studies between 1950 and 1999 found that learning in the arts leads to academic improvement in some other areas. Cites clear

causal links demonstrated between spatial-temporal reasoning and both listening to music and learning to play music.

-
- 14) Huckabee, M. & Paige, R. (2005). Putting arts education front and center. Washington, DC: Americans for the Arts.

http://ww3.artsusa.org/services/arts_education/arts_education_012.asp

Presents commentary by Governor Mike Huckabee, who also was Chairman of the Education Commission of the States for 2004-06, and former U.S. Secretary of Education Rod Paige promoting the influence of arts education on the development of critical analysis skills. Introduces "The Arts: A Lifetime of Learning," a program implemented by the Education Commission of the States. The program uses public awareness, research, analytical tools, and leadership efforts to "increase the arts' stature in education."

-
- 14) Jensen, E. (2001). *Arts with the brain in mind*. Alexandria, VA: Association of Supervision and Curriculum Development.

<http://www.jlcbrain.com>

Makes a strong case, based on research, that the arts should be a core subject. Eric Jensen, an expert in brain-based teaching and learning, cites research suggesting that arts education helps decrease the number of dropouts, boosts attendance, instills team building skills, enhances creativity, and provides other benefits that influence academic and career success. He describes in detail how the arts aid learning.



Annotated Bibliography—The Arts, Cognition, and Social Development



-
- 15) Levine, M. (2002). *A mind at a time*. New York: Simon & Schuster.

Explains the neurodevelopmental research of the author, who has found that students bring unique combinations of strengths and challenges to school. Understanding these differences can help teachers meet students' needs. Often children may be perplexed by what appears to be their failure to fit a "norm." Through a process he calls "demystification," Levine's approach helps individual children to understand that each has a unique set of strengths, as well as areas where they need additional help.

-
- 16) Luftig, R.L. (2000). An investigation of an arts infusion program on creative thinking and academic achievement of children at three grade levels. *Studies in Art Education*, Vol. 41, No. 3 (Spring, 2000), pp. 208-227.

Details the finding from SPECTRA+ research that, based on data from pre- and post-administrations of the Torrance Test of Creative Thinking, a group of students receiving a systematic instructional program in the arts made greater gains than either of two control groups on several dimensions, including total creativity, fluency, and originality. The author concludes that "there was a strong indication that creative thinking...was facilitated by involvement in the arts."

-
- 17) Murfee, E. (1995). *Eloquent evidence: Arts at the core of learning*. Washington, DC: National Assembly of State Arts Agencies.

<http://www.nasaa-arts.org/publications/eloquent.pdf>

Details various national studies in which arts education was shown to strengthen creativity and promote

communication and problem-solving skills in students. In one notable study, creativity measures for students who participated in the SPECTRA+ Program were four times higher than their peers who did not participate in an arts curriculum. In addition, a review of 57 studies indicates that participation in the arts promotes a higher self-concept and improved social skills.

-
- 18) Rabkin, N. & Redmond, R. (2006). The arts make a difference. *Educational Leadership*, 63(5), 60-64.

Describes how arts integration improves achievement by producing a "cognitive resonance" between the arts and other subject areas and amplifies this resonance by connecting learning to students' feelings and experiences.

-
- 19) Rabkin, N. & Redmond, R. (2004). *Putting the arts in the picture: Reframing education in the 21st century*. Chicago: Columbia College Chicago.

Makes a strong case for placing arts integration at the center of education renewal.

-
- 20) Ruppert, S. (2006). *Critical evidence: How the arts benefit student achievement*. Washington, DC: National Assembly of State Arts Agencies.

<http://www.nasaa-arts.org/publications/critical-evidence.pdf>

Examines how participation in the arts impacts student achievement, citing examples from national programs in which arts learning was linked to the development of cognitive and social skills. In one case, learning to play the guitar and perform in front of peers was shown to bolster the confidence and self-esteem of a group of 8- to 19-year-old boys living in residential homes and

Annotated Bibliography—The Arts, Cognition, and Social Development

juvenile detention centers. Similarly, a group of juvenile offenders between the ages of 13 and 17 who participated in jazz and hip hop dance classes reported marked increases in confidence levels.

-
- 21) Seidel, S. (1999). Stand and unfold yourself. In E.B. Fiske (Ed.), *Champions of change: The impact of the arts on learning*. Washington, DC: Arts Education Partnership and the President's Committee on the Arts and the Humanities.

<http://aep-arts.org/files/publications/ChampsReport.pdf>

Examines what makes the programs of Shakespeare & Company, a classical professional theatre organization that teaches Shakespeare in K-12 schools, so effective. Four major learning areas are identified from responses submitted by the nearly 800 students who participated in the study: Shakespeare and his language, acting, creative communities, and self as learner. Project Zero's



research indicates that reading and acting Shakespeare's works promote confidence in interpreting various forms of complex text (including mathematical theorems), as well as a greater awareness of others and a sense of community between peers working toward a common goal.

-
- 22) Stevenson, L. M. & Deasy, R. J. (2005). *Third space: When learning matters*. Washington, DC: Arts Education Partnership.

Reports case studies of ten schools that serve large percentages of at-risk students and use arts-integrated instruction to bring about student gains in various subjects, as well as to create an environment that is conducive to cognitive and social development. Researchers determined that arts-integrated learning experiences offered rich opportunities for developing higher order thinking skills. See Chapter 3: Thinking in the Arts. They also found that performance in the arts heightened students' self-efficacy and engagement and awakened their desire to make a contribution. See Chapter 2: When Learning Matters.

-
- 23) Weiss, S. (2004). The arts in education. *The Progress of Education Reform*, 5(1).

<http://www.ecs.org/clearinghouse/49/91/4991.pdf>

Summarizes four studies (*Champions of Change: The Impact of the Arts on Learning; Critical Links: Learning in the Arts and Student Academic and Social Development; Creativity, Culture, Education and the Workforce; and The National Assessment of Educational Progress 1997 Arts Report Card*) in which arts education is shown to foster problem-solving and creative-thinking skills in students, as well as encourage increased self-confidence and empathy.

Samples – The Arts, Cognition, and Social Development

Newsletter Article

Elementary school students in the Lima City Schools understand culture and community more deeply after a month of learning activities that integrated the arts, social studies, and physical education. Mike Huffman, Director of Arts and Magnet Programs, says the centerpiece of their learning was several days spent interacting and performing with the Gullah Kinfolk—musicians and dancers descended from West African slaves who settled on the isolated islands and marshlands of the South Carolina coast.

“Such learning experiences—combining the arts with other ways of knowing to explore important themes that cut across the boundaries of disciplines—represent a powerful form of arts integration,” says Mary Campbell-Zopf, director of the Ohio Arts Council’s Office of Arts Learning.

“Arts integration engages students cognitively, physically, and emotionally,” says Patricia Stuhr, chair of The Ohio State University’s Art Education Department. Recalling the schools she studied in her work with the national Transforming Education Through the Arts Challenge (TETAC), Stuhr says: “Students were more engaged and remembered everything. Principals said teachers were invigorated. Everything just seemed more alive.”

“Arts integration also diversifies teaching to engage students with a range of backgrounds and learning styles,” says Cindi Menefield, visual and performing arts curriculum manager for the Cincinnati Public Schools. For example, Menefield teaches line dancing while students are learning about mathematical patterns. The combination of learning about patterns and moving in patterns, she says, especially benefits tactile-kinesthetic learners. In fact, the premise behind arts integration is respect for how children learn.

“Integration occurs,” says Ohio State University professor Michael Parsons, “when students make sense for

themselves of their varied learning experiences, when they pull these together to make one view of their world and of their place in it. It takes place in their minds or not at all.”

But can arts integration promote general academic success? Evidence is mounting, say Nick Rabkin and Robin Redmond, who edited *Putting the Arts in the Picture*. They cite five projects in urban school systems that are not only improving test scores but also helping students “become better thinkers, develop higher-order skills, and deepen their inclination to learn.”

From Links & Threads a statewide online newsletter for school leaders and their arts partners, published by the Ohio Arts Council. Letter to the Superintendent

Letter to the Superintendent

DIANE NANCE
209 Winthrop Road, Columbus OH 43214
614/263-9384
dnance@columbus

January 23, 2006

Dr. Gene Harris
Superintendent
Columbus Public Schools
270 East State Street
Columbus, Ohio 43215

Dear Dr. Harris:

Last week’s announcement that the Board of Education may move ahead by next academic year with the Innovative Task Force recommendation for a later start time for middle and high school students is welcome news. Research on adolescent sleep cycles and the relationship of improved academic performance with a later start to the day should not be ignored. I strongly support this direction.

Samples – The Arts, Cognition, and Social Development

However, as a parent of a CPS high school student, I am disturbed by the concurrent discussion of instituting a shorter school day and offering high school classes in middle school as a way for students to earn elective credits. In essence, this idea benefits only a small percentage of middle school students who are prepared for, or will be selected to take, high school level classes, and it limits student access to electives since the time allotted for electives will be minimal with a shortened day.

Dr. Harris, you advocate steering CPS toward meeting today's shifting work force needs by encouraging students to graduate from high school and progress to a college education. A decrease in time allotted for electives – and that generally means the arts and foreign languages – means a deficiency in the skills and preparation necessary to achieve success in college and in the 21st century work force.

Students involved with the arts exhibit greater motivation and achievement. Schools with quality arts programs register increased attendance rates and fewer discipline referrals. The arts can 'level the playing field' for students from disadvantaged circumstances. Exposure and participation in the arts contributes to social development and academic advantage, communication skills, and visualization training that leads to reading readiness. What better way to engage our children and prepare them for life?

Columbus City Council, Mayor Coleman, the Chamber of Commerce, the Greater Columbus Arts Council, and Experience Columbus support the importance of the creative industries in our city's development. The nonprofit arts alone generate \$265 million in revenue and create nearly 9,000 jobs in greater Columbus. Clearly, support for arts education plays a vital role in this economic trend.

As the attached list of CPS achievements suggests, the CPS Board of Education values arts education. Last September, CPS entered into an unprecedented partnership with GCAC, BalletMet, Opera Columbus, and Jazz Arts Group with

funding from the U.S. Department of Education for Professional Development for Arts Educators. At the end of the three-year grant, over 500 unique arts integrated lesson plans will have been designed and taught in CPS classrooms, over 200 CPS teachers and local professional teaching artists will have been trained to align integrated lessons to Ohio content standards for the arts and for English language arts, and data will have been collected on the impact of arts education in the classroom. Narrowing high school students' access to arts electives could diminish the impact of this work, as well as detract from a distinguished history of rich arts education in our public schools.

The arts can turn a good education into a great education. Hundreds of artists, arts educators, and parents want to support your efforts, and we encourage you to improve arts integration in the Columbus Public Schools curriculum. Give us more reasons to stay in Columbus and send our children to Columbus Public Schools. Please do not consider shortening the school day or decreasing students' access to electives.

Let's not allow Columbus to be a place where the arts are cut or devalued. Our community deserves more. We look to you to provide a long-term policy approach to arts integration and to be mindful of the demonstrated effectiveness of arts learning.

Sincerely,

Diane Nance

cc: Terry Boyd

Andrew Ginther

Jeff Cabot

Betty Drummond

Karen Schwarzwald

Carlton Weddington

Stephanie Hightower, member, GCAC Board of Trustees

Kubera, R. "Education will lead to jobs, Harris reminds families." THE BOOSTER, January 4, 2006, p.7.

Catterall, J. In Critical Links: Learning in the Arts and Student Social and Academic Development, a 2002 study sponsored by grants from the National Endowment for the Arts and the United States Department of Education.

I am employed by the Greater Columbus Arts Council.

Samples – The Arts, Cognition, and Social Development

School communities which infuse their curricula and orientations to teaching and learning around the arts have experienced broad-reaching outcomes...including positive social behavior, social compliance, collaboration with others, ability to express emotions, courtesy, tolerance, conflict resolution skills, and attention to moral development.

James Catterall, *Critical Links: Learning in the Arts and Student Social and Academic Development*

Catterall, <http://www.newhorizons.org/strategies/arts/catterall.htm>

94% of Franklin County school districts utilize Ohio's Model Competency-Based arts education program in comparison with 88% statewide



Columbus Public Schools and the Arts

Over the years, CPS has been a pioneer in arts education and has consistently supported artists and arts curricula:

- Two elementary schools (Duxberry and Fair Avenue), one middle school (AIMS), and a high school (Fort Hayes) provide a continuum of quality arts education for Columbus students.
- In the 2003 inventory of schools, the Greater Columbus Arts Council found that 69% of Franklin County School Districts teach to the national standards, as opposed to 31% of Ohio districts statewide. CPS provided a significant portion of that response.
- Of 132 arts and cultural organizations identified as partners for Franklin County schools, the three most frequently identified sources were The Columbus Museum of Art, the Greater Columbus Arts Council (Artists-in-Schools), and The Columbus Symphony Orchestra.
- CPS is a significant user of GCAC's Artists-in-Schools program, accounting for approximately 25% of Artists-in-Schools bookings each year, benefiting a cumulative total of 25,000 CPS students annually.

- CPS partners with GCAC in the delivery of arts-based after school activities for elementary and middle school students.

In 2003, 16 Franklin County school districts cooperated with the Greater Columbus Arts Council to inventory levels of arts education in public schools in Franklin County. CPS cooperation was evidenced by nearly 100% participation from schools in the district. GCAC plans to repeat the study at regular intervals to monitor and quantify progress with respect to compliance with national and state standards for arts education, expenditures, space designated for art instruction, arts specialists employed, and use of community arts resources.



Samples – The Arts, Cognition, and Social Development

Testimony to Legislators

Testimony of the Ohio Arts Council to the Ohio Senate, Tuesday, November 28, 2006.

Thank you for this opportunity to speak to you about Substitute Senate Bill 311 and the importance of having a fine arts credit as part of Ohio's graduation requirements.

The real question before us is: how do we educate our young people for leading productive and creative lives in the 21st century? The Ohio Arts Council, through its policies and grant programs, demonstrates its belief that the arts must assume a central role in education if young people are to achieve greater academic success in school and be prepared to contribute to Ohio's changing economy, both locally and globally.

Students who participate in arts experiences improve their academic achievement, as well as their success in other realms of learning and life. In a well-documented national study using a federal database of more than 25,000 middle and high school students, researchers from the University of California at Los Angeles found students with high arts involvement performed better on standardized achievement tests than students with low arts involvement. Moreover, the students highly involved in the arts also watched fewer hours of TV, participated in more community service and reported less boredom in school.

These findings are supported by high school students' SAT scores. The College Board and multiple independent studies have shown that students' arts participation and SAT scores co-vary, meaning that the more arts classes a student has taken, the greater the likelihood that he or she will achieve high SAT scores. In 2005, students who took four years of arts coursework outperformed their peers who had a half-year or less of arts coursework by 58 points on the verbal portion and 38 points on the math portion of the SAT.

Furthermore, the arts support literacy development by increasing students' desire for and commitment to expressing personally relevant ideas. Communicating by creating and performing in the arts often enhances students' desire to read, write, and speak. These were the conclusions of Lauren Stevenson and Richard Deasy's comparative analysis of ten low socio-economic status arts-integrated schools that have been recognized for high performance, one of which was Cleveland's own Newton D. Baker School of Arts.

A review of research on learning and creativity conducted by the Ohio Arts Council finds that the set of skills most required by today's knowledge-based economy includes a combination of creative thinking, problem-solving, individual responsibility, sociability, and self-esteem. These and other aspects of cognitive growth are nurtured through an education in the arts.

Most importantly, though, the arts encourage children to think creatively. Creativity measures for students who



Samples – The Arts, Cognition, and Social Development

participated in the SPECTRA+ program in two Ohio school districts were four times higher than those of their peers who did not participate in an arts curriculum. Additionally, more than 80 percent of business leaders participating in a recent survey ranked “creativity and innovation” among the top five applied skills that college graduates need to succeed in today’s workplace. However, only 21.5 percent of recent four-year college graduates were assessed as “excellent” in these skill sets; more than half of high-school graduates were rated “deficient.”

Many business experts recognize that these findings have serious implications for America’s position in global trade. Workforce skills are nurtured through an education in the arts. Arkansas Governor Mike Huckabee, who was also Chairman of the Education Commission of the States in 2004-06, and former U.S. Secretary of Education Rod Paige both have asserted that the arts are a vital part of developing workforce skills. According to Huckabee, “The

future ability of our economy and this country will be based on the fact that we have students who are able to be more creative with what they’ve learned than anyone else.” A 2001 survey of 6,000 executives, conducted by researchers from McKinsey & Company, revealed that of all the challenges businesses will face in the future, one of their greatest concerns is finding employees able to “make good decisions in times of uncertainty ... adapt to new opportunities and respond creatively to change.” Creativity is the domain of the arts, and learning in the arts reinforces improvisation and entrepreneurship, vital skills for workers in the 21st century economy.

In conclusion, I, along with our Council Board (which passed a resolution of support this past summer), urge your support for the addition of one credit Carnegie Unit in the fine arts to Ohio’s graduation requirements as necessary to prepare Ohio high school students to be competitive in a global, knowledge-based marketplace. As U.S. Secretary of Education Margaret Spellings states, “[The arts are] an important part of a well-rounded, complete education for every student. The knowledge and skills that learning in the arts imparts uniquely equip young persons for life.”

Thank you for your time and your consideration of this very important issue.

Testimony given by Julie S. Henahan, Executive Director, Ohio Arts Council, in support of including a graduation credit requirement in the fine arts in Substitute SB 311 and Substitute HB 565 (the Ohio Core). This testimony was created using multiple examples in the Tool Kit.



Arts Facts to Go – The Arts, Cognition, and Social Development

Here's an innovative idea: A wallet-sized card with talking points about the impact of the arts on cognition and social development. When conversing with colleagues, you don't have to fish for the answers. You can literally reach into your wallet and say, "Wait a minute. Let me tell you what the arts can do."

The arts help develop cognitive skills, as well as a number of strengths and capacities that contribute to better educational outcomes. Benefits include:

- Abstract reasoning skills essential to learning
- School attendance and engagement and cognitive involvement in academic work
- Creative thinking and problem-solving
- Communication skills
- Self-confidence, social skills, conflict resolution skills, and community-building skills

How to obtain additional ArtFacts cards

Download the pdf files that follow for printing additional cards. Overnight Prints, the company initially used to print them, required separate files for [front](#) and [back](#), thus the reason both sizes are provided. Any business card printing company can be used, but be aware that not all of them do full color and bleed like www.overnightprints.com does. A credit card is required when ordering with Overnight Prints. Following the pdf files there is an [InDesign file](#) you can download and use to create your own version using pictures and research relevant to your state. The InDesign file is in InDesign CS3. It will tell you what links are missing, and potentially the fonts, based on what you have on your computer. You can certainly change the links and fonts.

