ARTS-IN-EDUCATION TASK FORCE

School District of Palm Beach County

FINAL REPORT

March 1, 2006

Generated by
The Arts-In-Education Task Force
May 31,2005 – December 1, 2005

Edited by
The Steering Committee
January and February 2006

Produced and Submitted by
ASK Associates
March 1, 2006

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March 1, 2006

Mary Kay Murray
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RE: Transmittal Letter for Final Report (AIE Task Force)

Dear Mary Kay:

Enclosed is the Final Report of the Arts-in-Education Planning Task Force project which we started in May, 2005. The report summarizes the findings, recommendations, plans, process summary and budget for the School Board in response to their authorized assessment last year

The findings and recommendations reflect the views of a group of stakeholders represented by this process. The final report was edited by the steering committee and other participants to assure precision, clarity and accuracy of language. This report also represents final editing by ASK Associates for structural consistency (headings, labels etc.). I will also send you an electronic version should you need more copies.

ASK Associates appreciates this opportunity to serve the arts and education communities in Palm Beach County through this collaborative planning and facilitation contract. Should you have questions about this final transmittal or needs for future projects, do not hesitate to contact me.

Thank you for your kind and considerate support throughout the process.

Sincerely,

Bess de Farber

Arts-In-Education Task Force Final Report

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Arts-in-Education Task Force
Executive Summary

As directed by the School Board of Palm Beach County and the Chief Academic Officer in March 2005, with support from private foundations (including the Mary and Robert Pew Public Education Fund, the Picower Foundation and the Stanley Fried Foundation), 27 persons representing a wide range of stakeholders met on May 31, 2005, to begin the creation of a world-class arts education system for students of the School District of Palm Beach County. Building on the *No Child Left Behind* legislation, the Sunshine State Standards and the county's needs assessment - *"State of the Art in Palm Beach County Schools: Where Do We Go From Here?"* (Burnaford, Smilan and Kimble, 2005), the Task Force's first assignment was to assess the feasibility of implementing the recommendations specified in the needs assessment. The Arts Administrator invited participants to "be forward thinking and revisit the foundations of educational practice" to rebuild the system which had eroded over the past two decades.

Task Force members discovered several barriers to implementing the recommendations, including structural, operational and financial barriers. **Structurally**, the decentralization of arts specialists, administered at each school site, demonstrated inequitable student ratios and wide variations in the way arts specialists were recruited, utilized and evaluated. **Operationally**, students in different schools received arts instruction that varied in time and frequency from 45 minutes every five days to 40 minutes once every 12 days. **Financially**, it was discovered that the current budget for arts materials is half of what it was in 1988. Given these conditions, Task Force members were not surprised to discover the subtle erosion of arts education within the system. There was recognition, however, that a fragmented funding system of support for arts-in-education programs provided by private funders currently substitutes for lack of program support from the District.

After six months of work through 20 meetings and research tasks between meetings, the Task Force generated a creative, integrative long-term approach to building a world-class arts education system within the School District of Palm Beach County. The Task Force initiated and refined the vision and goals; defined key policy recommendations requiring School Board attention; developed a five-year budget projection; and developed curriculum and professional development and frameworks (agreed upon definitions and assumptions) in an unprecedented collaborative process with representation from a diverse group of stakeholders. Stakeholders included the School District, arts agencies (state and local), universities, arts providers, private foundations and out-of-school providers. The Task Force completed its work on December 1, 2005 and authorized School District staff and a steering committee to complete the final preparation of the report and budget. The effort was assisted by ASK Associates providing facilitation and logistical support.

The vision generated by the Task Force included multiple perspectives, values and beliefs. Participants had varying perspectives on what a "world class" arts-in-education program would look like, but found common ground. The Task Force envisioned preparing tomorrow's citizens through both arts education and arts integration in four arts disciplines (dance, drama, music and visual arts), recognizing and appreciating cultural diversity. This vision includes highly qualified teachers, strong curricula and community partnerships as vital elements. The vision also requires attention to staffing and structure; professional development; curriculum; leadership; resources; and public awareness and support.

The six key policy recommendations, derived from six months of deliberation and synthesis, provide guidance for staffing, budget, professional development and contact hours with students. Major themes are to:

- Centralize arts education staff at the District level.
- Expand administrative and teaching staff in all four arts disciplines.
- Restore budget for materials, supplies, equipment, repair and textbooks.
- Integrate professional development in arts education through the Single School Culture for Academics process
- Require uniform time and frequency devoted to arts education for all children in all schools.

Further discussion of each recommendation appears in a separate section of this report.

The Task Force generated a thoughtful and integrative approach to resolving many problems and reversing the programmatic erosion over the past 20 years. The Task Force considered the realistic costs and proposed solutions. The proposed budget includes cost estimates (over five years) of additional resource teachers; additional arts teachers; restoration and growth of the required materials/repair and textbook estimates; and a uniform approach to funding cultural partnerships with professional artistic providers. (See the attached budget and narrative for more detail and rationale for budget recommendations.)

The Task Force drilled deep and uncovered, analyzed and synthesized previously unavailable information. The collaborative group demonstrated a model process and composition to continue as a guiding coalition for future planning and decision-making as the system evolves. The Task Force developed a vision and deeply considered strategies, and is now prepared to communicate that vision and associated strategies to the Board and the community. The strategies are designed to empower School District employees by removing barriers and generating short-term success and long-term accomplishments in the areas of increased student achievement and increased accountability. The vision of a world-class arts-in-education experience for each student in the School District of Palm Beach County is possible and highly desirable. As these strategies are implemented, with School Board approval, gains in professional development and student achievement can be actualized.

A summary of the six-month process (participants, products and process); the curriculum and professional development and frameworks; and references are available in sections of this report.

Arts-in-Education Academic Business Plan

Leadership and Professional Development
K-12 Arts Education

Step	Suggested Action Step	Evidence of Completion	Program Development and Support	FY06	FY07
	By 3/30/06 Principal Leadership Academy with Benjamin Zander completed	Principals attendance, agenda, and presentation		March 27-28, 2006	
	Engage principals in Arts Education and academic curriculum training sessions	Agendas and presentation materials	Tom Pearson	Ongoing	Ongoing
	By 5/30/06 establish with principals new procedures of central staffing, facilities, scheduling, and materials budgets for elementary, middle, and high school.	Staffing facilities, scheduling, and materials budgets	Tom Pearson		
	By 9/30/06 engage 3 principals in ongoing Arts In Education advisory board	Advisory Board Roster	Tom Pearson	Ongoing	
	By 12/15/06 establish new PNP arts education component	Component for training	Tom Pearson/Elizabeth Decker	Ongoing	
	Arts Education Professional Development is developed and integrated through the Single School Culture for Academics	LTM and PDD agendas	Tom Pearson	Ongoing	
	A minimum of 45 minutes of arts education per week for every child in grades K-5	Elementary schedules	Elementary Principals		

Staffing
K-12 Arts Education

	By 4/30/06 develop a job description for 3 district level resource teacher/curriculum coordinators for visual arts, drama, and dance	Job descriptions defined	Tom Pearson		
	Determine staffing needs, hire and place arts teachers according to new elementary teacher/student staffing ratio	Arts teacher placement	Tom Pearson/Principals	Ongoing	
	By 7/1/06 convert all district arts teachers to centralized budget under the K-12 Arts Education Administrator	New positions in 9039 department budget	Mike Burke/Tom Pearson		
	By 7/30/06 oversee the hiring process for four new teaching positions (2 drama and 2 dance) for elementary pilot programs	New Teachers hired	Tom Pearson/Brenda Magee		
	By 7/30/06 oversee the hiring process for 1 new district level resource teacher	New Teacher hired	Tom Pearson/Brenda Magee		
	By 8/1/06 develop management system for new arts staff assignments (orientation to goals, assignments, standards, and schedules)	Objectives for each position established in Individual Objective Statement	Tom Pearson		

Budget
K-12 Arts Education

	By 7/1/06 restore the budget for arts education materials, supplies, equipment, repair, and textbooks	Line items appear in 9039 budget for Arts Education	Mike Burke		
	By 7/1/07 budget allocations for Arts Education per student will increase $1.00 per student per art area	Line item is increased by $1.00 per student per arts area	Mike Burke		

Arts-in-Education Task Force
Curriculum & Professional Development Frameworks

Curriculum Frameworks

Definition: Curriculum frameworks include goals, objectives, activities and assessment of outcomes for teaching and learning. A content, scope, sequence and a process that defines the "why, what, how and how well" of a course of study.

Objective: Elementary curriculum framework for arts education and arts integration based on standards and best practices in the areas of dance drama, music and visual arts coordinated with out of school time providers and arts providers.

Shared Assumptions, Findings and Recommendations

Sunshine State Standards (SSS) and national standards exist for all four discipline areas at the elementary level. Grade Level Expectations (GLE) exist for music and visual arts. The standards for dance and drama are vague and not very useful. All standards (state and national, as well as Bloom's taxonomy) will provide the platform for curriculum planning for arts curricula, classroom curricula (arts integration) and out of school time. Curriculum resources from other associations and institutions will be utilized. The "basic principles of arts integration" will also be considered.

The curriculum will be based on 40 minutes every 5 days over a 12 week period (trimester) with discipline concentrations rotating three times a year.

Visual arts curriculum for one grade level has been developed by the U.B. Kinsey and Norton partnership. Curriculum in other three areas will be developed through three additional partnerships focusing on the other three disciplines (dance, drama and music). Over the next three years, attention may be focused on dance and drama since music is well developed.

Curriculum writers (writing teams with arts teachers, classroom teachers, arts providers and out of school time staff) will develop curriculum resources for all elementary levels based on curriculum developed from the partnerships, and resources available from associations and other institutions. The curriculum resources will outline effective practices based on standards and experience from partnerships as well as resources (texts and websites), strategies (based on partnership experiences), and a glossary of terms and acronyms so that partners can understand the languages of each segment.

- The Single School Culture for Academics process will be utilized to help each school plan their approach to arts education and arts integration with assistance from the resources developed through the partnerships, the curriculum writing teams and District staff resources. The curriculum will not include a sequence of lesson plans, but rather be focused on helping teachers and providers think deeply about the opportunities available and how to implement over the long term in their specific schools.

To support this, elementary arts teachers will be centralized at the District level, state approved texts will be provided to each school (for the teachers, not the students) and materials budgets will be increased.

A group (sub-sub-committee) comprised of arts teachers, classroom teachers, arts providers, out of school time staff and university resources (all education practitioners) has been convened to examine the specific details of arts education and arts integration curriculum planning, beyond the scope and time of the existing task force. (Karen Bradley & Cathy Smilan)

Professional Development Frameworks

Definition: Professional Development Frameworks outline the ongoing process of gaining, updating, expanding, deepening and applying knowledge, skills competencies and expertise in one's profession. It refers to the sequence and array of learning activities, education, preparation, reading and affiliation necessary to master the body of knowledge, standards, best practices, skills and appropriate behaviors and perspectives for the occupation or profession.

Objective: Professional development will reflect what is needed by teachers and cultural providers to perform at high levels of achievement.

Shared Assumptions, Findings and Recommendations

The desired outcomes/results will include (a) improved student performance (over a five year period of implementation at pilot schools), (b) increased teacher effectiveness and support (an in-depth and long-term change in teacher approach), and (c) stronger partnerships among arts teachers, classroom teachers, arts providers and out of school time staff. There will be both internal (data warehouse) and external evaluation of the process and results.

The target participants will include arts teachers, classroom teachers, arts providers and out of school time staff. Principals are also targeted for increased awareness, understanding and support.

State and District requirements and resources will be considered. Teachers need 120 points every five years for certification. One arts education certification is granted for the entire K-12 spectrum. Staff development resources from the District will be engaged to clarify requirements and resources. Centralized staffing and student assessment may increase accountability. Supplements, graduate credits and other incentives must be considered.

The approach will be multifaceted, sequenced, on-going and utilize both School District (internal) and cultural partners (external) resources.

Information will be developed and disseminated using a wide variety of strategies and media. For example, teachers (both arts and classroom) will be surveyed to determine wants, needs, logistical requirements (season, time of day, day of week, venue etc.), communication/promotion strategies, credit possibilities and interest in the various possibilities. As information is developed, it will be shared via the District website, TV and e-mail distribution channels. One of the pieces of information to be developed is an inventory/calendar of existing development opportunities.

- Channels of training and development might include:
  1. New teacher orientation for both classroom and arts teachers on the basic principles of arts integration. New arts teachers need to be engaged into networks of arts teachers by discipline and/or geography (organized by the new District curriculum coordinators).
  2. On-site support from district level coordinators to model and support team teaching approaches for arts education and arts integration within the single school culture (supported by new district staff).
  3. Opportunities (beyond early release time) for teachers to meet, work and plan together as a team and develop a supportive camaraderie. District curriculum

coordinator staff might organize these by geographic cluster for in-person meetings and follow-up with electronic meetings via chat rooms or e-mail distribution lists. Ultimately, arts providers and out-of-school time staff will be included. A "retreat" for all four target audiences can explore learnings, possibilities, partnership strategies – a time to reflect, get to know one another and plan together. The process can focus on "partnership" schools in first year and be expanded in subsequent years. Collaborative teams (of the four target audiences) develop workshops for teachers, that go beyond new good ideas (not "make and takes" or "sit and gets") to deeper questioning of strategies and long term changes in implementing new teaching strategies.

4. A one-day "Expo/Showcase (such as in Broward County, planned, sponsored and executed by the Cultural Council, School District and University) with partners showcasing what they do, accomplishments, results and what they learned not to do with a wide menu of possibilities.
5. Opportunities for students (higher education, high school and middle school) to assist middle and elementary teachers and students with arts education and arts integration. This will provide community service credit, build leadership skills and perhaps develop the next generation of arts teachers (especially in the needed areas of dance and drama).
6. Universities develop modules and institutes for the four target audiences leading to credit. Programs might include certificate programs or arts integration specialist credentials.
7. School District managers will continue to identify and take advantage of special training and development opportunities as they become available.
8. Teachers will be encouraged and supported (where possible) to participate in existing association conferences. Incentives may be built into the partnership grants, but opportunities must not be restricted to selected partnership schools. A cohort of arts education and integration leaders can be developed annually.
9. Provide specific professional development events for arts providers.

- Identify "catalyst" teachers (skilled and enthusiastic) for fast track development and training/consultation training to expand the capacity to support arts and classroom teachers in new teaching strategies. They may come from the partnership schools first, but catalyst teachers will need to be identified in all schools.

Consider the nine guidelines for professional development shared by Gail Burnaford, six of which are part of the Single School Culture for Academics approach.

Art-In-Education Task Force
Process Summary

This summary provides an overview of planning processes used to arrive at recommendations for addressing the arts-in-education needs of the School District of Palm Beach County's students as outlined in the "*State of the Art in Palm Beach County Schools: Where Do We Go From Here?*" presented to the School Board on March 30, 2005. This assessment report (Phase I) was the outcome of site visits to exemplary Arts-in-Education programs in Los Angeles and Chicago, and the work of Florida Atlantic University experts (Burnaford, Smilan and Kimble) who compiled survey and interview results to produce an environmental scan and current situation analysis with recommendations and was funded by the Mary and Robert Pew Public Education Fund. The goal of Phase II was to assess the feasibility of these recommendations and determine best methods for implementation to educate Palm Beach County public school students in the arts.

The summary identifies and describes:

I. Participating Representatives
II. Products
III. Planning Process

Participating Representatives

From May 31, 2005, through December 1, 2005 (six months), representatives met twenty times to develop a plan for implementing the vision of a world class arts education system in Palm Beach County. Participants represented:

- Palm Beach County School District (including sixteen teachers, a Resource Teacher and the K-12 Arts Administrator)
- Local Arts Agency: Palm Beach County Cultural Council,
- Universities (Florida Atlantic University and Palm Beach Atlantic University),
- Statewide Arts Agency: Florida Cultural Alliance
- Arts Providers & Educators: Center for Creative Education, Florida Stage, Kravis Center for the Performing Arts, Norton Gallery of Art, and Old School Square
- Out-of-School Providers: Prime Time and Children's Services Council
- Private Funders: Education Foundation, Pew Public Education Fund, Community Foundation, Picower Foundation, Lost Tree Foundation

Organization of Participation

Representatives participated in the following three meeting groups:
1.) Full Task Force (all participants met four times);
2.) Curriculum and Professional Development Committee (nine meetings); and
3.) Resource Development Committee (seven meetings).

Venues and Role Responsibilities

Two-hour group meetings were held in a variety of venues including the School District headquarters, a high school library, the Kravis Center and the Cultural Council. There were also meetings for coordinating support functions performed by the Steering Committee (Project Director, Facilitator, Committee Co-Chairs and a Foundation Representative), a strategy group and a smaller, more focused curriculum sub-committee. The Project Director and Foundation Representative (from Pew) provided leadership and guidance. The Facilitator (from ASK Associates) prepared agendas, developed strategies to engage the broadest range of participants and meet decision deadlines, facilitated the meetings and assisted with recording the meetings. Roles of the Committee Co-Chairs included logistical planning (finding and arranging space), finding (and sometimes developing and analyzing) the information needed by participants to make decisions and recommendations and leading the meetings. The interplay and cooperation of these various leaders was critical to the success of the project.

Products

The Task Force generated:

- a defined vision, goals/objectives,
- a curriculum framework (shared definitions and assumptions),
- a professional development framework (shared definitions and assumptions),
- school board policy recommendations and
- a five year budget to implement the plan (see attachments).

Also, at the request of the Task Force, a representative from the consulting group (ASK Associates), the School District and the Cultural Council collaborated to develop a map of schools, cultural resources and existing partnerships between schools and cultural resources.

Three by-products of the Task Force process were:

1.) Informal networking among teachers, university professors, arts providers and funders (which resulted in or contributed to other projects);
2.) Development of a "cooperative spirit" among arts providers and teachers" as they "see themselves on the same team working for the same goals" (as stated by a participant on 10/11); and
3.) Nearly 200 hours of in-service training credits for seventeen teachers.

This process began a conversation that needs to be (and will be) continued

Planning Process

Following the initial formation of the Task Force, participants were briefed on Phase I learnings and recommendations. They also required understanding of state funding guidelines and mandates as well as the regulatory environment including the federal No Child Left Behind (NCLB) Act; Sunshine State Standards and Grade Level Expectations

(State GLEs); and Single School Culture for Academics process; as well as basic educational notions such as developmentally appropriate practice and Bloom's Taxonomy. University experts shared research on the impact of arts education and arts integration on student performance, as measured in Florida by the Florida Comprehensive Assessment Test (FCAT). The group shared videos (Chicago, Kennedy Center and Zander), websites and readings to assist the larger group with the content and understanding the possibilities. At the initial meeting, the group was alerted to common challenges of collaboration and group process that result in predictable frustration in the early stages of a creative project such as this.

The Task Force then voluntarily divided into two subcommittees including 1.) Curriculum and Professional Development, and 2.) Resource Development. The first committee meetings focused on developing the vision of a world-class arts-in-education system by viewing videos from other locations and generating features of such a system in Palm Beach County. The Curriculum and Professional Development Committee struggled with how to implement the recommendations within structural constraints that rendered them unfeasible without considerable commitment from the principals. The Resource Development Committee recognized the challenge of lack of funding for many items, some beyond the scope of the original report (materials). Both groups acknowledged that this was an enormous task to accomplish while getting to know one another with limited time. Both groups recognized the need for more information and began to search for and develop the needed information. Confusion and frustration resulted from the large scope, the lack of information and the lack of cohesive management structure (site based management). The journey of discovery was transformed into an archeological dig as participants found, developed, generated, and shared the needed information, including:

- **Common definitions for vocabulary**
- **Map of schools, arts providers and arts partnerships (current)**
- **Current staffing structure (by school – demonstrated inequitable ratios)**
- **Current arts instruction time and frequency (by school – demonstrated inequitable instruction ranges)**
- **Current materials budget levels (with history of higher levels in 1988)**
- **Current SSS/GLE development at the state level (finding: visual arts and music are more developed than dance and drama)**
- **Approaches to student assessment and program evaluation**
- **Identified costs and budget assumptions, duration (five years) and frameworks**
- **Depictions of funding model possibilities**

By midway in the planning process (predictable, according to the research on group process), the August 11th Full Task Force meeting to be precise, the group seemed to be at the peak of frustration. Some participants dropped out of the process and others dropped in to the process as school fall term schedules dictated availability for participation. The level of ambiguity inherent in this creative group process was very challenging, but the participants' engagement and commitment grew considerably as September brought a new momentum. According to written feedback after meetings, participants appreciated "having data to spur ideas and good discussion," "the complexity of the structure that we are dealing with," "the enormity of what we're doing

(can be scary) and the sense of overwhelming tasks," "good collaborative conversations – probing/exploring issues to be defined," "playing off other's ideas – combining ideas," and "seeing the larger picture." However, participants were frustrated by "lack of time – too much to discuss thoroughly," "needed changes in the way statistics are recorded or reported," "lack of concrete information and structure of plan," and "not enough time to deal with all the issues on the table." While one participant noted that the "agenda/assignment was well planned," another noted the need for "better planning these meetings to ensure sequential development." By October, a participant noted less of a competitive spirit and more of a cooperative spirit as "arts providers and teachers see themselves on the same team working for the same goals."

There were several pivotal points in the process as new questions emerged and new information was provided. One was the question about and discovery of the erosion of the materials budget. Another was the realization that assigning teachers on a per-school basis caused inequities because of the differences in school sizes. Another pivotal point in managing the overwhelming nature of the planning task was achieved when through a scenario planning task with the Resource Development Committee in late August. The Committee concluded that, given the scope of 100 elementary schools, 35 middle schools and 20 high schools (with 17,000 employees), the plan needed to focus on elementary programming and consider the budget over five years rather than consider all schools over one year.

With the realization about the inequities of assigning teachers on a per-school basis, another turning point in the planning occurred when the group looked at alternative delivery structures. Emerging information was allowing participants to see that arts education and arts integration was very fragmented and unequally delivered by site-based decision making. Although several principals had been invited to participate in this process, none had responded either in meetings or to the minutes of meetings in an effort to elicit principals' perspective on this issue. It was noted that some principals were very creative and resourceful about how they delivered arts education, while others used the allocated arts teachers as substitutes. As more information emerged, and was analyzed, the group concluded that restructuring or centralizing the arts education staff and assigning teachers on a teacher/student ratio rather than a teacher/school ratio was critical to success. Also, recruitment of teachers to meet the goal of adequate number of arts teachers in each discipline was projected to require a long-term commitment and investment and will not happen the first year. The demand exceeds the supply of qualified teachers in the four disciplines, along with other economic challenges (housing costs) to recruitment of teachers in Palm Beach County. As the picture of assigning teachers in geographic clusters emerged, some of the budget assumptions about staffing became clarified.

The budget went through a number of iterations starting in August, with participant input at each step. The Resource Development Committee explored options for funding models and partnerships that combined public and private resources, but postponed further discussion on that until the level of commitment and investment by the School Board could be determined. The group did define which items should be funded by the

School Board (i.e. staffing and materials) and which might be funded by outside resources (i.e. partnerships and professional development).

As the Curriculum and Professional Development Committee became more focused, they agreed that "curriculum" did not mean a series of lesson plans, but rather a uniform framework defining targets, conditions and standards. They also agreed that professional development did not mean a single approach or event, but rather a range of possibilities and opportunities to support the ongoing process of gaining, updating, expanding and applying the current knowledge, skills, and competencies of arts education and arts integration. It was enlightening when a panel of arts providers revealed a vast range of opportunities for students and teachers, along with information that teachers were not participating in the opportunities. Again, a more centralized approach to structure, staffing, operations, and communication, as recommended by the Task Force, will help take advantage of the opportunities afforded by the arts providers. After considerable deliberation of the project objectives, the Committee generated, reviewed and approved the Curriculum Frameworks and the Professional Development Frameworks included in this report.

By the target date of December 1st, the Full Task Force reviewed, revised and approved the Curriculum and Professional Development Frameworks, the Board Policy Recommendations (with major changes in structure and staffing) and the budget generated through the process. The budget includes a five year plan with provisions for structural changes, staffing increases, materials allocation increases by the School District, as well as opportunities for private funding for partnerships and professional development. More detailed accounts of each meeting are available in the minutes. The Steering Committee and a few volunteers continued through January to edit the final report.

Arts-in-Education Task Force
Definitions

ACCOUNTABILITY
The aspects of responsibility that involve the provision of statistical or judicial explanation for events. Quality assurance – evidence of learning

ARTS EDUCATION (ARTS DISCIPLINE-BASED CURRICULUM)
Art forms that are taught for the pure aesthetic value of the art form and for the love of the art should be considered a disciple-based curriculum. Study of other subject areas as they relate to a specific art form or period are a by-product of the in depth study of the discipline-based art form.

ARTS FUNDERS
Agencies and/or individuals that contribute financially to arts related programs that serve the students and schools of the School District of Palm Beach County.

ARTS-IN-EDUCATION
An umbrella phrase that includes: 1) arts education; 2) arts integration; and 3) experiences gained through arts provider partnership programs.

ARTS INTEGRATION CURRICULUM
An education that enables students to identify and apply authentic connections (understanding the difference between knowing and understanding) between two or more disciplines and/or to understand essential concepts that transcend individual disciplines.

Or

Uses the language and methodology from more than one discipline and focuses on unifying themes, issues, problems, concepts and experiences.

ARTS PROVIDERS
Outside agencies and/or individuals that supply programs and resources for the classroom and teachers.

ASSESSMENT OF STUDENTS
The ongoing process aimed at understanding and improving students' learning.

Or

The process of identifying collective aims for cumulative learning in terms of knowledge, skills, abilities, values, and/or attitudes and determining whether those aims have been met.

Or

A collection of information about the progress of students. Assessment differs from testing in that is uses multiple indicators and sources of evidence to reach a conclusion. (Florida Department of Education)

CURRICULUM
Plan with goals, objectives, activities and assessment of teaching and learning Specifies content, scope, sequence and process (why, what and how).

EVALUATION OF PROGRAM
An ongoing process aimed at understanding and improving program efforts, effectiveness and efficiencies.

PROFESSIONAL DEVELOPMENT
An ongoing process of gaining, updating, expanding, deepening and applying knowledge, skills, competencies and expertise in one's profession.

Appendices

Arts Education Meta Analysis

I. Champions of Change

- High verses Low-Arts Involvement and Academic Performance
- Socio-Economic Status (SES) and Arts Involvement
- Math Proficiency (low SES) and Arts Involvement
- Arts Involvement and Creative Thinking Abilities
- Perceptions as a Self Learner
- Arts Involvement and School Climate

II. Oklahoma A+ Schools

Academic Performance Index (API) Scores

- A numeric score from 0-1500 indicating school performance based on state-mandated tests

Oklahoma Core Curriculum Test (OCCT)

- Mandated by Oklahoma law to sample skills and content specified in State standards

A+ Schools of North Carolina

- Value Added: Beyond Test Scores-student's intellectual, emotional, and social growth

Harford County Reading/Instrumental Music Study

- The percentage of instrumental students who moved from the Proficient reading level to Advanced reading level is higher than that of non-instrumental students
- The percentage of instrumental students who move from the Basic and At-Risk levels is also higher than that of non-instrumental students

Critical Links: learning in the Arts and Student Academic and Social Development

- An analysis of 25,000 students in the National Longitudinal Study found that arts participation is linked to higher academic performance, better grades, and lower drop-out rates.
- Positive effects are even more significant for low-income verses high-income students

Larry Scripp - Harvard' Project Zero

Research at the New England Conservatory Charter Lab School, where students are chosen by lottery and not by musical talent, found notational skills in music correlate positively with achievement in math and reading.

- The ability to process musical symbols is a leading predictor of music's association with learning in other subject areas
- Musical pitch is more predictive of mathematical ability
- Rhythm is more predictive of reading ability

VI. Chicago, Minneapolis, and Dallas Studies

- A study of 23 arts-integrated schools in Chicago showed test scores rising as much as two times faster than comparable schools
- In Minneapolis, arts-integration programs showed the most positive effects on disadvantaged learners
- In Dallas students made larger strides in literacy and writing. Test scores rose 10 points in reading between 4th and 5th grade compared to 3 point rise in a control group. The program seems to benefit students of every ethnic and socioeconomic or academic group.

Related Studies:

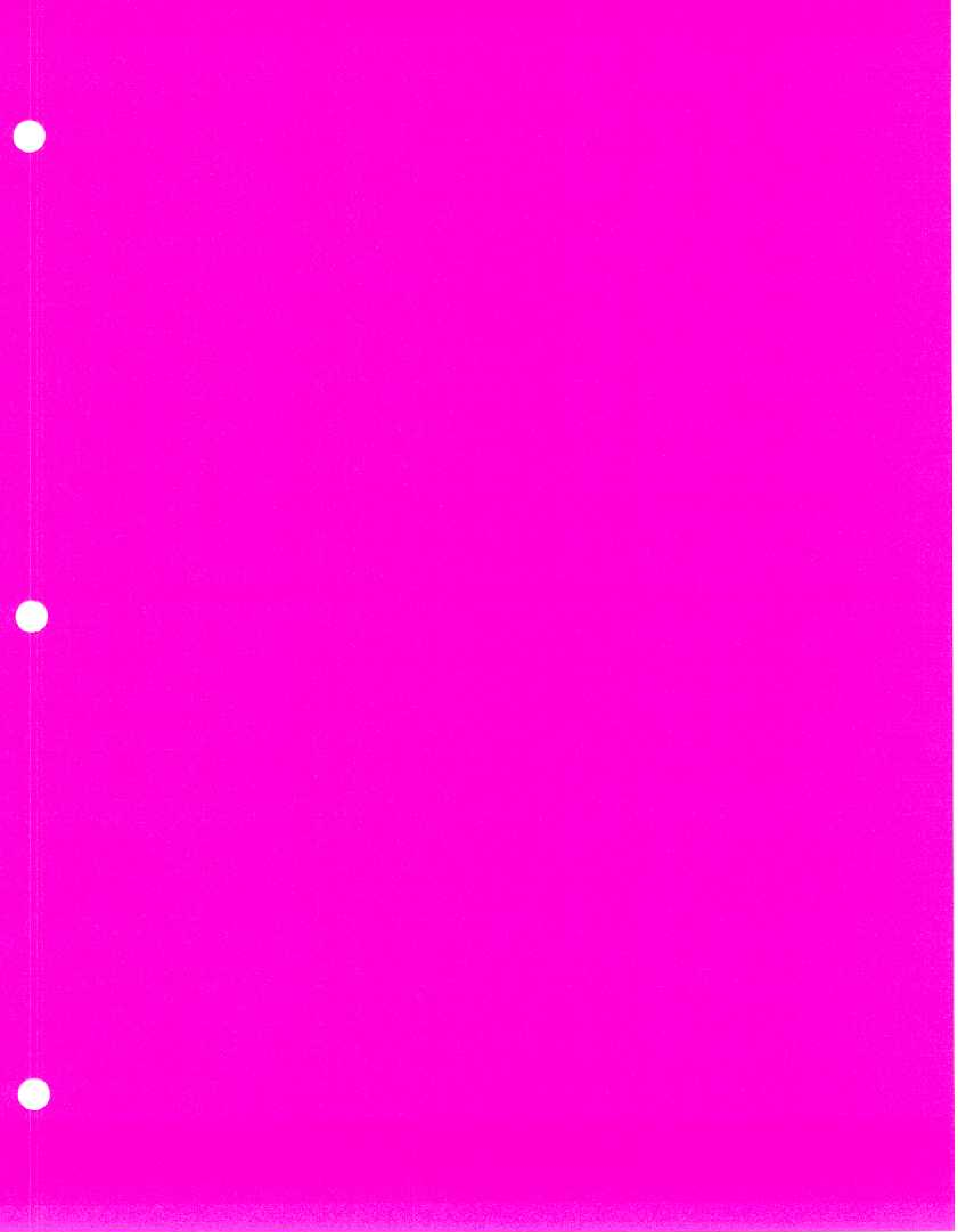
- University of Central Oklahoma
- How arts Integration Supports Student Learning
- Is There a Relationship Between Dance and Creative Thinking
- Arts and SAT scores
- Duval Elementary School-Alachua County, Florida

School District of Palm Beach County-(ongoing research projects)

- World Music Drumming/"Beat For Peace"

  Title I schools guidance counselor and music teacher paired to instruct at-risk students through group counseling/drumming instruction.

- VH-1 Save The Music Project



OVERVIEW OF THE STUDY

"You are talking to someone who had very little to do with the arts before I came here. This has changed me enormously. I have an appreciation for the arts that I never had before. I have seen youngsters come through here who perhaps weren't as motivated, and I have seen them take off and fly because we pulled them into an art and opened up new avenues. I couldn't work anymore in a school that wasn't totally immersed in the arts." Middle School Principal

Based on a study of over 2000 pupils attending public schools in grades 4–8, a group of researchers from Teachers College Columbia University, found significant relationships between rich in-school arts programs and creative, cognitive, and personal competencies needed for academic success.

The study began by asking three inter-related questions: What is arts learning? Does it extend to learning in other school subjects? What conditions in schools support this learning?

The researchers found that young people in "high-arts" groups performed better than those in "low-arts" groups on measures of creativity, fluency, originality, elaboration and resistance to closure—capacities central to arts learning. Pupils in arts-intensive settings were also strong in their abilities to express thoughts and ideas, exercise their imaginations and take risks in learning. In addition, they were described by their teachers as more cooperative and willing to display their learning publicly.

In schools with high-arts provision, these competencies and dispositions also emerged in other subject areas when particular tasks evoked them. In such schools, teachers of non-arts subjects, such as science, math, and language, frequently speak of what they see as the extended effects of arts learning on learning in their disciplines. They comment on abilities such as thinking creatively and flexibly, imagining ideas and problems from different perspectives, taking imaginative leaps, and layering one thought upon another as part of a process of problem solving. In arts-rich schools, pupils are also seen by their teachers as curious, able to express ideas and feelings in individual ways, and not afraid to display their learning before their teachers, peers, and parents.

These responses frame what is interpreted in this monograph as a dialectical relationship between the different subject disciplines. Learning advances in depth through the challenge of traveling back-and-forth across subject boundaries.

The study found that the arts add the kind of richness and depth to learning and instruction that is critical to healthy development only in schools where arts provision is rich and continuous, administrators supportive, and teachers enlightened. The policy implications of this study are profound, particularly as they impinge upon in-school arts provision and teacher education.

Methodology of the Study

The Learning In and Through the Arts study was undertaken by the Center for Arts Education Research at Teachers College Columbia University and examined the artistic experiences of over 2000 pupils in public elementary and middle schools.[1] The goals were to determine what cognitive, social, and personal skills are developed through arts learning, if these competencies have a more general effect on learning, and what conditions in schools support this learning.

We recognized at the outset that the practice of arts teaching in schools is extremely diverse. The arts are taught in a variety of ways and configurations and in the contexts of four disciplines—visual arts, music, dance, and drama. Some programs in schools integrate the arts, while others integrate the arts within the general academic curriculum. Still others teach them

Support for this study was provided by The GE Fund and The John D. and Catherine T. MacArthur Foundation. Details of the procedures and analysis employed in this study can be found in Burton, Horowitz and Abeles (1999). Learning In and Through the Arts: Transfer and Higher Order Thinking. New York: Center for Arts Education Research, Teachers College, Columbia University. This report was prepared with the invaluable assistance of Barbara Salander, Research Associate of the Center.

We invited a broad cross section of arts educators to suggest elementary and middle schools that fit within one of five types reflecting this diversity of provision. By studying two schools from each type we believed we would be able to make comparisons among different approaches to arts teaching. We visited 28 of 150 nominated schools, often several times, and it quickly became apparent that schools did not fit easily into specific types. Instead, we found pockets of different kinds of arts instruction existing side by side in single schools, even across single grade levels. We found that children in many schools received unequal arts provision, sporadic teaching, and unevenly sequenced instruction.

In light of this discovery, we concluded that the best approach would be to treat each school as a complex combination of types of arts provision within which we could track the experiences of individual groups of children. Thus, we rated each school in our study on three seven-point scales, identifying the degree to which they were arts integrated, arts-rich or employed external arts providers.

We invited 18 schools to participate in a preliminary data collection for the study. Twelve schools were selected for more extensive study, and four of them became sites for in-depth case studies. In all, we examined the artistic experiences of 2046 children in grades four, five, seven, and eight. They attended public schools in New York, Connecticut, Virginia, and South Carolina.

The Arts and Creative Thinking Abilities

We first examined our numerical data in order to see if there was a pattern to the kind of art experiences to which children were exposed in schools. We were particularly interested in how these experiences related to creative thinking abilities and to teachers' perceptions of artistic capacities. We found that there were significant associations among these measures. In order to explore this finding more fully, we looked at the number of years children had received in-school arts instruction and the range of different arts they had studied during this time. These data were then assigned to either a high-arts exposure or low-arts exposure group. The high-arts group consists of the upper quartile of children based on the amount of in-school arts instruction they received. Similarly, the low-arts group consists the lower quartile of children. A typical 5th grader in the high-arts group might have received art and music instruction for at least three continuous years, as well as a full year each of drama and dance. A child in the low-arts group might have had one year or less of music and art, and no drama or dance instruction.

As we compared the experiences of the children in the respective groups we saw immediately that the high-arts group consistently outscored the low-arts group on measures of creative thinking and teachers' perceptions of artistic capacities. (See Figure 1)

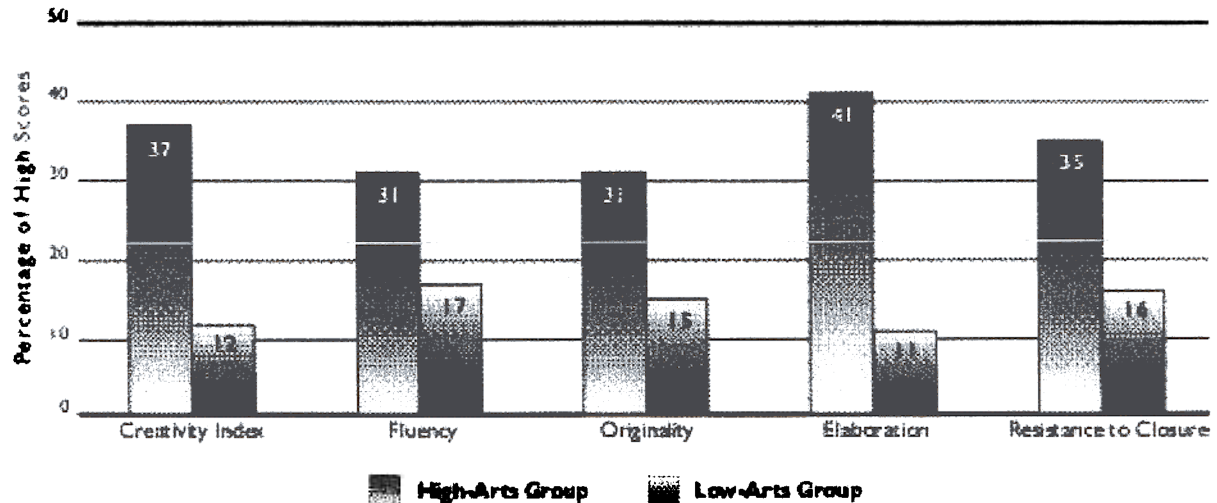
More detailed analysis showed that youngsters included in the high-arts groups scored well on measures of creativity, fluency, originality, elaboration,and resistance to closure.[4] In our many conversations and interviews with arts specialists,arts providers,and teachers of other subjects, we heard time and again how these same capacities are critical to arts learning as well as to other subject disciplines. In the arts, whether visual, music, dance, or drama, the ability to explore myriad ideas, envision and try out unusual and personal responses, consider objects,ideas, and experiences in detail, and be willing to keep thoughts open long enough to take imaginative leaps, are all important.

Arts Involvement and General Competencies

Young people included in the high-arts groups also scored more strongly in terms of academic teachers' perceptions of their general competencies. As shown in Figure 2, data reveal that youngsters in the high-arts

[4] Fluency represents the number of ideas or solutions that a person expresses when faced with a stimulus or problem.Originality refers to the unusual quality of responses, while elaboration is the imagination and exposition of detail. Resistance to closure represents the ability to keep open to new possibilities long enough to make the mental leap that makes possible original ideas. The creativity index is an overall creativity score (Torrance, Ball, and Safter, 1992).

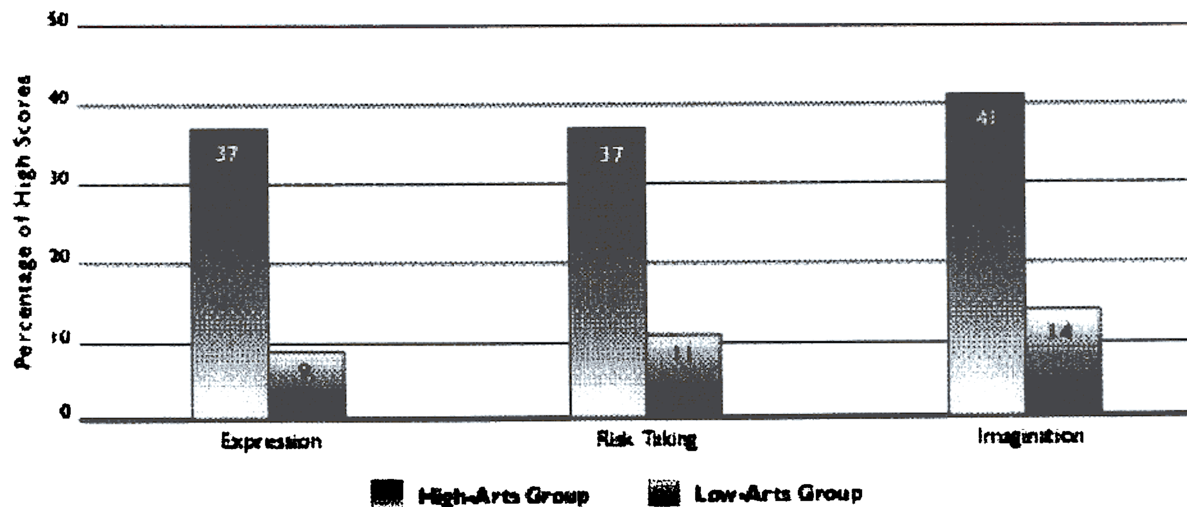
Figure 1. Creative Thinking Abilities



group were stronger than those in low-arts groups in their ability to express their thoughts and ideas, exercise their imaginations, and take risks in their learning. Moreover, they were also more cooperative and showed a greater willingness to display their learning before a community of their peers and parents.

Our interview and observation data offered a rich context for understanding these results. Teachers emphasized that young people involved in the arts were able to unify divergent thoughts and feelings within representational forms that make it possible for them to express their ideas in many different ways. Similarly, arts subjects provide frameworks of learning where it is permissible,and desirable, to take imaginative leaps and to envision new possibilities and probabilities. Above all,the arts are subjects where young people can take

Figure 2: Arts Involvement and General Competencies



risks in their thinking as they try out new and unexplored arenas of learning.

We also speculated that the arts, by their very nature, require a great deal of collaboration and cooperation in their creation. Even the visual arts, usually thought of as solitary activities, can involve youngsters in collaborative enterprises such as painting murals and scenery, producing books, and organizing exhibitions. Pupils involved in arts learning come to know first-hand what it means to share and learn from each other.

Unlike other school subjects, the arts present a public face to learning. Paintings can be seen, music heard,and dance and drama experienced by everyone. Learning in the arts inevitably involves some measure of willingness to perform or display publicly, to reveal accomplishments, to garner appreciation,and to learn from the critiques of others.

Arts Involvement and Perceptions of Self as Learner

The data revealed some interesting differences in the children's own perceptions of themselves as learners. High-arts youngsters were far more likely than their low-arts counterparts to think of themselves as competent in academics. They were also far more likely to believe that they did well in school in general, particularly in language and mathematics. (See Figure 3)

As with other findings, these results were validated by our observations of classrooms and in conversations with teachers and administrators. They confirmed that youngsters exposed to strong arts education acquire a sense of confidence in themselves that radiates beyond the studios and performance spaces. (See Figure 4) One might also speculate that the kind of persistence that it takes to be successful in the arts, particularly in the processes and organization required to represent thoughts and ideas, would have general cross-curriculum relevance.

Arts Involvement and School Climate

Administrators and teachers in high-arts schools attributed many positive features of their in-school climate to the arts. We found that schools with strong arts programs had supportive administrators who played a central role in ensuring the continuity and depth of provision. They encouraged teachers to take risks, learn new skills, and broaden their curriculum.

Figure 3: Arts Involvement and Perceptions of Self as Learner

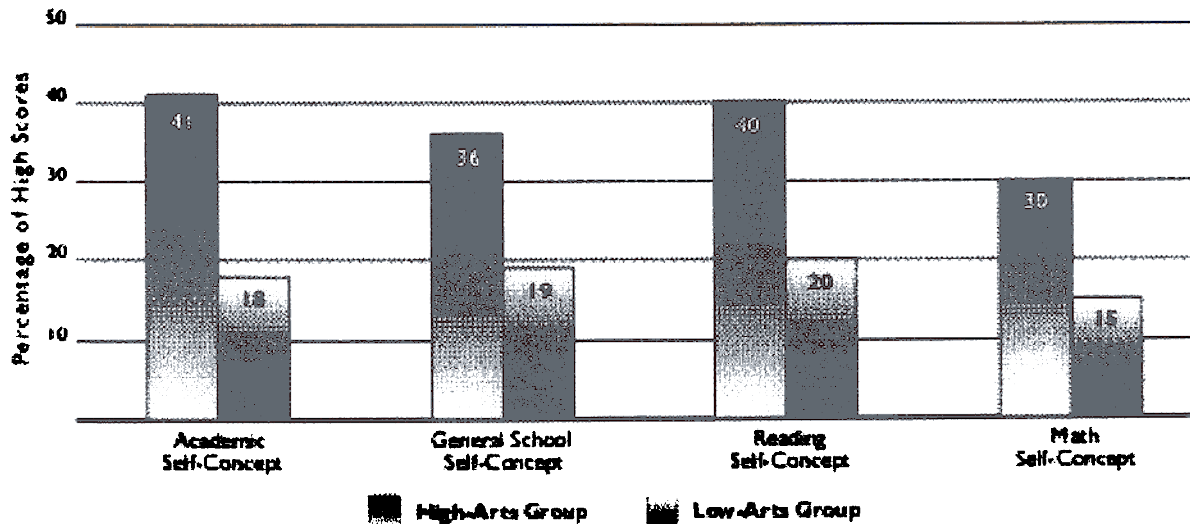


Figure 4:SDQ-I (Self-Concept) Scores Compared to The Number of Years of In-School Arts

SDQ-I Scores	High-Arts Group	Low-Arts Group
Physical Ability S-C	29.65%	20.08%
Physical Appearance S-C	27.40%	24.31%
Peer Relations S-C	29.45%	23.26%
Parent Relations S-C	35.17%	24.31%
General Self-Concept	36.81%	27.48%
Reading S-C	40.49%	20.08%
Mathematics S-C	29.86%	15.43%
General School S-C	35.79%	18.60%
Total Non-Academic S-C	33.33%	24.31%
Total Academic S-C	41.10%	17.76%
Total S-C	34.15%	17.97%

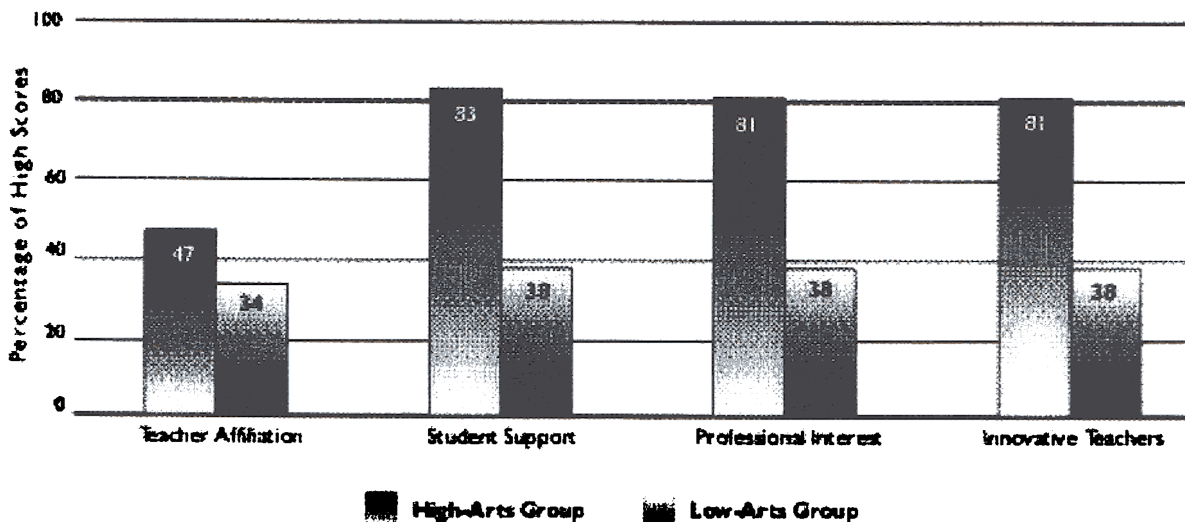
Similarly, we found specialist arts teachers who were confident in their pedagogy and practice, knowledgeable about pupils' abilities and personalities, innovative in their approaches to learning, and who also enjoyed collaborating with other arts specialists and teachers of other subjects.

The findings of our study show that children in arts-rich schools are more likely than children in low-arts schools to have good rapport with their teachers. (See Figure 5) In a similar vein, the results show that teachers in arts-rich schools demonstrate more interest in their work and are more likely to become involved in professional development experiences. These teachers work in schools that favor change and experimentation. They also are more likely to be innovative in their teaching. The data on teacher affiliation show that such teachers tend to have good working relationships with other teachers in their school. In the high-arts settings, we found considerable flexibility in curriculum design, with less emphasis on conformity, formalization, or centralization.

Finally, it should be noted that when we examined our school sample for socio-economic status, we discovered that the results of our study were more firmly tied to rich arts provision than to high economic status.

A great deal of data came from our interviews with specialist teachers in language, science, and mathematics, as well as from our observations in classrooms and attendance at exhibitions and performances. While

Figure 5: Arts Involvement and School Climate



interpretation if encoded in images, movement, or musical sound.

In such cross-disciplinary conversations involving the arts, young people are given permission to go beyond what they already know and to move towards new horizons for their learning.

Educational Implications of the Study

The results of our study offer empirical evidence that learning in arts-rich schools is complex and that it is most successful when supported by a rich, continuous, and sequenced curriculum. We also have clear empirical evidence that children, in what we have called the low-arts schools, are less able to extend their thinking. It appears that a narrowly conceived curriculum, in which the arts are either not offered or are offered in limited and sporadic amounts, exerts a negative effect on the development of critical cognitive competencies and personal dispositions. This conclusion brings to mind our original experience in choosing school sites for our study. In the many schools we visited, arts provision was almost uniformly inconsistent and sporadic.

Arts-rich schools offer a picture of a curriculum that is neither formalized nor centralized, but rather is open and flexible. Within these schools it was clear that teachers thought about, and accepted, a variety of different ways for pupils to be creative, to exercise skills and to think through problems, and exercise imagination in the construction of paintings, musical compositions, choreography, and plays. This suggests that a flexible curriculum which paces in-depth arts experiences to a sensitive appreciation of developmental needs leads to learning that combines the kind of persistence and confidence necessary for academic accomplishment.

Taking our cue from the arts-rich schools in this study, we might envision an ideal curriculum as one that offers in-depth, carefully sequenced teaching in several art forms for the entire span of young peoples' schooling. Teaching would be carried out by properly educated specialist teachers who are both committed to their own art forms and knowledgeable about the socio-cultural background and development of the young people they teach. An ideal curriculum would enable arts teachers to collaborate with each other, with teachers from other disciplines, and with visiting artists and other arts providers. This kind of curriculum requires careful planning. Teachers need the time to collaborate in disciplinary and cross-disciplinary groups in order to research and frame the learning to which they will contribute. They will also need administrative support in arranging the daily timetable so that pupils have long stretches of time in which to research and try out ideas and to stretch their thinking as far as it will go—both within and across disciplines.

As part of this extended time for learning, pupils need to be able to use cultural institutions—art, science, and natural history museums, botanical gardens, concert halls, and so forth—much as they would use a library for research purposes. The arts-rich schools in our study were characterized by a flexibility, knowledge, and openness in the way that teachers planned and delivered instruction. One can only imagine what they might have accomplished, had they been able to restructure their school days in support of even greater expectations for learning.

One unexpected outcome of our study under-cuts the debate about whether or not the arts are core or ancillary to learning across the curriculum. Our findings led us to the conclusion that, all things being equal, the arts are neither ancillary nor core but rather that they are participants in the development of critical ways of thinking and learning. In schools with rich arts provision this argument can be sustained on the basis of the constellation of capacities that are nurtured in arts learning and that characterize the dialectical relationship between the arts and other subjects. By contrast, in schools with a paucity of arts provision the arts may well be considered ancillary because they do not have the capacity to promote the ways of thinking that, by interacting dynamically with other subject domains, offer children generative and complex

OKLAHOMA A+ SCHOOLS

UN O N RA OK AHOMA

RESEARCH UPDATE

January 2005

Table 1: Oklahoma A+ Teacher Opinion Survey

Statement	No. Responding	Percent Agreeing (A or SA)
My personal fulfillment as a teacher is enhanced by my work in the arts.	301	79.7%
Students become more self-actualized through the arts	313	84.1%
Integrating the arts into the general curriculum makes my teaching more rewarding to me.	303	86.1%
The arts in my classroom enhance the spirit of respect and empathy.	295	94.6%
Arts integration aids in the goal of students loving to learn.	310	96.1%
Using the arts in my classroom reduces discipline issues for the children I teach.	298	80.2%
The arts integrated into the total curriculum promote learning across subject boundaries.	313	93.7%

Teachers in schools first implementing A+ during the 2004-05 academic year are not included in this analysis.

Professional Support and Staff Development

The Oklahoma A+ Network provides on-going professional support and staff development through collaborative research-based practices. The 2004 Summer Institutes were very well received by participants.

> *"I rediscovered my passion for teaching. . ."*
> [teacher interview]
>
> *"I think that all of our Summer Institute experiences [will result] . . . in successful experiences for our students."* [teacher interview]

Increased leadership from Oklahoma Fellows and Faculty was often noted as a particularly important asset:

> *The Oklahoma Fellows really address our needs. I think the North Carolina people were good, but they don't know our school culture and our needs and goals are different."* [principal interview]

Supporting Data

Ranges of API and OCCT scores for students in Oklahoma A+ schools indicate substantial increases in minimum scores achieved. (See Tables 2 and 3.)

Academic Performance Index (API)

The API, defined in Oklahoma state law under Title 70 O.S. § 3-150 and 3-151, is a numeric score (from 0-1500) indicating school performance based upon state-mandated tests and other factors contributing to a school's educational success.

The purpose of the API is to measure success and initiate growth in school and district performance in Oklahoma. It is important to remember that because of vast differences in size, location, demographics, etc. among Oklahoma schools, the State Department of Education (2003) urges caution in comparing the score of one school or district to that of another.

Table 2: API Scores for Oklahoma A+ Schools (Original 14 Schools)

	2001-2002 (Before A+)		2002-2003 (A+ Year One)		2003-2004 (A+ Year Two)	
	Minimum Score	Maximum Score	Minimum Score	Maximum Score	Minimum Score	Maximum Score
Regular*	553	1300	619	1303	791	1380
Male	579	1410	987	1446	**	**
Female	547	1330	912	1331	**	**
Economically Disadvantaged	538	1326	816	1384	**	**
All	392	1285	613	1256	**	**

*Regular student scores (does not include special education students and English language learners)

** Data not available at this time

Oklahoma Core Curriculum Tests (OCCT/CRT)

As mandated by Oklahoma state law (Title 70 O.S. 1210.508) the Oklahoma Core Curriculum Tests (OCCTs) were developed to sample the skills and content specified in the PASS standards. Student performance on the OCCTs is classified into either Satisfactory (at least 70% mastery of content) or Unsatisfactory, or one of four performance levels (Advanced, Satisfactory, Limited Knowledge, and Unsatisfactory). The minimum requirement for a Satisfactory school rating is 70% mastery by at least 70% of the students.

Table 3: Percentage of A+ 5th Grade Students Scoring Satisfactory or Higher on the Oklahoma Core Curriculum Test (Original 14 Schools)

5th Grade

	2001-2002 (Before A+)		2002-2003 (A+ Year One)		2003-2004 (A+ Year Two)	
	Minimum %	Maximum %	Minimum %	Maximum %	Minimum %	Maximum %
Arts	36	90	61	97	61	100
Geography		93	24	92	26	100
Math		100			74	96
		100	43	94		91
		100	62	97		94
		97	43			94
	50	98	61	100	*	*

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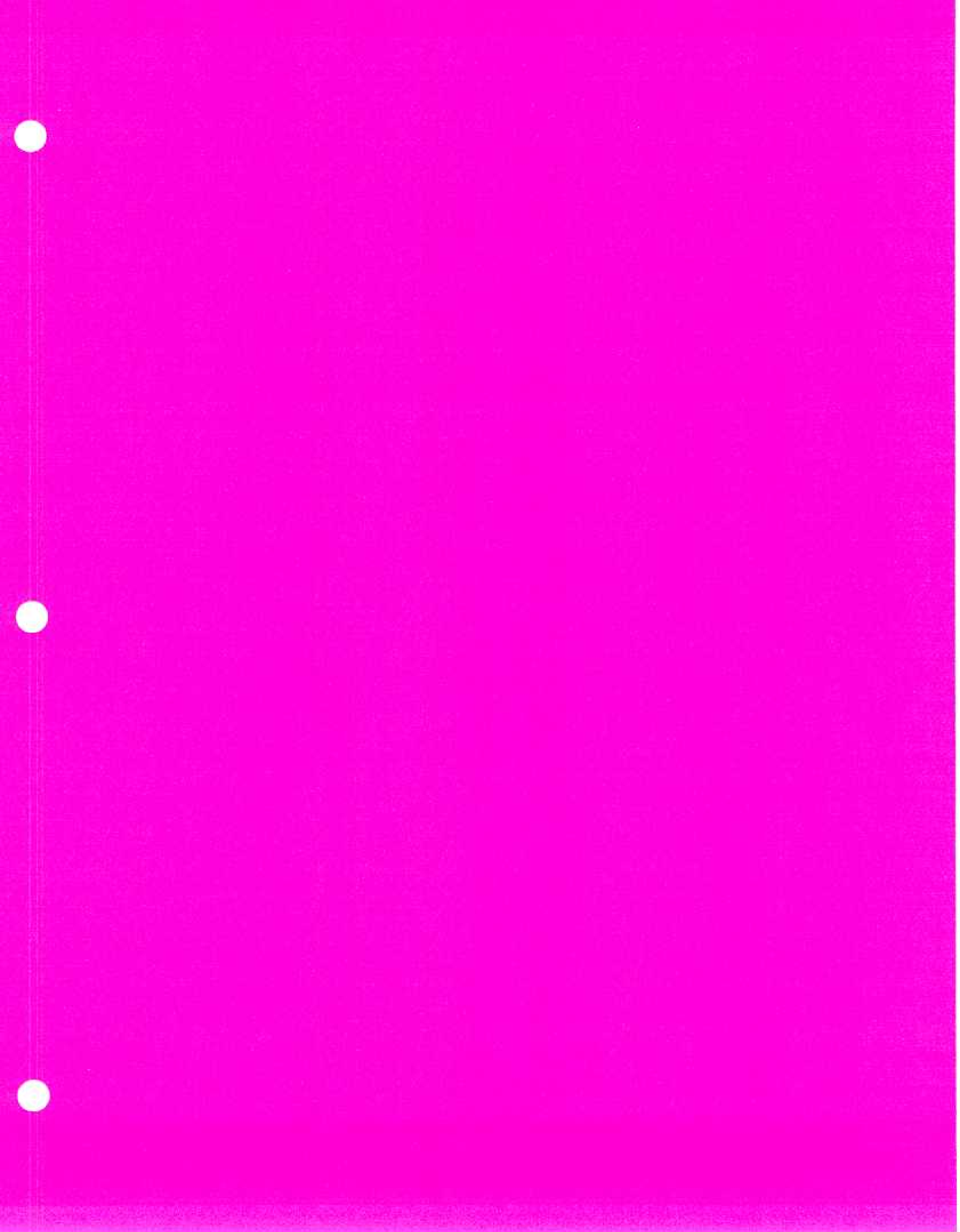


UNIVERSITY OF CENTRAL OKLAHOMA

OKLAHOMA A+ SCHOOLS

RESEARCH HIGHLIGHTS

September 2005

The mission of the Oklahoma A+ Schools is to advance a quality, whole school experience to nurture the creative learner.

How do stakeholders involved in and with A+ schools differ from those who are not?

- A survey of over 12,000 A+ and non-A+ educators, administrators, community members, legislators and business people across Oklahoma found that those involved in **A+ schools agree significantly more often** that arts education:
  - **Decreases violence**
  - **Teaches problem solving**
  - **Improves learning**
  - **Improves grades**
  - **Increases student attention span**
  - **Has a positive impact on the community**

  A+ school's **Academic Performance Index averages exceed the API averages of their district** and maximum scores have **increased by an average of 5%** from 2003 – 2004.

- The need for **reading remediation** among **economically disadvantaged** students in A+ schools has **decreased by an average of 40%** after two years of participation, **opposite a national trend.**

- After two years of implementation, **5th grade criterion-referenced test scores have improved by an average of 7%** across all subject areas from year 1 to year 3.

  1,230 students in A+ schools indicate that they find their school work:
  - **Enjoyable** (average rating of 4 on a 5 point scale)
  - **Interesting** (average rating of 3.67 on a 5 point scale)
  - **Challenging** (average rating of 3.61 on a 5 point scale)

- A **survey of 312 A+ teachers** reveals that:
  - The **arts have a positive impact** on the school and their teaching (average rating of 3.15 on a 4 point scale)
  - **A+ enhances collaboration** (average rating of 2.92 on a 4 point scale)

In 2004, Oklahoma A+ Schools served **8,197 students** and **558 teachers** in **22 schools.** Oklahoma A+ Schools has also provided over **800 hours of professional development** for educators and administrators in the Oklahoma A+ Schools Network.

...And the transformation continues.

Contact Oklahoma A+ Schools for the entire 2005 research update.

Rev. 9-26-05

THE UNIVERSITY of NORTH CAROLINA
GREENSBORO

Inspire. Change.

A+ Schools Program

"There is much that the arts can teach us about school reform, and the A+ Schools Program provides a powerful example on which to base these lessons."

— from 'Creating and Sustaining Arts-Based School Reform: The A+ Schools Program,' an eight-year follow-up report funded by the Ford Foundation

Sustainable Arts-Based School Reform

The A+ Schools Program is a whole school re-form model that views the arts as fundamental to how teachers teach and students learn in all subjects. The mission of the A+ Schools Program is to create schools that work for everyone—students, teachers, administrators, parents and the community.

Grounded in the A+ Essentials ™, the central vision of A+ is to create enhanced learning opportunities for all students by using arts-integrated instruction which incorporates Howard Gardner's theory of multiple intelligences, as well as other theories of intelligence and recent brain research. For schools, A+ is a comprehensive education reform because other changes in school practice, in areas from assessment to scheduling and collaboration to parent involvement, radiate out as necessary to achieve this central vision.

ief History

ablished in 1995 by the Kenan Institute for the Arts, the A+ Schools Program began with 25 schools, representing the diversity of North Carolina schools and communities, participating in an extensive four-year evaluation. The results of the initial evaluation, and the subsequent evaluation in the eighth year, attributed the success and sustainability of the Program to the use of the arts in school reform, the professional development and the statewide Network created to support teachers and schools.

Upon completion of the four-year evaluation in North Carolina, other states began to express interest in the Program. In 2000 the North Carolina Program began a four-year process to assist the Kirkpatrick Foundation in Oklahoma City in establishing a statewide A+ Schools Program in Oklahoma (www.okaplus.ucok.edu) Today, the Oklahoma A+ Schools program has 31 schools with plans to continue adding schools each year.

One year after beginning work with the Oklahoma project, the North Carolina Program began a similar process with a private foundation to assist in establishing a statewide Program in Arkansas. http://www.aplusnetwork.org/ Arkansas now has 14 A+ schools with plans to add schools each year.

In 2003, the three statewide A+ Schools programs, North Carolina, Oklahoma and Arkansas, came together to form the National A+ Schools Consortium to further their mutual interests in guiding the development of future statewide A+ Schools programs. The three statewide networks continue to meet several times throughout the year and are working collaboratively on the 2005 A+ Schools National Conference.

In 2003 the A+ Schools Program moved from the Kenan Institute for the Arts to the University of North Carolina at Greensboro (UNCG). UNCG was selected as a home for the A+ Schools Program because of the opportunity to work closely with the University's School of Education, the School of Music and the departments of art, theatre and dance. The University enjoys a vibrant arts community, both on campus with primary resources such as the Weatherspoon Art Museum and ArtsLink and within the greater Greensboro community. The A+ Schools Program works closely with UNCG faculty and staff to develop innovative arts in education research projects and programs.

Value Added: Beyond Test Scores

In addition to the usual measures of student achievement and school success (expected gains in test scores, student and teacher attendance, student discipline and parent involvement), the A+ Schools Program evaluators and developers identified the unique ontributions that the arts in education make to student's intellectual, social, and emotional growth. This 'value-added' case for the usion of the arts in a school's curriculum proved to be a strong justification for A+, and schools have continued to achieve growth North Carolina's accountability tests comparable to that of other schools statewide without 'narrowing' the curriculum (i.e. not eliminating non-tested subjects such as science, history and the arts).

The A+ Schools Program enabled schools to use the arts to 're-form' their approach to 'doing the business of schools'—educating children. The evaluators found that A+ Schools were able to respond to accountability standards in both effective and creative

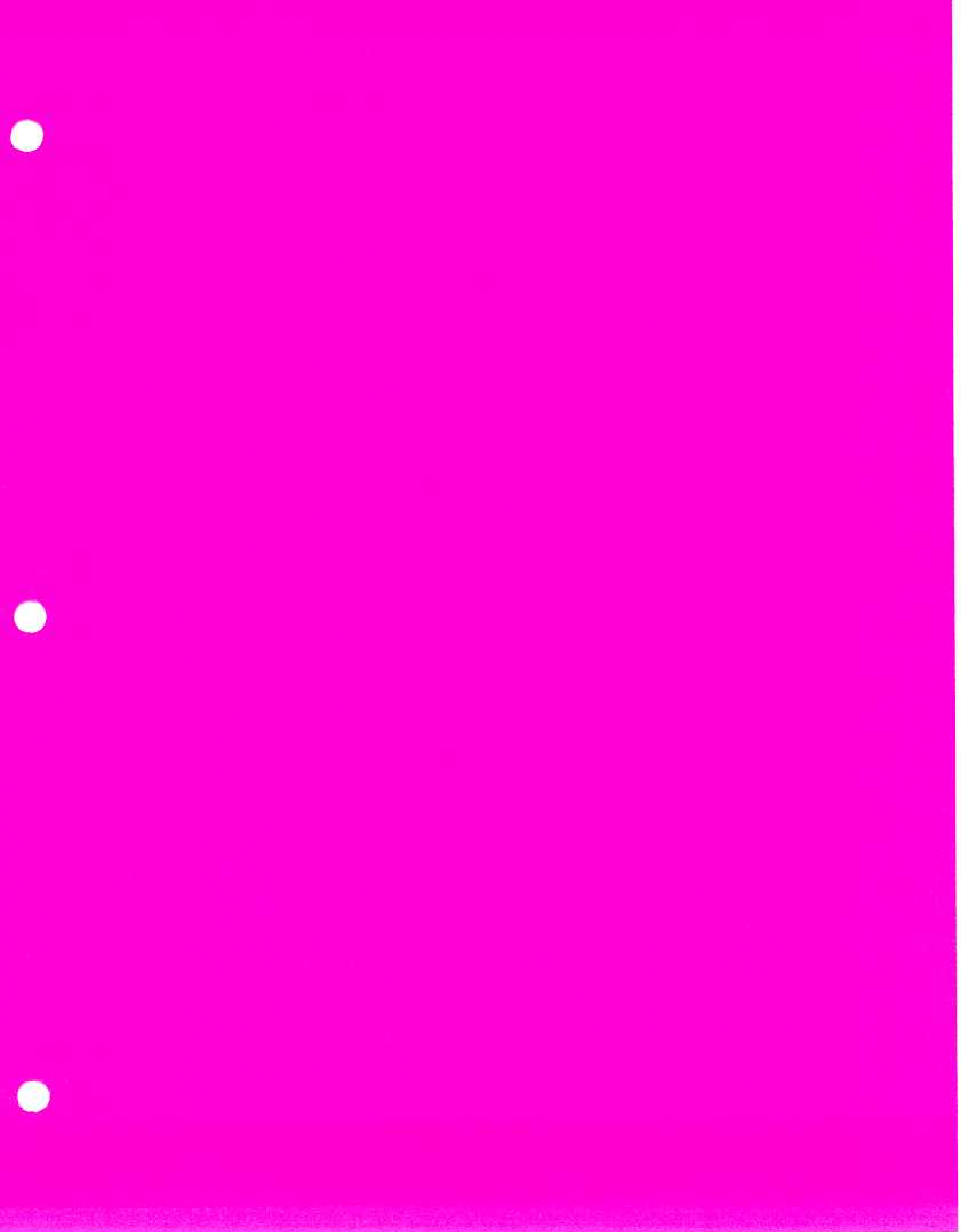
ways, meeting standards in North Carolina's high-stakes testing program and developing a school identity around the arts by deeply integrating the arts into the curriculum.

onal Recognition
e A+ Schools Program is now nationally recognized as an effective, research-based strategy for sustainable school reform and has partnerships and contracts with other state initiatives to assist in establishing statewide and regional A+ Schools networks.

The A+ Schools Program has been recognized across North Carolina and cited extensively as an exemplary program in the North Carolina Department of Public Instruction publication, *A Balanced Curriculum,* (http://www.ncpublicschools.org/docs/curriculum/balancedcurriculum.pdf), and nationally as an effective, research-based strategy for sustainable school reform—*Critical Links: Learning in the Arts and Student Academic and Social Development, 2002* (Arts Education Partnership http://aep-arts.org/) and *Putting the Arts in the Picture: Reframing Education in the 21st Century* (Center for Arts Policy at Columbia College Chicago http://artspolicy.colum.edu/).

The A+ Schools Program continues to provide consultation services and professional development to schools, school districts and states, and to maintain partnerships with other states.

More Information Available
For additional information about the A+ Schools Program, or to order copies of the research reports please email at aplus@uncg.edu or call the A+ Schools Program office at **336.334.3103.**



Reading Achievement of Instrumental Music Students and Non-Instrumental Music Students in Six Harford County Elementary Schools

James Boord, Supervisor of Music
Harford County Public Schools
Assisted by
Michael Mark
Spectrum Associates Inc.

August 2004

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Reading Achievement of Instrumental Music Students and Non-Instrumental Music Students in Six Harford County Elementary Schools

James Boord, Supervisor of Music
August 2004

Reason for the Study

Numerous studies have indicated that elementary school students who are involved in school music education perform as well as or better than students who are not involved. These studies, however, reflect schools in a variety of locations and are not necessarily reflective of Harford County students. I was especially interested to learn whether the Lexile averages of 4th and 5th grade instrumental music students who are "pullouts," those who leave their classes for music lessons, growth rates are different from those students who do not take instrumental music.

Nature of the Study

To determine whether the studies reflect Harford County schools, I conducted a study to compare Lexile levels of instrumental music students with those of students who do not take instrumental music. The study was done in six Harford County elementary schools, three of which are Title I schools. Each has at least two 30 minute pullouts per week. The study, which covered students from the end of the 3rd grade to the end of the 5th grade, documents reading achievement [illegible] g [illegible] st that is used by the Harford County Public Schools. I chose the SRI because of its clear and easily understood definitions. The Lexile framework allows for students' reading skill to be reported in terms of the difficulty level of the text they are able to read. Lexile describes both the skill of the student and difficulty of the text. In the spring of 2004, I examined the SRI results of students in the six schools from the Data Warehouse and disaggregated them to identify students who participated in instrumental music programs and those who did not. The average scores were then calculated by individual schools and by all of the participating schools.

The Schools Involved in the Study

One school was targeted in the first year of this study, 2001-2002. The Director of Elementary Education, concerned about the school's performance on the state testing programs, suggested that instrumental music might help increase student reading scores. The principal identified struggling students and purchased instruments for those who desired them. The next year, 2002-2003, the instrumental music program at that school expanded from 24% to 53% of 4th and 5th grade students. After that, five additional schools were selected at random to participate, with the requirement that three Title I schools were to be included among the six.

Results

The results of the study indicate that in most cases, instrumental music students achieve higher reading levels than non-instrumental students. In most other cases, pullout students have a growth rate parallel to non-instrumental students.

School Profiles

HCPS 1 is a Non-Title 1 school; enrollment is 841; average class size 21.6; 12% African American, 3% Hispanic, 3% Asian, 1% Am. Indian/Aleutian Native, 81% White. 40% of professional staff has a Master's Degree and 19% have a Master's +30.

HCPS 2 is a Title 1 school; enrollment 509; average class size 20.7; 35% African American, 6% Hispanic, 3% Asian, 1% Am. Indian/Aleutian Native, 55% White. 57% of professional staff has a Master's Degree and 11% have a Master's +30.

HCPS 3 is a Non-Title 1 school; enrollment 534; average class size 21; 5% African American, 4% Hispanic, 3% Asian, 1% Am. Indian/Aleutian Native, 87% White. 50% of professional staff has a Master's Degree and 12% have a Master's +30.

HCPS 4 is a Title 1 school; control group; enrollment 363; average class size 20; 52% African American, 4% Hispanic, 2% Asian, 1% Am. Indian/Aleutian Native, 41% White. 49% of professional staff has a Master's Degree and 8% have a Master's +30.

HCPS 5 is a Non-Title 1 school; enrollment 455; average class size 21.5; 0.5% African American, 1% Hispanic, 1% Asian, 0% Am. Indian/Aleutian Native, 97.5% White. 46% of professional staff has a Master's Degree and 19% have a Master's +30.

HCPS 6 is a Title 1 school; enrollment 575; average class size 21.2; 57% African American, 5% Hispanic, 1.5% Asian, 1% Am. Indian/Aleutian Native, 35% White. 38% of professional staff has a Master's Degree and 6% have a Master's +30.

Findings

Figure 1 compares Lexile averages for 4th and 5th graders in all six schools.

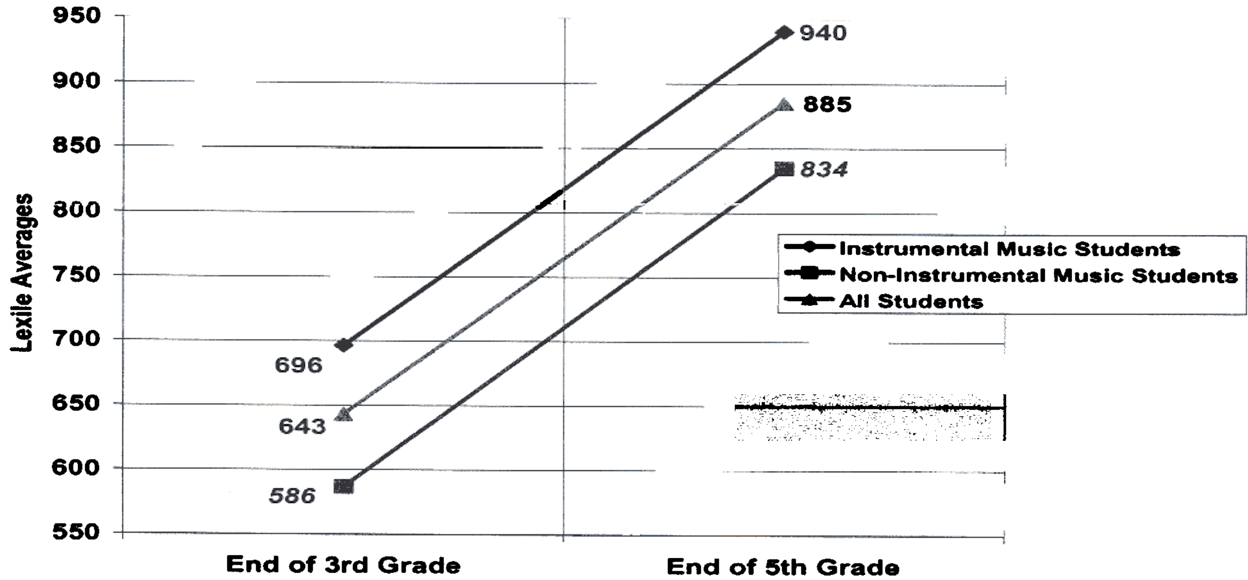


Figure 2 compares the percentages of 4th and 5th grade students in all six schools who are rated satisfactory in reading.

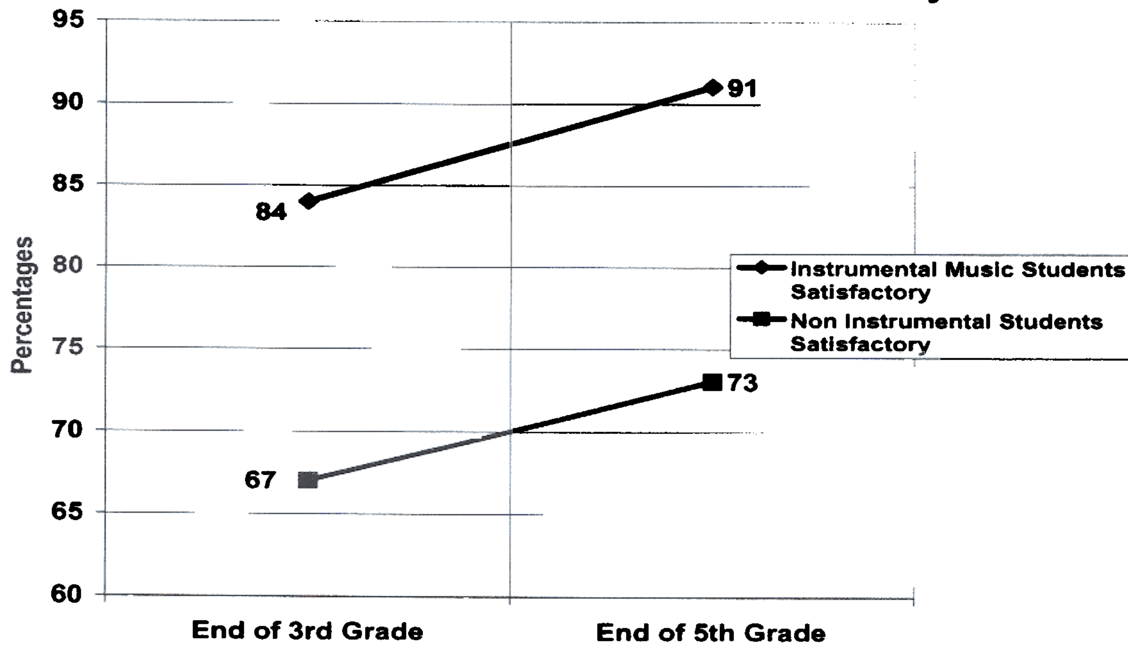


Figure 3 compares Lexile averages for 4th and 5th grade students in the 3 Title I schools

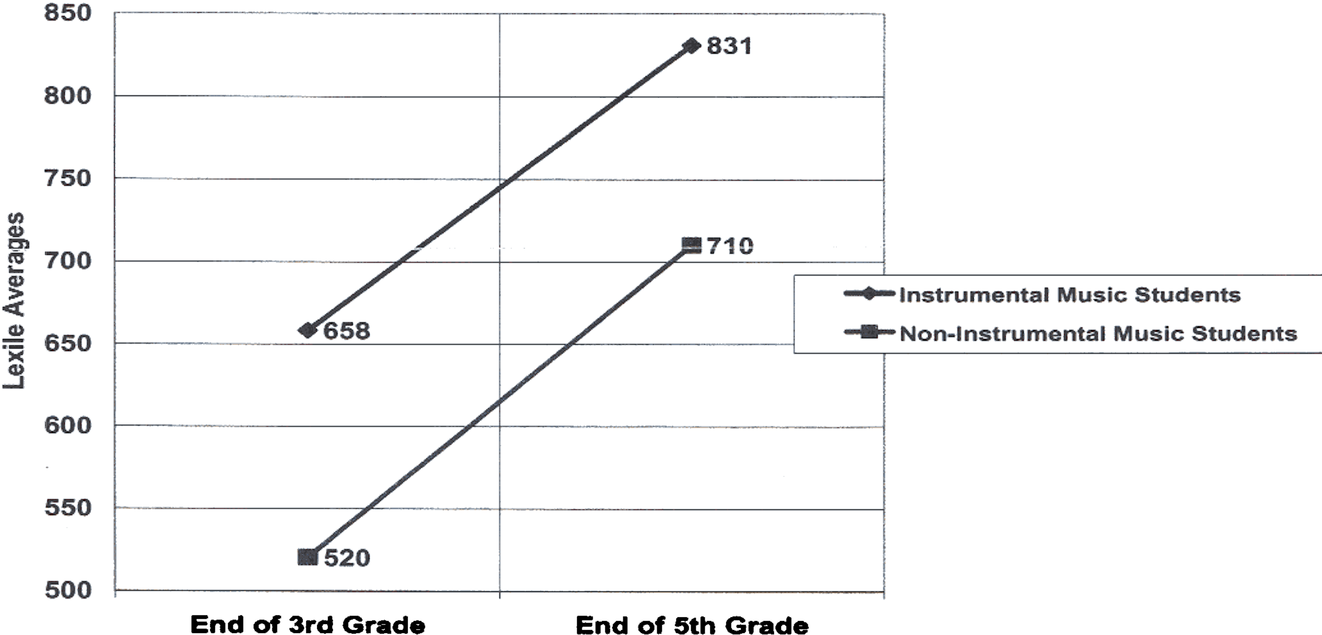


Figure 4 compares Lexile averages for 4th and 5th grade students in the 3 non-Title I schools.

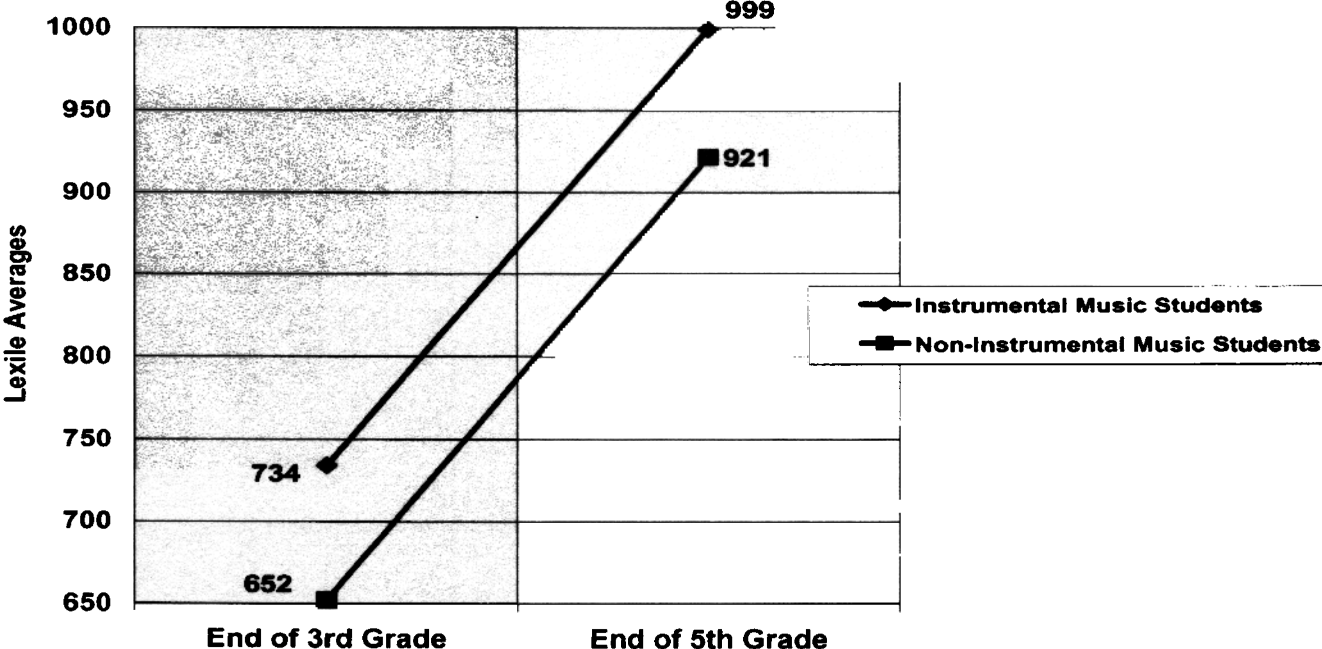
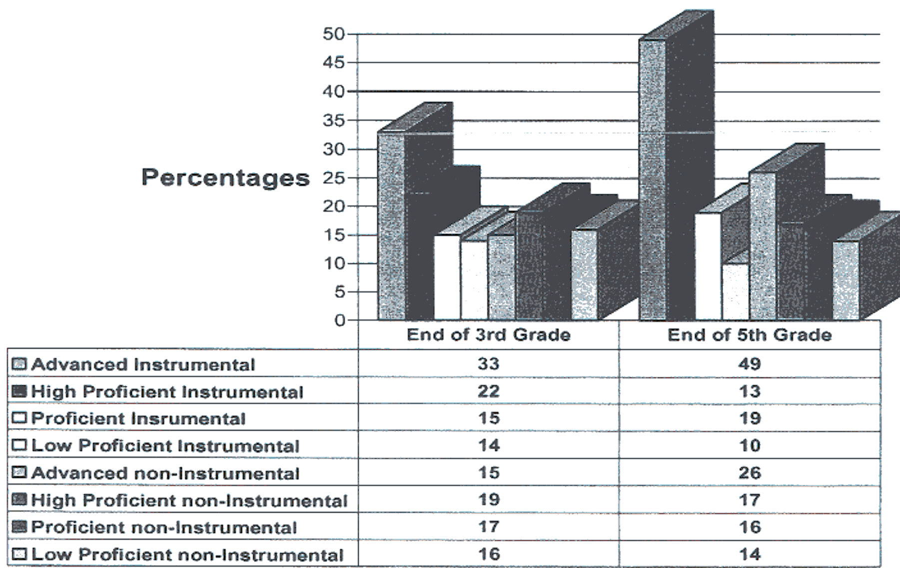


Figure 5 compares percentages of 4th and 5th grade students in Advanced and Proficient reading categories.

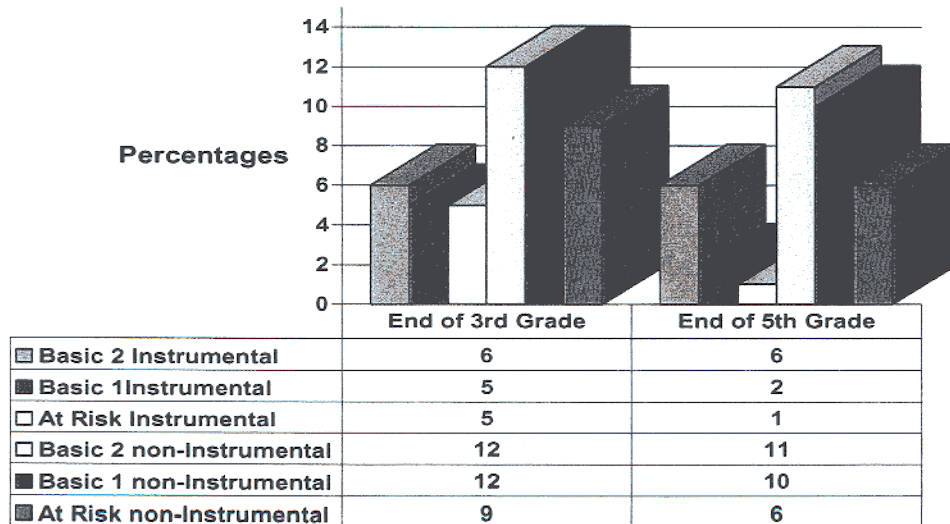
Figure 5: Percentages of Students in Advanced and Proficient Reading Categories



	End of 3rd Grade	End of 5th Grade
Advanced Instrumental	33	49
High Proficient Instrumental	22	13
Proficient Insrumental	15	19
Low Proficient Instrumental	14	10
Advanced non-Instrumental	15	26
High Proficient non-Instrumental	19	17
Proficient non-Instrumental	17	16
Low Proficient non-Instrumental	16	14

Figure 6: Six schools comparison of Basic 2, Basic 1, and At Risk students

Figure 6: Percentages of Students in Basic and At Risk Categories



	End of 3rd Grade	End of 5th Grade
Basic 2 Instrumental	6	6
Basic 1Instrumental	5	2
At Risk Instrumental	5	1
Basic 2 non-Instrumental	12	11
Basic 1 non-Instrumental	12	10
At Risk non-Instrumental	9	6

Conclusions

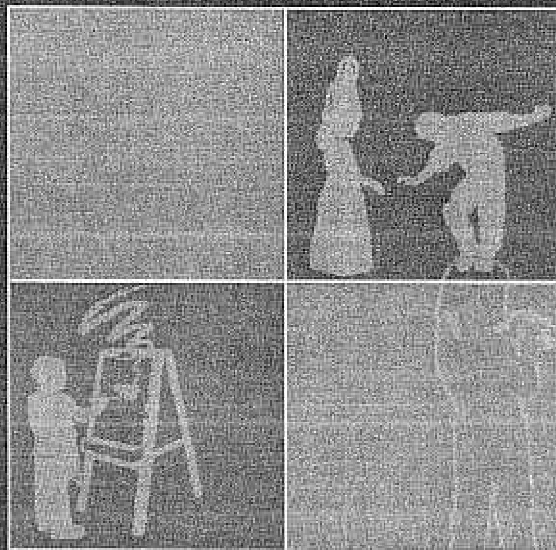
The Lexile scores of instrumental students reflect the schools they attend. The yearly gains of these students are parallel to those of non-instrumental students.

2. The percentage of instrumental students who move from the Proficient levels to the Advanced reading level is higher than that of non-instrumental students.

3. The percentage of instrumental students who move from the Basic and At Risk levels is also higher than that of non-instrumental students.

This study demonstrates that the "Pullout Instrumental Music Program" has no negative effect on the reading scores of participating students.

Critical Links:



Learning in the Arts and Student Academic and Social Development

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The Arts Education Partnership is a national coalition of arts, education, business, philanthropic and government organizations that demonstrates and promotes the essential role of the arts in the learning and development of every child and in the improvement of America's schools. The Partnership includes over 100 organizations that are national in scope and impact. It also includes state and local partnerships focused on influencing education policies and practices to promote quality arts education. The Partnership is administered by the Council of Chief State School Officers and the National Assembly of State Arts Agencies, through a cooperative agreement with the National Endowment for the Arts and the U.S. Department of Education. The Arts Education Partnership can be contacted at:

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Critical Links:

Learning in the Arts and Student Academic and Social Development

Edited by Richard J. Deasy

Studies were selected for inclusion in this Compendium, and summaries of the studies prepared, by James S. Catterall, Imagination Group, University of California at Los Angeles; Lois Hetland, Project Zero, Harvard Graduate School of Education; and Ellen Winner, Project Zero, Harvard Graduate School of Education and Psychology Department, Boston College.

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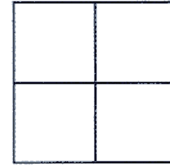
* Each of these researchers contributed to the summaries of studies included in this Compendium. Each summary includes comments from two researchers. The researchers' initials (shown in the list above after their name and affiliation) appear after each section of a summary they authored.



Foreword

In its 1997 report, *Priorities for Arts Education Research*, the Arts Education Partnership's Task Force on Research recommended the creation of this Compendium. The Task Force applauded the National Endowment for the Arts (NEA), in collaboration with the U.S. Department of Education (USED), for commissioning an earlier compendium (*Schools, Communities and the Arts*, published in 1995) and urged that periodic surveys of recent research be regularly produced as a service to researchers, practitioners, and policy-makers. Both the NEA and the USED responded positively to the Task Force recommendation and awarded funding to the Arts Education Partnership (AEP) to commission and publish the next compendium. *Critical Links: Learning in the Arts and Student Academic and Social Development* is the result.

Through a competitive process, AEP commissioned James S. Catterall of the Imagination Group at the University of California at Los Angeles, Lois Hetland of Project Zero at the Harvard Graduate School of Education, and Ellen Winner of Project Zero at the Harvard Graduate School of Education and the Psychology Department at Boston College to assist in the preparation of the document. Their primary tasks were to establish the criteria for the inclusion of studies; examine and select recent research in five art form areas: dance, drama, music, visual arts, and multi-arts; and prepare summaries of the studies, including comments on the contribution of each to the field of arts education and its implications for future research and/or practice.

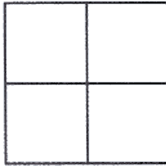
In light of available resources, a decision had to be made about the focus of the studies to be screened for inclusion in this Compendium, namely, to include either studies of the academic and social effects of arts learning experiences or studies focused specifically on the arts learning experiences themselves. The decision, made with the advice of the Compendium Advisors (listed p. i), was to do the former, in part to identify strong arts education research that would make a contribution to the national debate over such issues as how to enable all students to reach high levels of academic achievement, how to improve overall school performance, and how to create the contexts and climates in schools that are most conducive to learning.

Multiple voices are heard in this Compendium. As Catterall, Hetland, and Winner began their work of summarizing the studies they had selected, the decision was made to engage other reviewers in reading the studies and adding their comments. The field of education research admits of multiple methods and perspectives. It was felt important to enrich the Compendium with a variety of viewpoints on the significance of the included studies. Consequently, each study summary includes comments by two reviewers. Initials identify the commentators on each study.

Subsequent to the completion of the summaries, essayists were commissioned to examine the group of summaries in each art form and to give their views on the implications of that collective body of work. These essays appear at the end of each art form section. Because of the centrality to the Compendium of the issue of transfer of learning, James Catterall, with assistance from Terry Baker of the Center for Children and Technology of the Education Development Center, was invited to address the topic in an additional essay in the Compendium.

Compendia attempt to capture the best work being done at a period in time. We believe this volume has done so. We believe it offers a rich look backward and valuable guidance on future directions for arts education research. And it provides important insights into curriculum designs and instructional practices that will enhance the quality and impact of student learning in the arts.

The Arts Education Partnership urges education decision makers to attend to these lessons. And we urge private and public funding agencies to make substantial investments in further research that builds on the studies and essays included in this volume.



Introduction

Themes and Variations: Future Directions for Arts Education Research and Practice

Richard J. Deasy

A purpose of this Compendium is to recommend to researchers and funders of research promising lines of inquiry and study suggested by recent, strong studies of the academic and social effects of learning in the arts. A parallel purpose is to provide designers of arts education curriculum and instruction with insights found in the research that suggest strategies for deepening the arts learning experiences that are required to achieve those effects.

Rob Horowitz and Jaci Webb-Dempsey in their overview essay on multi-arts studies make a comment that is true of the volume as a whole: "The selection . . . is diverse, both in terms of the arts learning experiences the studies describe and the particularities of the research they report." So their advice to the readers of their essay is good guidance to all: treat the Compendium as a body of work to be explored and mined for commonalities as well as particularities, themes and variations. The insights are layered.

Particularities lie in each of the 62 studies and are probed by the summaries and commentaries written by the contributing reviewers. Five essays then trace common threads found in the group of studies within dance, drama, music, visual arts, or multi-arts. A reader will want to do the same.

A reader also will want to set the essays themselves side by side to search for patterns of analysis and argument. For instance, all of the essayists urge that future research define with greater depth, richness, and specificity the nature of the arts learning experience itself and its companion, the arts teaching experience. They agree that the Compendium studies suggest that well-crafted arts experiences produce positive academic and social effects, but they long for more research that reveals the unique and precise aspects of the arts teaching and learning that do so. Curriculum, instruction, and professional development would benefit greatly from such clarifications.

In his essay on "transfer," James Catterall echoes his colleagues in arguing for a more complete approach to the question of how learning in the arts "transfers" to learning and behavior in other academic and social contexts. While "transfer" is often construed to be a one-way effect in which learning in one domain (e.g., music) causes an effect in another (e.g., spatial reasoning), Catterall reflects the sentiment shared by other essayists in urging researchers to adopt and pursue the more plausible and educationally useful view that transfer involves reciprocal processes involving multiple interactions among domains and disciplines. He also embraces the perspective recently espoused by John Bransford and Daniel Schwartz that the effects of these interactions perhaps can be known only over time.[1] Longitudinal studies are more likely to reveal the effects of learning across domains and situations than are single snapshots, however empirical and controlled these latter may be.

The essayists also share the view that research is but one form of "usable knowledge" that decision makers should call on as part of a repertoire that includes information drawn from direct experience validated by successful practice. Horowitz and Webb-Dempsey say: "Administrators and policy-makers can be secure in supporting arts programs based on the evidence presented (in the multi-arts studies)." Others might add: "and use the studies to examine, challenge, or confirm the views they have developed through their daily work in schools and classrooms." Good decisions emerge from the interactions among research, practice, and reflection.

The essayists and the commentators on individual studies find support in the body of work in the Compendium for the role of arts learning in assisting in the development of critical academic skills, basic and advanced literacy and numeracy among them. They also offer suggestions, based on the studies, for restructuring curricula and instructional practices. For instance, Catterall and other commentators powerfully detail the use of drama in the preschool and early grades as a technique for teaching and motivating children to develop higher-order language and literacy skills. Intriguingly, Larry Scripp in his essay and in several commentaries on music studies explores how the skills of learning music relate to comparable skills in language use, both in English and, in a specific study, French. And Karen Bradley, Catterall, and Scripp each discuss studies where linking writing exercises and arts experiences yields deeper and more complex understandings and articulations by students.

The interrelationships between learning in certain forms of music instruction and the development of cognitive skills such as spatial reasoning appear incontrovertible in light of a number of studies in the Compendium. But once again Scripp in his essay urges researchers and practitioners to probe deeply into the particularities of these relationships and argues strongly for the development of new forms of music instruction that he feels will advance at one and the same time both music and related learning.

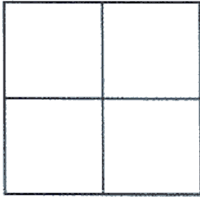
Another fruitful line of future inquiry would be to build on the studies and the suggestions of commentators and essayists to clarify the habits of mind, social competencies, and personal dispositions that are inherent to arts learning and to explore the application of these qualities in other realms of learning and life. Horowitz and Webb-Dempsey most directly address this issue in their multi-arts essay, but variations on the theme can be found in all layers of the Compendium. In part this is a matter, they say, of continuing to develop "better and more creative research designs" that probe the complexity of the arts learning experience, and also take into account the contexts in which the learning occurs. More richly textured qualitative studies—comparable to many of those in this Compendium—are the necessary prelude to clarifying the questions and directions for subsequent inquiry, including controlled experimental studies. But at issue as well, and well illustrated in the Compendium commentaries and essays, is the need for a lexicon of descriptive terms that authentically capture the arts learning experience while at that same time suggesting an array of interactions with other realms of learning and life—a lexicon that may blunt the debate between "intrinsic" and "instrumental" arts learning. For instance, individual studies invoke terms such as "theorizing" (developing theories to predict the consequences of actions); "persistence and resilience" (the capacity to sustain focused attention and to surmount distractions, setbacks, or frustration), and "respect for authentic achievement" to describe fundamental aspects of arts learning and art making. Terms such as these prompt us to explore the interrelationships between these abilities and attitudes as they are brought into play or produced in the context of arts learning and in other academic, personal, and social contexts and situations. So the term "theorizing" may comprise a "constellation" of mental processes that are cultivated and strengthened by application in disparate contexts including the arts. The essays urge us to explore that possibility.

Bradley, Catterall, and Baker in their separate essays on dance, drama, and visual arts, also have language on their minds, specifically the lack of consistency of usage within the art forms. Bradley in her essay on the studies of dance argues, "a common language from dance theory is critical to the future rigor and robustness of dance research... The grammar of movement is inherent in dance style and technique," but verbal expressions of this grammar need to be codified and used to undergird both instructional practice and research. Her candidate for a useful model is Laban Movement Analysis. Similarly, Catterall urges researchers and practitioners engaged with drama and theater to agree on a basic set of terms; he offers some potential definitions. Baker tackles the vexing question of how "art" itself should be defined and urges researchers to at least adopt and articulate an operational definition in their studies.

Given their perspective that learning in the arts—and its relationship to other learning—is complex and interactive, the essayists also argue strongly, even passionately, for the development and acceptance of forms of assessing teaching and learning that respect and reveal that complexity. They repeatedly make the point that knowing the full range of effects of arts learning requires assessment instruments that can validly and reliably identify and measure the outcomes of arts instruction. Discerning the impact of that learning in other domains requires instruments other than the currently available tests of reading and math achievement. The argument is not just that these tests are not sensitive to the effects of arts learning, but that they also are not adequate to assess the complexity of language and mathematical learning themselves, which, the essayists contend, are interwoven with the cognitive and affective processes of other domains, including the arts. They urge the development of new forms of assessment in all domains. Current forms, which assess only a limited range of content and skill, may divert curriculum and instruction away from more authentic and enriching learning.

Catterall makes a related argument that the technology of achievement assessment current in education, largely centered on reading and mathematics, also defines the educational research agenda and studies that are published. Among the effects, he argues, is a concentration of studies—in the arts and other domains—on young children in the elementary grades where data from standardized tests are most readily available. A corollary is that researchers and evaluators of the arts feel compelled to use these instruments and data, which have professional standing, to determine the impact of the arts—a severe limitation on arts education research of the kind advocated by the essayists.

With these views and perspectives, the essayists place themselves—and the arts—firmly within current discussions and debates about the education policies and practices that will best bring about school reform and improvement and high achievement for students. They make a strong case for the importance of arts learning. And they urge their colleagues in arts research and education to strengthen their contributions to these discussions by following leads and implications found in this Compendium.



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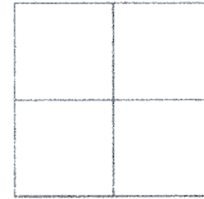

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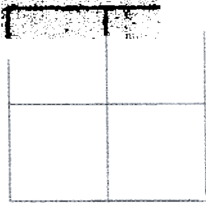

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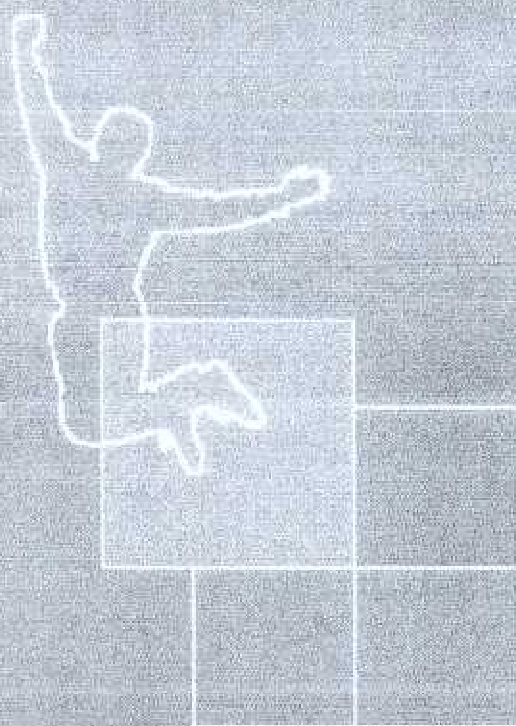
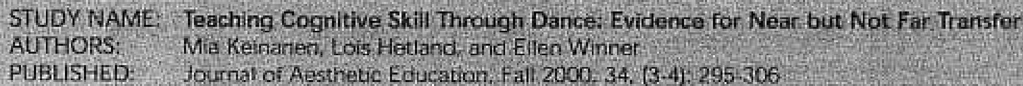


Dance


STUDY NAME: Teaching Cognitive Skill Through Dance: Evidence for Near but Not Far Transfer
AUTHORS: Mia Keinanen, Lois Hetland, and Ellen Winner
PUBLISHED: Journal of Aesthetic Education, Fall 2000, 34, (3-4): 295-306

Research Questions

Can dance instruction improve reading?
Can dance instruction improve nonverbal reasoning?

METHODS

The authors claim an exhaustive search of computer databases, references in literature, recommendations from primary researchers, and searches through identified journals resulted in 3,714 potentially relevant studies. From these, the authors selected seven studies that could be examined using their meta-analytical technique. Those selected had quantified outcomes in the area of dance and cognition, used control groups, and were conducted on non-impaired populations. All of the selected studies were unpublished. Eliminated were those studies that were primarily deemed to be articles of advocacy, those articles that were teacher testimonies, studies in which students self-selected for dance, any studies that were deemed co-relational, and those studies whose outcomes were affective or physiological.

A first and second coder read the seven studies, with a resulting 12 percent rate of disagreement on 100 coding decisions. Any coding disagreements were subsequently resolved and were coded as to: Year of Publication/Outlet, Outcome, Sample Size, Design, Type of Dance Instruction, Type of Control Instruction, Duration, Intensity, Participant Age, and Participant Characteristics. The studies were analyzed within the two categories of Reading Abilities and Non-Verbal Reasoning. One study (Von Rossburg-Gempton, 1998) tested two populations (senior citizens and young children), and so effects were calculated for each population tested. The meta-analysis conflated the factors across the four studies in each category, with a resulting array of statistics that are extensive but ultimately uninformative.—*K.B.*

RESULTS

The meta-analysis of the four studies reporting reading outcomes found a small average effect, which increased (doubled) when weighted by sample size. Larger sample sizes produced more positive correlations. However, the range of both effect sizes and the varied tests for significance (there were two) on such a small number of sample sizes provided the authors with the argument for a weak effect overall. The heterogeneity of the studies weakens the validity and reliability of the meta-analysis.

The meta-analysis of the cohort of three studies reporting nonverbal reasoning effects found a much clearer positive correlation between dance experiences and nonverbal reasoning skills. The studies reporting nonverbal effects were more homogeneous than the reading studies. They yielded a greater degree of reliability and validity ($r = .17$, three more studies required to bring results to significance).

Discussion of the results includes the authors' understanding that future dance studies in which cognitive outcomes are part of the desired effect should be more rigorous, should be set up to preclude teacher expectancy effects, should separate out motivational factors, and should be of a sufficient sample size.—*K.B.*

CONTRIBUTIONS TO THE FIELD

The study is a meta-analysis of seven research projects in dance. The studies span a period of 26 years and vary greatly in sample size, measurement techniques, and dance activities applied as variables.

The use of meta-analysis on a mere seven studies, and the fact that these studies were found in what is described as an exhaustive search of eight databases, journals, bibliographies, and requests to researchers, indicates that the authors believe that research in dance education is in its infancy. Research studies that utilized anecdotal reports or in which students self-selected for dance were eliminated. Recommendations are made for more studies, more empirical studies, and a more uniform use of quantitative research methodology across all studies in the future.

This is the first meta-analysis of the dance education field. In that, its main contribution to the field is that it highlights the limits of meta-analysis on such a small sample size.—*K.B.*

COMMENTARY

Of the seven studies included in this meta-analysis four examined the effect of dance instruction on reading skills and three on nonverbal reasoning. However, the small number of studies, the variation in dance instruction in each study, and the large gap between early and later studies (16 to 18 years) make it difficult to draw any significant conclusions. This temporal gap is especially worrisome in light of the positive results for the two more recent studies in reading effects (Seham 1997 and Rose 1999); these positive results disappear in the meta-analysis discussion.

Statistical analysis were used to determine the size of the effect as well as whether the effect was positive, null, or negative. Meta-analysis can be more useful than a mere electoral approach (i.e., simply counting up the number of studies with a positive effect, a null effect, or a negative effect) because sample size can be accounted for in determining the probability level for a particular effect. The prob-

lem with meta-analysis is that the conflation of numbers ceases to be useful when comparing different types of experiences and variables, especially in small numbers of studies. And, in the end, we only know that any numbers are highly questionable. Guidance for dance educators and researchers is difficult to elicit from such a meta-analysis. Within the meta-analysis, the authors criticize studies where there has been an overt facilitation of transferability by a teacher. The authors ascribe to the belief that if teachers know they are trying to improve reading skills through dance, causality cannot be proven since the teachers may be "signaling" the desired results to the students. Yet good teaching is often about clearly signaling the direction of the expectations. Just such a phenomenon was cited in the meta-analysis discussion as a reason why positive results were suspicious in the Rose study (1999). "...[T]he teachers of the dance group were aware of the hypothesis that dance should improve reading. Thus, those teachers may have taught reading in a more enthusiastic and engaging manner than those teaching the control group." (Keinanen et al., p. 300)

But a more major concern with the meta-analysis, as with a number of other studies in this Compendium, is the failure to distinguish the content of the variable "dance instruction." In the seven studies that met the authors' test for inclusion, the type of instruction was defined under one of three categories: (1) instrumental dance instruction (making letter shapes with one's body, etc.), (2) creative dance instruction (problem-solving, divergent-thinking experiences), and (3) traditional dance instruction (technique class). But that categorization is not meaningful to dance education researchers because often the instrumental use of dance activities is indistinguishable from creative dance instruction. Studies are needed that examine the effects of each of the experiences inherent in dance (technique, improvisation, performance, and composition) and also the interrelationship among their effects. The selection of studies for the meta-analysis does not provide a complete picture of the range of dance instruction and experiences, which would be needed to draw conclusions about the academic and social effects of dance.

Dance education researchers differentiate among experiences in performance, composition, improvisation, and technique. In one study cited (Seham 1997), students at the National Dance Institute (Jacques D'Amboise's school) improved significantly on all scores for cognitive learning against a control group that received no special program, but it is unclear whether the dance classes affected overall concentration and focus as opposed to affecting reading scores. The positive influence of dance technique classes on learning across the board leads the authors to criticize the research rather than encouraging a closer look into the instrumental aspects of a dance technique program. Intensive study in the discipline of dance might lead to increased focus and concentration, and that would be highly instrumental. The error belongs both to the author of the original study (Seham 1997), because the content of the classes was not clearly defined, and to the use of the data within the original study by Keinanen et al. because the meta-analysis is comparing what may be vastly different types of experiences and drawing conclusions about overall effects on reading scores.—*K.B.*

CONTRIBUTIONS TO THE FIELD

The value of this work is its careful and comprehensive review of the entire research field (including published and unpublished work), uncovering 3,714 studies that investigated the effects of dance on student learning in non-dance areas.

The research used a widely accepted technique, meta-analysis, allowing the authors to assess the aggregate contribution of multiple studies that employed a range of student reading and reasoning measures, as well as varied statistical techniques.

The most important contribution, beyond the fact that this is the first systematic review across all the research on this topic, is simply that only a handful of studies met the researchers' standards for acceptable scientific rigor. The clear message is that the field needs more research.—*B.W.*

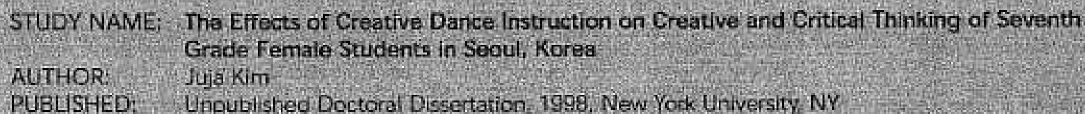
COMMENTARY

The researchers found only four studies meeting their strict standards of acceptable research that investigated the relationship between dance instruction and reading skills and three studies that assessed reasoning skills. The former group of four studies included a total sample of only 527 students while the latter group of three studies involved only 188 students. So, in almost 50 years of research only 715 students have been exposed to carefully designed experimental treatments on the learning effects of dance. One obvious response is to decry the lack of controlled research in this field. It is also not unreasonable to argue that such a small sample hardly qualifies for such sophisticated quantitative analysis.

The more appropriate point is, perhaps, that the medical/agricultural model upon which these standards for meta-analysis are derived is not necessarily the best one from which to understand the complex endeavor of education or more specifically dance education. The varied contexts in which instruction is delivered, even from classroom to classroom in the same building, make it difficult to meaningfully transfer successes in controlled experimental settings to messy classrooms.

"...a more major concern with the meta analysis...is the failure to distinguish the content of the variable 'dance instructior

While it is important to understand the value that dance can add to students' cognitive skills, it is just as important (if not more so) to know the how and why dance contributes to learning, as well as the organizational and instructional conditions that allow arts learning to help students become more successful students. Thus, the 3,714 studies should also be mined to learn what the many qualitative studies can add to these important questions.—*B.W.*



STUDY NAME: The Effects of Creative Dance Instruction on Creative and Critical Thinking of Seventh Grade Female Students in Seoul, Korea
AUTHOR: Juja Kim
PUBLISHED: Unpublished Doctoral Dissertation, 1998, New York University, NY

Research Question

What effect on creative and critical thinking abilities does a program of creative or traditional dance instruction have on seventh-grade girls?

METHODS

Seventy-eight seventh-grade girls without previous dance experience took 45-minute classes in either creative (n = 38) or traditional (n = 38) dance twice a week for eight weeks (total of 15 sessions). Groups were intact classes from one neighborhood middle school (heterogeneous SES) in Seoul, Korea.

The programs are described in detail in the text and in appendices. The traditional program was taught in three five-week blocks of modern, ballet, and Korean traditional dance, by teachers who selected the style, and who designed and taught the segments consecutively. The creative program was designed and taught by the researcher for all 15 sessions.

The study employed a quasi-experimental, pre- and post-test, nonequivalent control group design. The Torrance Test of Creative Thinking (TTCT) Figural Forms A and B (counterbalanced by group and test administration) were used as pre- and post-tests for creative thinking. Raven's Standard Progressive Matrices were used as pre- and post-tests for critical thinking. The tests were selected for their high reliabilities, long histories, and nonverbal forms (to match the nonverbal dance medium). Tests were administered by trained proctors blind to group and hypothesis and scored by a psychologist. In addition, students responded to a pre-course interview and in three written reflections after the fifth, 10th, and last class sessions. Qualitative data were analyzed by procedures outlined by Miles and Huberman, Weller and Romey, and Yin, including creating data arrays, constructing categorical matrices, making flow charts of relationships, constructing frequency distributions, and ordering data chronologically.

Analysis of quantitative results checked assumptions and employed independent t tests on gain scores (post-test – pre-test) and ANCOVAs (covarying pre-test scores). Bonferroni adjustments were made to control Type I errors (i.e., erroneously finding a positive effect), and alpha level was set at $p < .01$. Clear tables report descriptive and inferential data, and text reports exact ts and ps for some comparisons, although not for non-significant ones (which are important, since $p = .02$, a high probability, is a very different finding from $p = .49$, which is a probability essentially equivalent to chance).—*L.H.*

RESULTS

Of four hypotheses, three were supported by the quantitative analysis: (1) subjects in traditional dance instruction did not make significant gains in creative or critical thinking, (2) subjects in creative dance did make significant gains in creative and critical thinking, and (3) subjects in creative dance had significantly greater gains in creative thinking than subjects in traditional dance. The fourth hypothesis was not supported: (4) subjects in creative dance did not gain significantly more in critical thinking than subjects in traditional dance instruction. However, the trend in critical thinking was toward the creative group (Creative Mean gain = 2.02; Traditional Mean gain = .97, equivalent to a moderate effect size of $r = .21$, equivalent to $d = .42$). Thus, while the hypothesis was not supported, the creative dance program did enhance subjects' abilities to think critically to a moderate degree.

The qualitative analysis demonstrated that students' assumptions about dance changed, depending on the type of dance instruction they experienced. This suggests the importance of program type and quality, because these factors affect learning. Thus, decisions about program goals need to be made carefully to support the intended aims of the program.—*L.H.*

CONTRIBUTIONS TO THE FIELD

This study combines rigorous quantitative and qualitative methods to explore a relatively unstudied and important question about transfer from dance instruction to higher-order thinking skills.

Quantitative analysis showed gains on four components of creative thinking (originality, elaboration, flexibility, and fluency) for subjects in creative dance instruction. These same students did not improve in critical thinking from pre- to post-test (but see Results section). A control group who studied traditional dance (modern, ballet, and Korean traditional) made gains only in the "fluency" component of creative thinking and not in critical thinking skills.

Qualitative analysis provided insight into students' perceptions of their dance experiences. Students in the creative dance instruction saw dance as requiring thought, intelligence, and problem-solving and as related to everyday life, while those in traditional instruction made none of these connections and saw dance as a means to a beautiful body and health.—*L.H.*

COMMENTARY

This study suggests that when dance is taught as creative problem-solving, students' creative thinking skills improve.

When it is taught as a series of steps to be replicated, creative thinking skills do not develop. In other words, the type of dance instruction appears to affect both what is learned in dance and what transfers to higher-level thinking.

Future research should compare programs of creative dance in which one group receives a program focused on creative problem-solving, similar to the program described here, and another employs creative problem-solving with the addition of deliberate bridging to the critical thinking used in a target subject.

This study would be an excellent model to replicate because of its rigor, focus on higher-order thinking, and clear reporting (numerous descriptions and appendices offer details about programs, methods, and data). Replicating within the United States would be informative, especially with subjects of various ages and abilities (gifted in dance, gifted in academics, at risk, or behaviorally disordered). Varying subjects' ethnicity and socio-economic backgrounds, and matching traditional dance forms to subjects' cultural backgrounds, would also provide useful information.—*L.H.*

CONTRIBUTIONS TO THE FIELD

The study is vastly comprehensive, including a fairly complete review of the literature of the early theorists in dance education from Laban to Murray to Mettler to Fleming to Russell to Anne Green Gilbert. But the author does not recognize the relationships of some of the theorists to Laban—particularly Russell, Boorman, and Preston-Dunlop. The author does not take into account that these approaches are based on Laban's theories and that Laban's theories permeate many of the other approaches as well. Therefore, while the review of the literature is broad, it is not organized into any meta-theory of creative dance. The author does not discuss how these theories informed her own creative dance classes (described later in the study), nor does she distinguish between teacher-centered and child-centered approaches to creative dance. She assumes that all creative dance approaches are child-centered, which is not necessarily the case.

Both quantitative and qualitative analyses of data provide a complete view of what was accomplished over the 15 sessions in creative movement and traditional dance forms. The results revealed that creative dance classes could indeed foster creative thinking, but not necessarily critical thinking skills. The permutations of the quantitative analysis are impressive, but the qualitative analysis actually reveals more specific information about what worked and what didn't work over the eight weeks. The content of both sets of classes is scrupulously documented, providing the opportunity to replicate the study in places other than Korea, with different age groups and utilizing different forms of traditional dance.

The author reports the responses of the participants in honest detail, including the remarks the participants made about being bored and embarrassed by the creative dance classes. She goes on to aggregate the responses demonstrating that ultimately, the creative dance group had a more positive and subjective appreciation of dance and the traditional dance group a more objective and detached view of dance.—*K.B.*

COMMENTARY

It is not unreasonable that the creative dance classes yielded an increase in creative thinking skills. The long shot was that creative dance classes would improve critical thinking skills. While Kim does not explore the body of literature on transference of learning from one modality to another, she was seduced by the claims that early theorists and scholars made about the potential for dance to influence or develop critical thinking skills. These early scholars did not do rigorous investigation of their claims, but wrote rich and broad descriptions of what it appeared was happening when children moved creatively. As cognitive science and the scholarship of teaching and learning have uncovered more about the brain, mind, and body connections, the theorists Kim based her thesis on appear quaint and naïve.

Kim also fell into a dichotomy within the field of dance education that the field needs to move beyond. The notion that traditional, teacher-centered dance classes will not yield creative or critical thinking skill development, while creative dance (which is "student-centered") will bring all good things is a trap. In this study, the traditional dance group did increase in one of the four categories of creative thinking skills: that of fluency of thinking. There are indications in this and other studies relating dance to creative thinking skills that movement or dance alone may enhance fluency.

The conflation of creative and critical thinking processes leads her to expect that creative dance experiences would enhance both and dance technique classes would enhance neither. The weakest part of the study occurs early in the dissertation, when she infers that because "thinking always involves both creative and critical processes," these functions must therefore always work together. However, in testing for the two kinds of thinking, she was compelled to utilize two different pre- and post-tests; suggesting that so far we haven't figured exactly how the two functions work together, or even if they do.

It is important to eliminate the dichotomous thinking about the content of dance classes and determine what dance technique, dance improvisation, dance composition, and dance performance do influence in regard to creative and critical thinking skills. One can imagine that composing a dance piece, refining it, and performing it might foster more closed-ended cognitive activity than explorative and open-ended improvisation. Kim had the creative dance students compose a dance in the last week of the classes, but there was no time to refine or perform it, much less test for effect.

The age and culture of the students clearly influenced the results, something Kim does explore in her paper. The seventh-graders were shy and withdrawn and therefore tentative about the creative process. Seventh-graders would bring a particular self-consciousness to any process, no matter what their culture of origin. The value of respect for authority that is more ingrained in Korean culture may have aided the research. Even though the girls felt comfortable enough to share their negative feelings with the teacher-researcher, they were cooperative and willing. One might imagine different results from a population of ninth-grade boys or second-grade mixed-gender groups.—*K.B.*

STUDY NAME: **Effects of a Movement Poetry Program on Creativity of Children with Behavioral Disorders**
AUTHORS: Martha C. Mentzer and Boni B. Boswell
PUBLISHED: Impulse, 1995, 3, 183-199

Research Questions

Can a program that integrates poetry-making with creative movement enhance creativity (originality, fluency, and flexibility) in children with behavioral disorders?

What are the unexpected outcomes of a program that integrates poetry-making with creative movement for children with behavioral disorders?

METHODS

Two boys participated, aged 7 and 10 years. The boys were selected from a pool of five children living at a residential treatment home. Selection was based on their 90 percent participation in the program. The boys' individual diagnoses and behavioral disorders were described, but no references were made to the cultural contexts of their families (e.g., race, ethnicity, SES).

The program integrated creative movement and poetry stimuli, and the boys participated in 16, 50-minute sessions over a period of 10 weeks. Sessions had a consistent, three-part structure, each part of which was described clearly: (1) an introduction and warm-up, (2) movement to a poem ("the heart of the lesson"), and (3) closure. The movement and poetry segment involved reading the poem aloud twice while the boys read along, the boys creating individual movement sequences for lines they each selected, and then sharing their movement sequences. By the fourth session, the boys began writing and creating movement for original poetry they "spontaneously spoke" and recorded on cassettes, which was later compiled into a booklet for each child. A behavior management reward system (tokens) that was used throughout the residential program was also incorporated into the program.

The study design was qualitative, and it was well conducted, analyzed, and reported.

Data were collected and analyzed from four sources:

(1) Anecdotal Recordings by two observers, trained prior to data collection. The observers alternated which child they observed for each session. They recorded observations chronologically within sessions to capture program information (progression of content) and the children's behaviors and verbalizations. Observations were summarized collaboratively by the principal investigator and observers after each session and then coded for (a) creative behavior (operationalized as originality, fluency, and flexibility, after Torrance), (b) unexpected outcomes, and (c) external factors. Originality = number of movements unique to the individual. Fluency = number of movements. Flexibility = number of definite changes in movement quality (force, direction, level, or shape).

(2) Observational Checklists. Sessions were videotaped, and two observers were trained prior to viewing by clarifying definitions and concepts and completing the creativity checklist (which tracked originality, fluency, and flexibility, as defined above) for a child from the home who was not one of the two subjects. Each observer's agreement with the principal investigator was $r \geq .85$. Then the observers completed checklists for eight (50 percent) randomly selected and ordered sessions of one child, which they viewed independently until satisfied about accuracy.

(3) Questionnaires/Interviews. Open-ended questionnaires were conducted with four staff members and the two observers, one week after the study. The questionnaires examined four general areas: (a) program success, (b) learning, (c) behavior changes, and (d) needed program changes. Open-ended interviews with the subjects, conducted and audiotaped by the principal investigator one week after the study, included the same general areas as the questionnaire (through the question: What does poetry mean to you?) and an additional supplementary area, feelings: (a) how feelings about poetry had changed from beginning to end of the program, (b) how the boys felt about moving with other children, and (c) what feelings arose when the boys moved to their favorite poem. Data from both sources were transcribed, coded, and summarized by the investigators into the four categories plus a "miscellaneous comments" category for comments that did not otherwise fit.

(4) Children's Original Poems. From the fourth session on, children created and spontaneously "spoke" their poems into an audiocassette. The poems were transcribed into booklets for each child. They were analyzed as "unexpected outcomes" and described according to creativity variables, representative topics, and overall characteristics.

Data sources contributed uniquely and also reinforced each other through triangulation, which affords verification and clarification of results. Anecdotal records were most helpful in understanding program outcomes.—*L.H.*

RESULTS

Three general results were reported for these two behaviorally disordered children: (a) the boys demonstrated all three creativity variables to varying degrees, (b) growth was both shared and individual: both boys gained interest in poetry, one gained social behavior skills, the other gained motor coordination skills, and (c) both boys enjoyed the program.

The study generated the foundation for testable hypotheses (along four dimensions) for further study of this research question.

(1) Areas of Learning: (a) independent thinking skills, (b) motor coordination, (c) body and spatial awareness, (d) verbal and physical expression of thoughts and feelings, (e) body knowledge, (f) awareness of dance elements;

(2) Behavior Changes: (a) willingness to participate in new activities, (b) positive group participation, (c) appropriate participation, (d) ove
coming inhibited expression;

(3) Program Changes: (a) extend over longer time, (b) increase importance of token system, (c) increase time for poetry writing per se
sion, (d) focus more on reflection of feelings in both movement and poetry;

(4) Study Design: (a) interview more frequently during the program (at least three times) to develop trust earlier, (b) continue to emphi
size detailed anecdotal records.—*L.H.*

CONTRIBUTIONS TO THE FIELD

This study is exemplary in its qualitative methods and reporting. The article describes the program and study clearly, and it offers both program modifications and hypotheses to test in future research.

The study suggests that, when combined, poetry and movement may contribute to engagement, development of creativity, and social and/or motor learning in children with behavioral disorders.—*L.H.*

COMMENTARY

The study is a model of qualitative work. It affords a fine-grained analysis of two children by triangulating four sources of data for validity: anecdotal records, observational checklists from videotaped sessions, questionnaires and interviews; and student work (poetry produced by the subjects). The authors report their findings in multiple formats (text, graphs, lists of hypotheses for future qualitative or quantitative research), and specify that their results apply only to these two boys and to future research questions. The authors are also careful to ensure and assess reliability and reduce bias by defining terms in measurable ways, by training observers, by randomizing session selection and order for coding, and by alternating which child is observed by which observers for each session.

Future research should explore the categories defined as outcomes by this study and replicate its careful methods and judicious reporting.—*L.H.*

CONTRIBUTIONS TO THE FIELD

This case study of two boys is quite complete and revealing about creative thinking and the particularities of the two boys' learning styles. Qualitative data collection is well documented and supported with citations from previous studies using similar techniques. Both boys were able to develop a portfolio of poems written from movement, indicating that improvisational dance from a linguistic stimulus can generate original thoughts with a degree of fluency.—*K.B.*

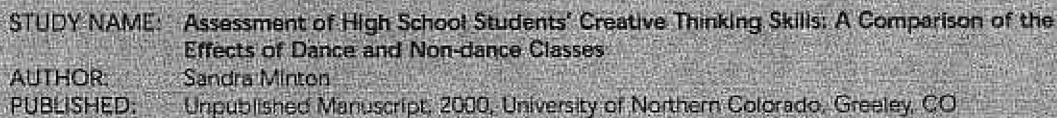
COMMENTARY

The study adds to the growing body of literature about creative thinking and what characterizes it. There are specific descriptions of behaviors associated with the creative thinking attributes of fluency, flexibility, and originality with both movement and writing examples.

A statement in the Discussion section of the study raises an area for further exploration in the field of dance education research. The authors reflect on the lack of emotional or affective images in the poems written by the two boys and speculate that greater attention on identifying and applying feelings to the process of writing poetry might extend creative output. More studies that address the inclusion of affective variables in cognitive skill development are needed, especially in dance, where the cognitive, affective, and psychomotor domains are so well synthesized. The authors go on to conclude that since one boy improved more in social behavior and the other in motor coordination, the union of creative movement and poetry writing provided a "stronger fabric" for development, especially for children of different and challenging learning styles.

"The study suggests that, when combined, poetry and movement may contribute to engagement, development of creativity, and social and/or motor learning in children with behavioral disorders.

The authors also state that the most useful data for understanding the outcomes the boys achieved came from the anecdotal records. The field needs to recognize that movement analysis may offer the clearest depiction of what cognitive or behavioral changes occur through involvement in dance.—*K.B.*


STUDY NAME: **Assessment of High School Students' Creative Thinking Skills: A Comparison of the Effects of Dance and Non-dance Classes**
AUTHOR: Sandra Minton
PUBLISHED: Unpublished Manuscript, 2000, University of Northern Colorado, Greeley, CO

Research Question

Is there a relationship between dancing and creative thinking?

METHODS

Two hundred eighty-six high school students (15 years old, on average) who were enrolled in dance (experimental group) and non-dance (untreated control group) courses participated. Students studied under six dance teachers in beginning and advanced courses for a wide range of dance forms. Dancers participated for about five to eight hours a week, in and out of school, for a semester. Controls attended classes in business accounting, English, health, interpersonal communications, and psychology.

Experimental and Control subjects were pre- and post-tested in groups on the three parts of the Torrance Test of Creative Thinking (TTCT), Figural Form A: picture construction, picture completion, and creation of recognizable objects. The test is fairly reliable: inter-rater reliability ($r = .66 - r = .99$); retest reliability ($r = .60 - r = .70$). TTCT is norm-referenced on five factors: fluency (number of ideas), originality (novelty of ideas), abstractness of titles (imaginative titling that captures the essence of a drawing), elaboration (detail identification), and resistance to premature closure (completing figures in non-simplistic ways). Because subjects were assigned random identification numbers by instructors, responses were scored blind by the investigator, which is a strength of the study. Group equivalence at pre-test was determined by a t test. Repeated measures of ANOVA on change scores were computed for experimentals vs. controls for all subjects and by school for each of the six schools. Finally, pre- and post-test scores were correlated with four indices of commitment and experience with dance: previous dance training, current dance instruction outside of school, total dance experience, and hours dancing per week.—*L.H.*

RESULTS

Elaboration, originality, and abstractness of titles correlated with higher levels of dance experience (results are presented in bar graphs, without specific values). It is puzzling that patterns of effect across factors of the TTCT are inconsistent, with different schools demonstrating significant differences ($p < .05$) for different creativity factors. The author reasonably suggests that the variation may result from differences in teachers or in school cultures—variables that should be assessed in future studies. Although results are compromised by potential selection bias (and can only be generalized to high school students who choose dance classes), there is evidence against an interpretation that higher creativity scores resulted because those who took dance started out more creative: dancers scored lower, on average, on pre-tests for all five creativity factors. Thus, it is not likely that the creativity gains resulted from a more creative group in the dance treatment but, rather, from the dance instruction itself.—*L.H.*

CONTRIBUTIONS TO THE FIELD

This study suggests a possible relationship between dancing and improved ability to consider multiple perspectives. Such flexible thinking is useful in a range of disciplines.

The study finds that high school students who studied a variety of styles of dance for a semester scored better than non-dancers on the elaboration, originality, and abstractness of titles factors of the Torrance Test of Creative Thinking.

This study also models an experimental design that allows reliable conclusions about transfer to be drawn. Experimental designs establish the direction of effect, in this case, from dance instruction to the outcome measure of creative thinking.—*L.H.*

COMMENTARY

Dancers in this study are more likely than students who did not receive dance instruction to employ creative thinking of the type measured by three factors assessed by the Torrance Test of Creativity. The study thus supplies empirical support for a belief that dance teaches divergent thinking.

The study does not assess or assert, however, how likely the dancers would be to use these thinking skills in, for example, history or science classes. That is possible, but not likely, since cognitive transfer across subjects is difficult to achieve (see Salomon, G. & Perkins, D. N. [1989], Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologist*, *24*[2], 113-142). Generally, skills are employed in contexts similar to those in which they are learned. In this case, the tests were administered at the start of a dance class, which may have helped subjects use what they had learned in dance more readily in the testing context than they would in other subjects or classes.

Future research should investigate whether creativity in specific disciplines (e.g., science, history) can be fostered through dance programs, explore how teacher behaviors

affect the creativity factors enhanced (what makes a quality dance teacher or experience?), and employ multiple, situated measures of creativity, rather than just paper-and-pencil tests.—*L.H.*

CONTRIBUTIONS TO THE FIELD

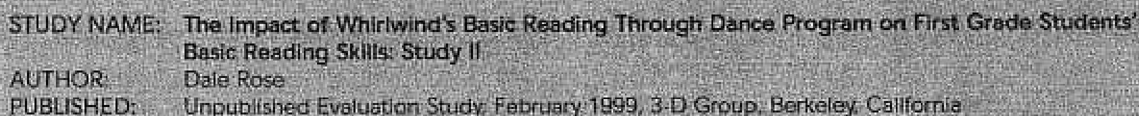
The study indicates that dance is a valid way for students to develop creative thinking skills, especially in the categories of originality and abstract thinking. The data are well decoded, and the study is a model for quantitative analysis in the field.—*K.B.*

COMMENTARY

The dance students studied an array of dance styles and approaches. Further research needs to tease out whether movement improvisation and/or choreography affect creativity to a greater or lesser degree than a dance technique class, where expectations are much clearer and the teachers directly model outcomes.

Whether dancers can utilize their original and abstract-thinking skills in other disciplines is an additional area of exploration for future researchers. Studies such as the Minton study show a correlation between a variety of dance activities and some creative thinking skills, but we need to demonstrate transferability as well as correlation in order to demonstrate the full value of dance activities. Studies that also test for skill development of creative thinking skills in writing and other creative problem-solving disciplines would be useful, especially if such studies demonstrate either that dance allows for deeper and more pervasive learning or that some dance activities are more transferable than others.—*K.B.*

This study suggests a possible relationship between dancing and improved ability to consider multiple perspectives



STUDY NAME: The Impact of Whirlwind's Basic Reading Through Dance Program on First Grade Students' Basic Reading Skills: Study II
AUTHOR: Dale Rose
PUBLISHED: Unpublished Evaluation Study, February 1999, 3-D Group, Berkeley, California

Research Question

Can first-graders' reading abilities be improved through a dance program in which children learn to use their bodies to physically represent letters?

METHODS

In 1998-1999, a Basic Reading through Dance (BRD) program was implemented in three Chicago public elementary schools. The goal of the program was to improve first-graders' reading ability through dance. The program lasted over 20 sessions. Each session was led by three dance specialists. The heart of each session consisted of teaching students to physically represent sounds by making shapes with their bodies to represent letters and letter combinations. Nine schools served as control schools. All 12 schools served predominantly African-American poverty-level children. A total of 174 BRD children and 198 control children were pre- and post-tested in reading using the Read America's Phono-Graphix Test. The test assesses the ability to recognize sounds for letters as well as phoneme segmentation ability. The study compared gain scores in the BRD and control children over three months.—*E.W.*

RESULTS

While both groups improved significantly in reading, those in the BRD group improved significantly more than those in the control group on all measures assessed by the reading test. They improved more in their ability to relate written consonants and vowels to their sounds, and to segment phonemes from spoken words, including nonsense words, compared to the control children.—*E.W.*

CONTRIBUTIONS TO THE FIELD

This is a well-designed study that shows that a three-month program in which children learn to physically represent letters with their bodies works to improve basic reading skills in these children.—*E.W.*

COMMENTARY

This study offers an innovative way to teach basic reading skills to at-risk children. Future research should examine whether the same kind of methods can help children improve in higher-level reading skills beyond basic decoding. It is important to recognize that the activities that helped children to learn to read were ones closely tied to reading: putting one's body in the shape of letters. This study does not allow the conclusion that dance leads to reading, but rather that putting one's body in the shape of letters improves basic reading skills in young children. Whether or not this activity is "dance" (a matter dancers could debate), we can conclude that this activity is an innovative and enactive way of helping children master sound-symbol relationships.—*E.W.*

This study offers an innovative way to teach basic reading skills to at-risk children. Future research should examine whether the same kind of methods can help children improve in higher level reading skills beyond basic decoding

CONTRIBUTIONS TO THE FIELD

The method used in this study can be easily replicated for different age groups and more advanced skills—and should be. The study is rigorous in design, and the results have validity. Clearly, it demonstrates that movement can reinforce cognitive skill development—in this case, early reading skills. With a sample size of 174 in the experimental group and 198 in the control group, the evaluators have done a great service by demonstrating that quality research can be done easily and with direct application to the actual classroom.

The results should be disseminated widely.—*K.B.*

COMMENTARY

One of the most compelling aspects of the study is the use of improvisational movement exploration to discover how sounds can combine into words. The development of linguistic abilities mirrors the development of dance phrase making. Therefore, the study reveals that, more than merely reinforcing letter-shape recognition, dance can help children discover the "music" of language. Both auditory and visual stimuli were used to cue the kinesthetic. Students

learned the shape of letters as well as the sounds of letters and were able to blend both sounds and letters into meaningful words. The use of a divergent approach, where children have a choice of multiple correct solutions, as opposed to the convergent approach such as a simple imitation of shape, is an example of the kind of active learning that will improve young children's skills. In the study, the experimental group scored lower on the pre-test, and therefore came further along using dance movement as the modality for reading skills.—*K.B.*

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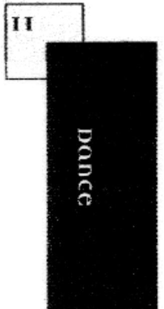
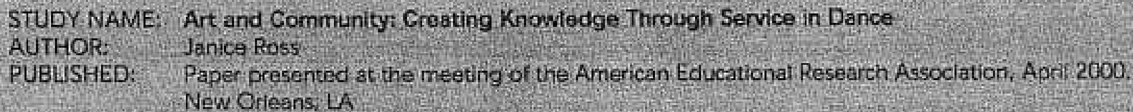



STUDY NAME: Art and Community: Creating Knowledge Through Service in Dance
AUTHOR: Janice Ross
PUBLISHED: Paper presented at the meeting of the American Educational Research Association, April 2000, New Orleans, LA

Research Questions

How does dance instruction affect self-perception and social development for at-risk and incarcerated adolescents?

How does participant/observation research by undergraduates in a dance-centered service-learning project affect perceptions of the purposes of arts generally and dance specifically in the undergraduates' and the lives of others?

METHODS

Sixty 13- to 17- year-old at-risk and incarcerated adolescents participated in 45-minute jazz and hip-hop dance classes twice weekly for 10 weeks. Eleven college students, all with dance experience but only one dance major, engaged in participant/observation research. They observed, danced, and interviewed the teens and produced a "collective meta-portrait" (one student's contributed portrait is an appendix). The principal researcher gathered data weekly from three sources produced by student researchers: reflection journals, in-class discussions, and written syntheses building toward students' final portrait. The principal researcher summarized and gave examples from these data sources but did not produce a portrait of the college students. Thus the relationship between the data and conclusions are not unequivocally clear.—*L.H.*

RESULTS

The first study produced hypotheses about why dance may be a medium particularly well suited to fostering positive self-perception and social development for disenfranchised adolescents. Hypotheses include the influence of teachers and teaching styles generally employed in dance (charismatic, physically powerful instructors, individualized instruction); the synergy of certain dance forms (jazz, hip-hop) with culturally valued leisure activities; the release of physical and psychological stress in which "expression, not conquest" is the activity's goal (in contrast to team sports); the focus of instruction on practicing non-linguistic bodily expression, which is a primary vehicle through which maladaptive social behaviors are conveyed; and the need and opportunity in dance to express individuality within a group, which provides practice with issues central to developing positive social identity and adaptability.

The second study suggests that the congruence of dance, service (providing data to prison administration about the dance program's effectiveness), and research (which placed college dance students in a social/therapeutic context and required reflection about impact and uses of the discipline) is an effective tool for advancing college students' understanding about how dance can be used and how reflection necessary in the method of portraiture fosters learning.—*L.H.*

CONTRIBUTIONS TO THE FIELD

This study used a qualitative methodology (portraiture) to explore a provocative and under-researched relationship between arts (dance) and social and community service. Its goal was to generate a conceptual framework and potentially testable hypotheses for future research.

The study found that incarcerated and low-income, non-English-proficient middle school students reported gains in confidence, tolerance, and persistence related to dance instruction. It resulted in hypotheses that may explain why dance is particularly well suited to promoting such gains.

The study also found that college student researchers reported an expanded view of dance as a tool for fostering social values instead of serving solely as a medium for performance or as recreation.—*L.H.*

COMMENTARY

The study focuses on non-traditional outcomes of dance instruction. It posits artists as social activists and positions dance as a tool for social interventions, in this case, for at-risk and incarcerated adolescents. Its two-level structure models a way that college teachers might expand their students' views of the purposes of their disciplines to include potential social impact.

Future research should investigate the hypotheses generated by this study about dance as an intervention for juvenile offenders and other disenfranchised adolescents. Such research could be qualitative or quantitative. Studies might compare the social effects of team sports with jazz and hip-hop dance instruction, or of different styles of dance instruction, with each treatment analyzed along the dimensions hypothesized by this study. The group-research model could be extended to groups of teachers in action-research projects.—*L.H.*

CONTRIBUTIONS TO THE FIELD

Three major contributions to the field arise from this study: (1) The methodology used (portraiture of the incarcerated students by the student-researchers from self-reflective journaling, contextualized and framed observations, interviews and presentations with feedback from the other student researchers) is brilliant, rich, and allows the process of learning to be revealed in its multifaceted components.

(2) The secondary level of the study (the self-reflective journaling by the student researchers) reveals a tool for expanding students' understanding of the value and range of the field of dance beyond technical proficiency and performance. Student researchers began to understand how dance could be a tool for progressive social and psychosocial growth.

(3) The conclusions by the author are profound and clearly make the case for why dance works so well with disadvantaged youth. Because she (Ross) had so much rich information to draw from, there are several stunning insights, including her statement, "Patience, and sometimes even compassion, can be social by-products of aesthetic engagement, and new regard for the human body (is what) dance can introduce."—*K.B.*

COMMENTARY

Ross has defined the best approach this writer has come across to understanding and unpacking what happens in a dance class. By using self-reflective observations, journaling, rich discussion, interviews, and a consensus-building approach to drawing conclusions, the author fosters understanding of both the value of and the constraints on dance-informed learning. The study is a model for dance education researchers. Field observation requires a selection of stances, which, if their techniques embrace elements from the value system of the event or culture being studied, can truly portray the breadth and details of the event.

While the longitudinal value of dance classes for incarcerated youth may be difficult to deduce, requiring large expenditures of energy and time, the fact that several of the student researchers are continuing their involvement with the arts and underserved populations means there will be a small cadre of "anthropologists" who can continue to observe, reflect, critique, suggest, and develop projects such as this one in the future.

For the future, dance education researchers need to look at other forms of dance (in this case, jazz and hip-hop were the delivery system for dance technique) and to other dance experiences such as choreography, improvisation, and performing.—*K.B.*

the best approach this writer has come across to understanding and unpacking what happens in a dance class

STUDY NAME: **Motor Imagery and Athletic Expertise: Exploring the Role of Imagery in Kinesthetic Intelligence**

AUTHOR: Anna Margaret Skotko

PUBLISHED: Unpublished Bachelor's Honors Thesis, March 23, 2000, Harvard University, Cambridge, Massachusetts

Research Questions

Is motor imagery a core operation of kinesthetic intelligence?

Does motor imagery ability increase with dance expertise?

Do kinesthetic and visual-spatial intelligences rely on similar or distinct cognitive processes?

METHODS

Participants were healthy, English speaking, right-handed females with normal or corrected-to-normal vision. Thirteen were novice dancers (9- to 12-year-olds with two years or less of ballet training), 12 young non-athletes (9- to 12-year-olds with no history of routine athletic training), 16 professional-level dancers (aged 18 to 25 with at least 10 years of routine ballet training), and 16 adult non-athletes (aged 18 to 25 with no history of routine athletic training). All subjects were recruited by posters and did not know the purpose of the study. Dancers and non-dancers in each age group were matched on socio-economic status.

Subjects completed Raven's Standard Progressive Matrices (as an index of general intelligence) and four experimental tasks: (1) decisions about biomechanical constraints (e.g., "If your right palm is put on your right knee, your thumb is on the left side of your knee.") and mental rotation of (2) hands, (3) feet, and (4) cube figures.—*L.H.*

RESULTS

Young dancers made significantly fewer errors on the biomechanical constraints tasks than their age-mate non-athletes. No other comparisons were significantly different statistically ($p = .05$), although the trend was that dancers performed the biomechanical tasks and tasks requiring rotation of hands and feet faster and more accurately than non-athletes. Interestingly, the opposite (though still non-significant) trend occurred with mental rotation of objects (cube figures): non-dancers tended to perform these tasks faster and more accurately than dancers. Because these tasks may index two different skills (kinesthetic versus visual-spatial intelligence), and because the standard intelligence test (Raven's) did not predict performance level on the imagery tasks, the results support the idea of discrete and specialized cognitive abilities (multiple intelligence theory).—*L.H.*

CONTRIBUTIONS TO THE FIELD

This study demonstrates the complexity of questions about transfer from arts (e.g., dance) to non-arts domains (e.g., mental rotation).

The study found no statistically significant differences between dancers and non-athletes on motor imagery ability. In addition, professional-level dancers were not significantly better at motor imagery than novice dancers. However, the effect sizes were positive and of moderate size. However, a considerably larger sample would be required to achieve statistical significance.—*L.H.*

COMMENTARY

This was a rigorous, initial study of a complex and understudied research domain—the effect of dance training on the ability to mentally rotate objects and/or pictures of body parts (hands and feet).

The author suggests that (1) future research should use larger samples, (2) longitudinal experimental, rather than correlational, designs would control variation in subject characteristics that may obscure any experimental effect, (3) experimental tasks should be redesigned to look more realistic (i.e., color photographs or videos of feet and hands), and (4) task difficulty should be made equivalent for tasks using objects or body parts.

"...the entire area of kinesthetic intelligence is under-explored..."

Finally, the author suggests reframing the research questions as "Does motor imagery ability generalize from one domain to another?" or "Can motor imagery ability be improved with athletic or cognitive training?"—*L.H.*

CONTRIBUTIONS TO THE FIELD

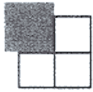
Since the entire area of kinesthetic intelligence is under-explored, especially in terms of the relationship of kinesthetic intelligence to cognition, this impressive study by an undergraduate initiates a dialogue that should continue. The author begins with an excellent discussion of motor planning and practice and the role of imagery in the development of kinesthesia. She includes interviews with elite athletes discussing how imagery makes a significant difference, subjectively, in performance. Since she uses ballet dancers as her subjects for the elite athlete group, the study makes the case for expanding research in the area of kinesthetic intelligence to include dancers. Ultimately, when and if the case is made for the role of kinesthetic

intelligence in developing the "whole child," how dance facilitates the process should be included.—*K.B.*

COMMENTARY

The author, in her discussion, divides the tasks (there were four) into two categories: egocentric motor imagery (tasks one-three, which involved translating written and visual depictions of body-part relationships to the core of the body) and visual-spatial imagery tasks (task four, which involved a paired depiction of a series of cubes in various states of rotation). There was no real significant difference among the experimental groups; athletes did not do better than non-athletes. The author has several wonderfully reflective insights into why the results were not differentiated, but misses the most obvious: that the athletes were performing these tasks at a computer and were disengaged from their kinesthesis while performing the tasks. It would be a worthy study to replicate everything about the study but allow the groups to move before responding. Therefore, the time on task may vary somewhat (and speed was a variable measured for this study), but results may be more accurate. Ballet dancers learn visually, with some auditory coaching for phrasing and musicality, but they also learn by "marking" the movement—doing a kind of scaled-down-and-back version of the patterns in their hands and legs.

In addition, modern dancers, particularly modern dancers who have had exposure to Laban Movement Analysis or Laban notation, or who have studied Laban-based dance techniques, would make an intriguing subject group for such kinesthetic tasks. Laban's approach to movement develops body-part awareness and spatial acuity directly, and such analytic skills may test differently from elite ballet dancers who, the author points out, are highly specialized and "domain-specific." Since Laban's theories of movement permeate elementary-level creative movement curricula in the United States and Canada, such a population may provide more useful data for understanding the role that kinesthetic intelligence plays in overall cognitive abilities.—*K.B.*



Essay:

Informing and Reforming Dance Education Research

Karen Kohn Bradley

The purpose of research in education is to improve the learning environment, learning processes, and teaching practices in schools and classrooms. As examples of how dance might help in these areas, the dance studies collected in this Compendium offer important initial insights into the best practices in the field and their effects. Educational researchers will find these studies a useful step on the longer journey to developing more, better, and more useful research on dance education. These studies also demonstrate the need for a common language to describe and analyze dance and its effects.

Dance Education and Transfer to General Learning

The seven studies in this Compendium suggest what directions dance researchers should pursue. They also provide important positive indications of exactly what young people learn in dance that relates to skills and attitudes applicable in other academic settings. Implications for curriculum and instruction are apparent as well.

The most consistent indication across the seven studies is the finding that dance is effective as a means of developing three aspects of creative thinking: fluency, originality, and abstractness. Mentzer & Boswell, Minton, and Kim all had positive correlations with at least one of these three areas of creative thinking. The results suggest that, at the least, physical activities specific to dance support development of fluency by actively engaging students. This is not surprising when one considers that fluency of thinking is essentially a facility and mobility of mind and involves the ability of the student to turn ideas around and look at them from different angles. In dance, the body does the same thing and reflection on that process is a valuable aspect of dance-making. Originality and abstractness, likewise, are valued modes of dance education, especially where improvisation and composition are taught.

The studies thus suggest that dance instruction may provide a means for developing a range of the creative thinking aspects of critical thinking skills. More study of programs where creative thinking is valued by the school and assessed in regular classroom settings will reveal further insights into how dance activities support such development.

The studies by Ross and Mentzer & Boswell also provide indications of how students engaged in dance develop and are able to express new insights and interpretations. The two studies probe how moving, and reflecting on that movement through writing and drawing, can lead to shifts in how students view dance experiences and how students view themselves through dance experiences. Both studies are qualitative analyses. Nevertheless, the new insights are observable as behavioral changes and offer a rich direction for future research.

Ross's study demonstrated the process of journaling as a means of tracking changes in attitude of college dance students toward dance education. Her findings showed that journaling and rich discussion can broaden and deepen students' understanding of, and attitude toward, dance as a means of social change. The college students observed and reflected upon a dance program held in a juvenile prison facility. Mentzer & Boswell's study demonstrated the effects of a creative movement program on the writing and drawing of two learning-disabled boys. Specifically, one wonders whether the general effects of dance itself, the process of moving, the thinking/reflection upon moving, or the writing/drawing/dance-making products are all equally necessary in order to effect the kind of rich shifts in perception these two studies suggest. Dance, as is suggested about other art forms in the essays in this Compendium, is in need of research that explains the interrelation of its specific dimensions as an arts experience and cognitive processes.

The Rose study is a quantitative study that provides a deep and rigorous look at a dance program that strives to use dance to improve the reading skills of students in three Chicago public elementary schools. The findings showed that the experimental group of first-graders improved significantly in the three areas of reading skills measured: consonant sounds, vowel sounds, and phoneme segmentation abilities. As difficult as empirical studies can be to carry out on a public school population and across two disciplines (dance and reading, in this case), Rose has established groundwork for additional studies in this area and has provided a basic approach to experiments that reveal a great deal about how a typical dance program can affect cognitive development.

> The use of a common language from [illegible] theory is critical to the future rigor and robustness of dance research.

Proving causality between variables is difficult enough when those variables are confined to a sterile environment in a petri dish. While we desire predictability in education, children are complex and slippery learners. In education research, we are trying to understand the underlying processes of learning. Our goal is not replicability in the laboratory but improvement in the classroom, a different kind of replicability. Rose's larger sample size (174 in the experimental group and 198 in the control group), timely pre- and post-testing, and rigorous analysis of test scores provide an integrity of process that makes the

impressive positive outcomes (the experimental group started out lower in reading skills and finished higher) exciting and provocative.

Rose, Mentzer & Boswell, and Ross provide important guidance on the future of dance education research and instruction. All three studies view dance experiences as more than simply learning to dance or learning about dance. Dance is defined as a full and powerful modality for interacting with the world of ideas. In addition, in these studies, teachers' goals for the students were overt, supplying clear directions for student learning and facilitating transference. While such practices may not provide the sterility of context that is required by some research methods, they are part of good teaching and can lead to a fuller understanding of how real children learn in real schools.

"Educational researchers will find these studies a useful step on the longer journey to developing more, better, and more useful research on dance education."

Most of the studies included are instructive in their procedural assumptions but do not clearly define the specific dance activity under study. Future research needs to delineate what the dance variable is (technique, improvisation, performance, or choreography), what the intended outcomes of that specific dance experience are (improved critical thinking skills, increased fluency or abstractness of thinking, better technique, more original choreography, etc.), and how the movements are assessed in relation to the intended outcomes. The impact of such informed, specific, and rich data on classroom practice and student learning would be powerful.

'he Need for a Common Language

In order for dance teachers to improve and disseminate their best methods and content, even more research and reflection on effective classroom practice are needed. Both quantitative and qualitative studies should incorporate dance theory as a way of noting and analyzing instructional content and practice and student learning. Dance theory will fill an important gap visible in this collection of studies, the lack of a common language by which to discuss dance and the changes that take place during the course of learning dance.

The use of a common language from dance theory is critical to the future rigor and robustness of dance research, whether it is empirical or descriptive. Getting at the details of movement change, describing shifts in attitude and expression, facilitating the expansion of movement vocabulary, and accurate measurement of such growth are the essence of a sound and useful body of research. The grammar of movement is inherent in dance style and technique, and various methods of analysis have been developed, one of which is Laban Movement Analysis (LMA). LMA is a system of movement analysis that has been used to document elements of movement change in athletes, actors, politicians, and in various cultures, as well as with dancers.

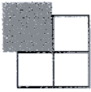
In several of the studies, noting or eliciting specific components of the movement might have allowed for more detailed analysis of the learning. The potential of the level of detail LMA provides could be demonstrated in studies (e.g., Rose) where children made letter shapes with their bodies and moved to the sounds of letters in order to develop early reading skills. By providing language that orients children in space, allows them to articulate (nonverbally) specific configurations of pathway and line, delineates qualities of movement and sound, and relates parts to wholes, LMA could provide data not only on whether the children learned their letters and could form words from them but also on the individual approach each child took. Learning styles and the preferred modalities of each child can be noted through the movement observation.

In addition to delineating specific approaches to learning and providing a means for perceiving the details of change, users of LMA adopt a particular stance toward analysis of the movement components of an event. The trained observer notes no more than what has changed in the mover's configurations. Therefore, the analysis and subsequent interpretation of the data reveal what the mover does, not what he/she does not do. LMA provides a map of the individual child's learning style as well as a way of documenting the evolving content of the child's learning.

The case study of Mentzer & Boswell, in which two boys were studied for creative thinking growth via creative movement experiences, could be enriched by observation of specific movement changes, in addition to the study's analysis of the poetry they wrote and drawings they made. Skotko could have observed the movement changes both the "dancers" and "non-athletes" she studied went through to organize for the motor planning tasks she analyzed. Dale Rose could have recorded the specific aspects of movement that best reinforce language acquisition and early reading skills. And Ross' college students could have written more descriptively and critically about the dance classes they were observing, providing more informed and richer data to track attitude changes.

Aligning Curriculum and Instruction in Dance with Research: Implications for Future Research

Beyond the need for a common language to discuss the changes that take place through dance, and more and better research, the dance studies in this Compendium illustrate a need for dance curricula in public schools to

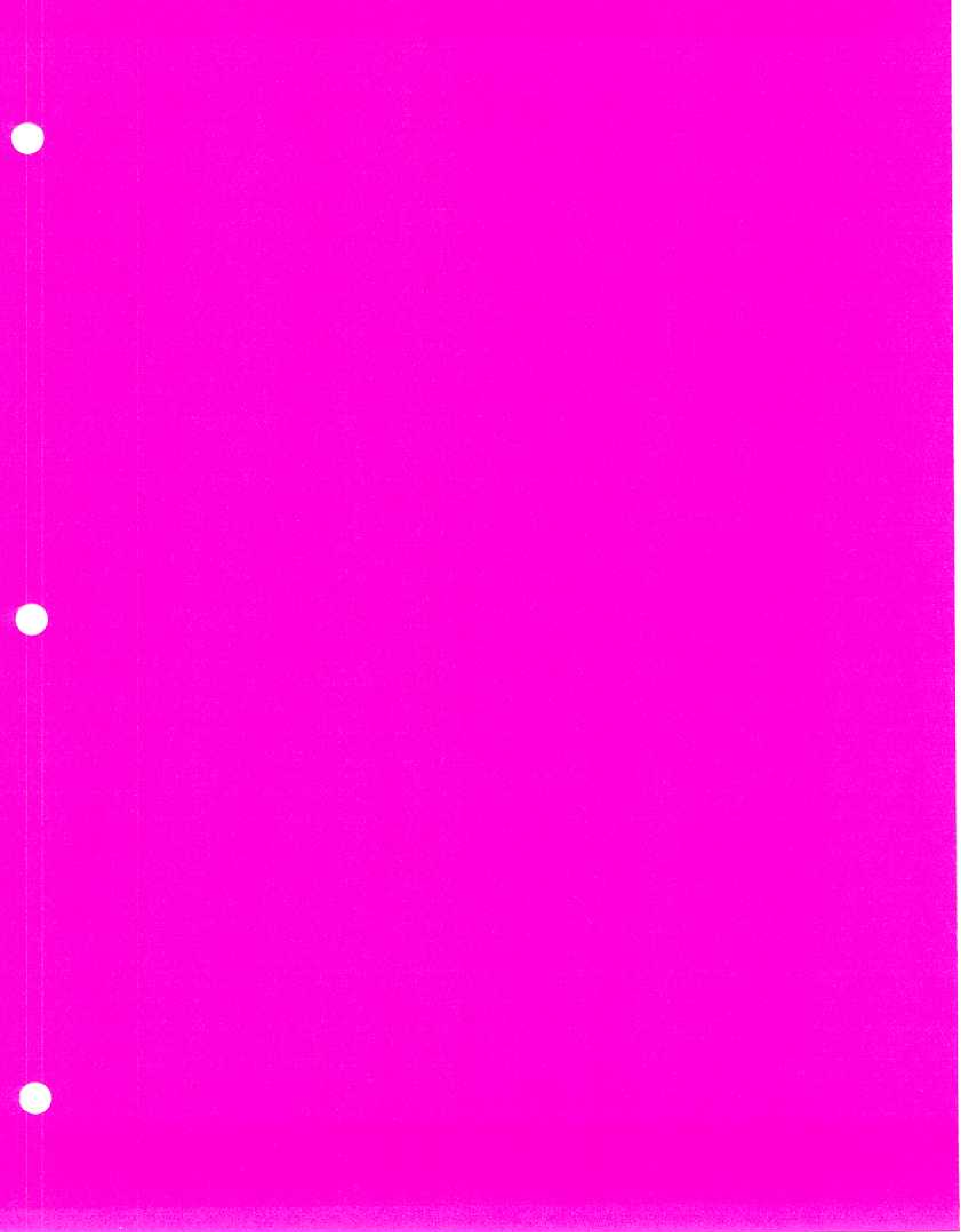


reflect current research so that educators and researchers can conduct informative assessments. In order for research to be useful and applicable to real classrooms, teachers and researchers need to share the common goal of reflecting on practice with integrity and insight. Teachers need to know various processes of inquiry and terms of discourse in the field of dance and need to field-test approaches to capturing specific information about how well students are utilizing dance for cognitive development. Researchers need to know the breadth and depth of dance content and open up to the methods of observation embraced within the discipline itself.

The research also suggests that for transfer of cognitive development from dance to other areas of learning and application to be more powerful, teachers should explicitly support transference so that it is more strongly incorporated into meta-cognitive activities, especially activities such as mapping and other such theoretical constructions. Lots of rich evaluative and reflective activities—writing, drawing, discussion, applied projects, product-making within the field (dance-making, performance building) and thoughtful, not rote, practice—are also indicated as productive reinforcements.

Conclusions

Clearly defined, discipline-embedded studies in dance need to be encouraged, supported, and disseminated. With good statistics and in-depth studies of the specifics of particular processes, educators will be able to replicate, amend, and develop the best practices dance education can offer. Educators, parents, and administrators will learn just how potent and effective dance can be with children, intrinsically and instrumentally. And finally, educators can design rich, effective dance experiences with the needs of real children in mind.



Arts Education: A Review of the Literature

BLUEPRINT

Blueprint Research & Design, Inc.

Terry Teitelbaum
Stephanie Fuerstner Gillis

Prepared for the Performing Arts Program of
The William and Flora Hewlett Foundation
November 2003 (Updated February 2004)

Introduction

The purpose of this review is to lay the groundwork for further investigation designed to answer: What are the most important opportunities in arts education for philanthropic investment by the Hewlett Foundation's Performing Arts Program? Where can the Foundation's dollars best be leveraged to have an impact on arts education in the Bay Area?

This is a preliminary review of current literature (within the last ten years) on arts education for youth, ages pre-K-12th grade, with an emphasis on performing arts disciplines. It focuses on four main sources of arts education delivery: 1) early childhood education programs, 2) in-school, curriculum-based programs, 3) programs provided by performing arts/cultural organizations, and 4) those provided by non-arts community organizations. There is overlap apparent among the four areas, some of which is addressed more explicitly in the section, "The Growing Role of Partnerships."

Key Findings

In our review of the literature, six key findings appear to be supported by research:

1. There Is Evidence that Arts Education Transfers to Learning in Other Subjects

Over the last ten years, there has been considerable research on the impact of arts learning on cognitive and social development as well as its transfer to learning in other subjects. The most reliable and consistent findings are:

- Music instruction has been shown to correlate strongly with enhanced spatial-reasoning skills, and high levels of involvement in instrumental music over the middle and high school years correlate with high levels of math proficiency by grade twelve. (Some pieces of research have gone on to explore what elements of music instruction lead to better performance in non-music subjects such as math or reading. For example, research from the New England Conservatory of Music's Laboratory Charter School has demonstrated that notational skills in music (not musical

performance ability) are positively correlated with test scores in math and reading. There are still opportunities for more research in this area.)

Classroom drama instruction, especially in the elementary grades, is positively correlated with improved reading comprehension, vocabulary use, and writing quality. Sustained involvement in drama among youth is related to gains in self-concept and motivation and higher levels of empathy and tolerance for others.

The impact of arts education on learning in other subjects seems to be more pronounced when an arts lesson is designed with such transfer as an intended outcome.

Arts-related comprehensive school reform efforts can be connected to increased student motivation, some increases in basic test scores, increased teacher collaboration, and strengthened school communities.

2. Youth from High-Risk Environments Benefit the Most from Arts Education

- While all youth benefit from arts education and participation, *youth who are considered 'at risk'* benefit the most, with positive links to cognitive development, test scores in other subjects, motivation to learn, self-perception, and resiliency.
- While there are positive outcomes for youth in all types of after-school programs, youth in after-school *arts* programs do better than youth in other after-school programs on both academic and social development measures.
- Youth with low socio-economic status who receive arts education are more likely to be arts participants later in life than those who don't. (See Bullet #3 under 'Linking Arts Education and Arts Participation')

3. Arts Education is a Predictor of Arts Participation

- People with more arts education are more likely to attend arts performances.
- Arts education is a strong predictor of almost all types of arts participation, with the exception of engaging in a performance.
- While socio-economic status relates to higher levels arts participation, *arts education acts as an equalizer* – the amount of arts education one receives is a stronger predictor of arts participation than socio-economic status.

4. Public Policy Attention on Arts Education Has Increased, While Public Funding Has Not.

In the last decade, national and state education policies have given the arts more legitimacy in public education with the adoption of standards for visual and performing arts instruction and inclusion of the arts as a core academic subject in the No Child Left Behind Act of 2001. Public funding for arts education, however, has not kept pace with policy. Recent growth in arts education funding in California has been reversed due to the state budget crisis.

5. Partnerships among Public Schools, Performing Arts Organization, and Others Are Playing a Growing Role in Delivery of of Arts Education

In addition to K-12 public schools, performing arts organizations, after-school and community based youth organizations, and partnerships among these are playing significant roles in providing arts education. The literature shows:

- There has been rapid growth in the involvement of performing arts organizations in public schools. Services include visiting artists, on-site professional development for classroom teachers, off-site workshops for teachers, special performances for students, and after-school programs.

Community-based cultural organizations and community foundations are also playing increasing roles in both in-school and out-of-school arts education.

Research on the growing role of partnerships for arts education cite at least four common characteristics of successful partnerships: 1) A primary focus on students and their need for high quality education and high quality arts experiences; 2) a focus on multiple arts disciplines; 3) attempts to take comprehensive approaches to system-wide arts education reform; and 4) involvement of diverse and multiple community sectors.

6. The Literature Makes Few Specific Recommendations for Funders

In literature that made specific recommendations for funders, common requests were for foundations to:

- Provide both long-term funding and leadership as partners in efforts to provide comprehensive, high quality arts education for all students.
- Support research-based programs with evaluation components as well as those that emphasize sustainability and the tracking and sharing of information.

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The Value of Arts Education

Arts Education and Transfer to Other Subjects

Perspectives on the purpose and value of arts education influence the design of arts education programs. These perspectives have implications for advocates, policymakers and funders when considering how or if to implement arts education programs.

There is a preponderance of recent research that attempts to assess the value of arts education, focused primarily on the ways that learning in the arts transfers to learning in other subjects and affects social development. Caterall's (Arts Education Partnership, 1999b) analysis of 25,000 students in the National Educational Longitudinal Study (NELS) database found that arts participation, in general, is linked to higher academic performance, better grades, and lower drop-out rates for students. Furthermore, he found that these positive effects are even more significant for low-income versus high-income students.

Music instruction has been shown to correlate strongly with spatial-reasoning skills, a finding that has implications for math learning (Graziano, and Peterson, 1999; Hetland, 2000.) Caterall and Chapleau (1999) found that high levels of involvement in instrumental music over the middle and high school years correlate with significantly higher levels of math proficiency by grade twelve. Such results led Harvard Project Zero researcher Larry Scripp (2003) to investigate how the intensive study of music might serve as a basis for academic excellence. His research at the New England Conservatory Lab Charter School (an elementary public school founded in 1998 where children are chosen by lottery and not musical talent) attempts to identify innovative ways to incorporate music into the curriculum and then measure its impact. Among his findings are that notational skills in music, not musical performance, correlate positively with achievement in math and reading. Scripp found, "The ability to process musical symbols and representations, a skill relegated to the training of the talented few in the past, is a leading predictor of music's association with learning in other subject areas." He also found that musical pitch is more predictive of mathematical ability while rhythm is more predictive of reading ability.

Several researchers (Parks and Rose, 1997; Podlozny, 2000) have shown drama instruction to be positively correlated with improved reading comprehension, vocabulary use, and writing quality. Caterall and Chapleau (1999) found that sustained involvement in drama among youth associates with gains in self-concept and motivation and higher levels of empathy and tolerance for others.

The impact of arts education on learning in other subjects (known as "transfer") seems to be more pronounced when such transfer is part of the purpose and design of an arts unit.

One example is "Building Reading through Dance," a program designed to improve first-graders' reading ability through dance, specifically by teaching students to physically represent sounds by making body shapes to represent letter and letter combinations. Program evaluators (Rose, 1999) found that students participating in the program improved significantly more than the control group on all reading skills measured.

Youth from High-Risk Environments and Arts Education

A subset of the social development perspective is the view that arts education and participation in out-of-school arts programs bring about positive outcomes for youth, particularly "at risk" youth (Brice Heath,

1998, 2001, 2002; Arts Education Partnership, 1999a, 1999b). The *Coming Up Taller Report* from the President's Commission on the Arts and the Humanities (1994) cites several studies documenting a positive correlation between participation in community arts programs and cognitive development, motivation to learn, self-perception and resiliency for children and youth. The YouthARTS Development Project evaluation (Farnum and Schaffer, 1998) of three out-of-school youth arts programs concludes that such programs "enhance young peoples' attitudes about themselves and their futures" and "can increase academic achievement and decrease delinquent behavior." More research on the impact of after-school arts programs for at-risk youth is reviewed under "After-School/Out-of-School Community-Based Arts Education" below.

Other researchers see the arts as inherently valuable and hold that arts education should be based on the contributions it makes to arts-based and arts-related learning (Eisner, 1998a, 1998b, 1999). Winner and Hetland (2002) question claims that links between arts learning and academic outcomes are causative. Several critics also warn about the pitfalls of depending on evidence for "transfer" to make the case for arts education. They feel that the "transfer" argument requires more than is reasonable of the arts and undermines support for arts education when evidence of transfer is weak. Winner and Hetland (2002) call for "a deeper understanding of arts learning that would build "a strong argument for the importance of arts education that does not treat the arts as handmaidens to reading, writing and arithmetic."

Larry Scripp (2003) counters that this view "keeps music locked in a needless either-or model of advocacy for its role in education." He asks us to "imagine if math or reading teachers were forced to decide whether their academic areas should be taught for their own sake or for the benefit of other academic subjects." No reading teacher would ever assert that teaching children to read does not influence their ability to learn history, and Scripp wonders why music educators are so fearful of taking credit for music's contributions to learning in other subjects. He posits that research on the impact of music on learning should be used not just to promote the value of music programs, but to fuel the development and use of innovative music curricula designed specifically for "teaching for transfer" through music. James Catterall (2003) concurs, stating that "since our education systems ideally focus on academic and social development, the arts should legitimately be considered in the array of potential instructional strategies contributing to these goals."

The case for "transfer" is at the foundation of recent arts-based school reform initiatives, whereby entire schools adopt interdisciplinary curricula that integrate the arts with instruction in other academic subjects for such purposes as increasing student achievement and improving the school environment. Examples include the Galef Institute's Different Ways of Knowing program, the Minneapolis Annenberg Challenge for Arts Education, Arts in the Basic Curriculum (ABC), North Carolina's A+ Schools Program, Chicago Arts Partnerships in Education (CAPE), and Artful Learning: A School Reform Model created by the Leonard Bernstein Center. Most school reform models involve partnerships among schools, community arts organizations, and researchers. For the most part, evaluations of these reform efforts found changes in school systems and structures, teaching practices and attitudes that were associated with positive outcomes in student learning, academic performance, and other desirable youth outcomes mentioned above (Horowitz, 2004). For example, in the Minneapolis project, there were positive relationships between arts-integrated instruction and arts learning, as well as a positive correlation between arts-integrated instruction and learning in math and reading (Horowitz, 2004).

Arts education for artistically talented students is justified by the value in providing opportunities for such students to excel and be stimulated in school as well as for preparing them for possible professional careers.

Several school-arts organization partnerships have implemented programs to recognize and teach artistically talented students (Ohio Alliance for Arts Education, 2003; ArtsConnection, 2003). At least one study (Oreck and Baum, 1999) evaluates the impact of the Young Talent Program in New York City public elementary schools on at risk students. A key finding is that "[t]he arts have clearly occupied a central place in the education and identify of these students, whether or not they were working toward an artistic career." Most of the remaining published education research on arts education for artistically talented students falls within the broader, more general category of education for "gifted" students. These were not reviewed for this report, nor was literature on the role of arts education in preparing students for professional arts careers.

Despite the debate on *why* it is important, all of these studies provide compelling arguments that *it is* important to provide arts education for all students — and, that it should be of high quality and sustained throughout a student's educational life. In fact, arts education advocates frequently cite many of these studies when making their cases to policymakers and funders (President's Committee on the Arts and Humanities, et al, 1998; California PTA, 2001; President's Committee on the Arts and Humanities and Arts Education Partnership, 1998).

Arts Education and Arts Participation

The National Endowment for the Arts (Bergonzi and Smith, 1996) found a link between arts education and arts participation. Using data from the 1992 U.S. Census "Survey of Public Participation in the Arts," researchers found that people with more arts education are more likely to attend arts performances. Furthermore, arts education was the strongest predictor of almost all types of arts participation, with the exception of engaging in a performance. While socioeconomic status (SES) influences arts participation (higher SES status relates to higher participation), it is not as important as arts education as a predictor.

Early Childhood Education in the Arts

In the context of increased national attention on pre-school programs, the role of the arts on early learning is an emerging field of research. According to Sara Goldhawk (1998): "A close look at what constitutes the best kind of experience for infants and young children leads quickly to the arts. From a baby's first lullaby, to a three-year-old's experimentation with finger paint, to a seven-year-old's dramatization of a favorite story, developmentally appropriate arts experience is critical."

Arts education and early childhood education journals have published copious research on strategies for and benefits of incorporating the arts into pre-school curriculum. There appears to be consensus that the most effective programs are those that work with children's natural movement, musical and dramatic abilities (Hildebrandt, 1998; Palmer, 2001). Many studies show that there are multi-faceted impacts of the use of drama, dance, and music in pre-school programs. These include the development of musical and other creative ability, language, problem solving skills (Moravcik, 2000; Snyder 1996), and spatial-temporal reasoning (Rauscher, Shaw, et al, 1997). Harvard University's Project Zero conducted a four-year study of the Wolf Trap Institute for Early Learning Through the Arts program that provided performing arts experiences to low-income children and trained teachers to incorporate performing arts into their curriculum (San Diego Office of Education, 1996). The researchers found that students in the Wolf Trap classes had significantly higher levels of engagement and social participation than those in non-Wolf Trap classes.

There are currently numerous research-based teaching guides, suggested arts experiences, and curriculum resources available to preschool teachers (Goldhawk, 1998; The California Arts Project, 1999). And, in recognition that pre-kindergarten education lays the foundation for school readiness, California's Visual and Performing Arts Standards include standards for pre-kindergarten for dance, music, theater and visuals arts (California Department of Education, 2001a).

Public Policy and K-12 In-School Arts Education Programs

There has also been increased attention in the last ten years on the inclusion of the arts in public school education.

At the federal level, the No Child Left Behind Act of 2001 reaffirms previous federal education policy that the arts should be included as core academic subjects (Arts Education Partnership, 2002b). Although the impact of this policy on federal funding specifically for the arts has been minimal so far, the Arts Education Partnership considers it significant because it "means that whenever federal education programs (such as teacher training, school reform, and technology programs) are targeted to 'core academic subjects,' the arts may be eligible to receive funds."

At the state level, California recently adopted visual and performing arts standards for pre-kindergarten through twelfth grade (California Department of Education, 2001a) and requires one year of either visual and performing arts or foreign language for high school graduation. Furthermore, the University of California and California State University systems have established arts course requirements for freshman admission (California Department of Education, 2003a). Until recently, increased arts education funding from the California Department of Education (CDE) supported these policy developments. The CDE (2001b) provided ArtsWork grants to districts statewide as well as, in collaboration with the California Arts Council (CAC), Local Arts Education Partnership (LAEP) grants to districts and arts organization partnerships. State funding for the CAC allowed the Council to make its own arts education grants through several programs to both school districts and arts agencies. These funding streams marked a returning trickle of state support for in-school arts education that had been previously drained by the Proposition 13's impact on overall education funding in 1978. All of these programs, however, have been eliminated or curtailed in 2003 due to recent state budget crises (CAC, 2003a; CDE, 2003b).

Arts education policy developments have coincided with attempts to map the scope and quality of K-12 arts programs. This has involved identification of indicators for successful programs, often through analysis of model programs (Longley, 1999; Heavey and Goodney, 2001). Among the indicators reported in these studies are: administrative support for arts education, community involvement, professional development for teachers, the presence of a district arts coordinator, comprehensive and sequential arts program, and planning. Such "indicators of success" research has provided the basis for tools and resources for districts and communities to assess their own arts education programs and to identify gaps and areas for improvement. These include the Kennedy Center's "A Community Audit for Arts Education," the CDE's Model Arts Program toolkit, and the California PTA's "Community Arts Education Project" guide.

There are few published reports that summarize the results of self-assessments using these tools. However, two early self studies of the San Francisco (Sustainable Funding for School Arts and Music Task Force, 2000) and Los Angeles Unified School Districts (Arts Education Task Force of Arts for LA) echo what an earlier statewide survey (Heavey and Goodney, 2001) reported: there are insufficient numbers of art and music teachers in elementary schools and funding is inadequate.

Researchers for the National Center of Educational Statistics (Carey and Kleiner, 2002) found that music and visual arts instruction were available in most public elementary schools during the 1999-2000 school year, while dance and theatre were available in less than one third. Seventy-two percent of the schools providing music instruction employed full-time specialists; 55% of those providing visual arts instruction used full-time specialists. In the schools that did provide dance or theatre, very few used full-time specialists to teach these subjects. This study reports on other aspects of the status of arts education in public schools, including availability in secondary schools, administrative support, facilities, work environment, professional development for teachers and involvement in the arts outside of schools.

Finally, an increasingly important focus of in-school arts education research is on assessment of arts learning. Although arts subjects are not included on standardized tests, the adoption of standards and emphasis on the arts as core curriculum has influenced the development of research and tools to measure what students are learning in the arts. Literature on this subject was not reviewed for this report, although several assessment references are noted.

Performing Arts and Cultural Organizations' Arts Education Programs

There are currently an estimated 7,000 performing arts organizations nationwide (Association of Performing Arts Presenters, 2002; Hager and Pollack, 2002). There has been rapid growth in education programs among these organizations (Dana Foundation, 2003). An Urban Institute study (Hager and Pollack, 2002) of 800 performing arts organization found that 77% provide programs and performances for K-12 and that 58% provide artist residencies.

Many performing arts organizations consider arts education for youth as a long-term, indirect strategy to develop audiences and increase arts participation (Walker, 2002; Polin, 2003; Association of Performing Arts Presenters, 2002; Bergonzi and Smith, 1996). According to Walker (2002), performing arts organizations commonly work to develop audiences by "fostering a new generation of arts and culture participants by sponsoring activities for children and families."

In *Acts of Achievement: The Role of Performing Arts Centers in Education*, Jane L Polin (2003) said, "For the best K-12 education programs established by performing arts centers, narrowly defined audience development was not the focus but rather a byproduct. Leaders in the field are now focusing on student learning." Polin quotes Michael Kaiser, president of the Kennedy Center, in describing the work of the Center as "enriching the lives of children and allowing children to express themselves through the arts. ... We believe the audiences will be developed if we do that work. But our primary focus is on enhancing the lives of young children."

Myers and Thomas (1996), in their book on partnerships among orchestras, schools and community, maintain, "If the orchestra's interest in education is primarily ... with the hope of building future audiences, its efforts are probably for naught. There is no hard evidence to suggest that sizeable audiences ... will automatically accrue from such motivations. ... [I]f the orchestra sees itself as helping to fulfill the human longing for aesthetic satisfaction and advancing the expressive capacities of the human mind and spirit, then its role becomes one of educating people to the wealth of life-enriching opportunities available through the symphonic music experience."

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The Association of Performing Arts Presenters (2002) reported on concerns expressed by representatives of performing arts organizations about audience development. These include the need: "1) for new forms of partnership in programming, education, community outreach, and fundraising, involving groups and individuals not previously engaged; 2) to make up for the loss of arts education at every level ... which harms both audience development and artistic development; and 3) to improve the quality (and increasing the supply of) teaching artists."

There is considerable literature describing the roles performing arts organizations play in both school-based and out-of-school arts education programs (Silverstein, 2003; Gradel, 2001; Dana Foundation, 2003; Arts Education Partnership, 1996). One key role is to provide artists to the schools in both short and long-term residencies. During the 1998-99 school year, 38% of U.S. public elementary schools sponsored visiting artist and 22% sponsored artists-in-residence (Carey and Kleiner, 2002). In partnerships with schools and classroom teachers, such residencies are used as part of the school's comprehensive — and increasingly standards-based — arts education program Visiting artists frequently work with classroom teachers, providing a form of on-site professional development to enhance arts teaching skills. Some organizations also provide professional development workshops, institutes and in-services for classroom teachers and teaching artists (Dana Foundation, 2003; Arts Education Partnership, 1996). Performing arts groups also host school-age children at special performances, sometimes involving students in creating their own performances. Their programs can also include after-school or weekend programs.

Community-based cultural organizations often provide similar services, and frequently through partnerships with schools and performing arts organizations. Some offer their own artist-in the schools programs, such as SPECTRA (TeachingArts.Org, 2003) and act as grantmaking intermediaries and technical assistance and professional development providers (Cultural Initiatives Silicon Valley, 2003). These functions are often fulfilled in partnership with local community foundations, school districts, county offices of education and other entities. Some are also involved in providing pre-K services and programs as well as professional development opportunities for teachers.

Although not cultural organizations per se, community foundations are playing an increasingly important role in supporting arts education, especially through partnerships with cultural organizations and educational institutions. Community foundations act as granting intermediaries, technical assistance providers, and arts providers (Walker and Boris, 1999; East Bay Community Foundation, 2003).

After-School/Out-of-School Community-Based Arts Education

As national attention on the need to provide safe and enriching activities for youth in non-school hours has grown, so has the prevalence of outcomes research on out-of-school programs. According to the U.S. Department of Education and the National Endowment for the Arts (1999), high-quality arts education programs in after-school programs have similar impacts as in-school programs. "They help develop the four 'Cs,' cognition, culture, communication, and creativity."

A leading researcher in the field, particularly on the role of the arts in after-school programs, is Shirley Brice Heath. Brice Heath, et al (1998, 2001. 2002) reports the results from research she and colleagues conducted between 1987 and 1998 on 124 youth-based organizations in economically disadvantaged communities. The organizations were categorized as academic-athletic based, community service based or arts based. While they found positive outcomes for participating youth in all types of programs their most

significant finding was that youth in after-school *arts* programs do better than in other after-school programs. Outcomes include recognized academic achievement, participation in a math or science fair, and awards for writing. As part of the same study, the researchers compared 100 students participating in after-school arts programs with a national sample (the National Education Longitudinal Survey) of similarly aged youth. Although the arts program youth in the study live in environments that place them at much higher risk than their counterparts in the national sample, they exceeded the national sample on a number of measures, including their sense of security, belief in themselves, and trust in their abilities to give back to their communities.

Many of the studies reviewed highlight model after-school arts programs for youth. Yet Brice Heath (2001) maintains that there is a "scarcity of environments for effective learning in the arts in ... youth-based community organizations" in the Bay Area. In particular, there is a significant gap in community-based arts learning opportunities for middle-school students. She calls this a "failure of Bay Area leaders to acknowledge what research ... has shown about effective cost-efficient ways to increase positive youth engagement in academic, community and family life." She also decries "[t]he failure of schools to sustain study and participation in the arts, from elementary through middle and secondary levels, [which] takes its toll then on how much community organizations can achieve within the arts." Her report offers a number of recommendations for foundations including researching and communicating what exists, improving existing programs, increasing youth access to programs, professional development for artists and youth workers, capacity building and infrastructure support and foundation practices.

The Growing Role of Partnerships

The trends and developments described above are fueling interest in arts education partnerships as effective and cost-efficient ways to combine resources for common goals. Most of the partnership literature reviewed centers on partnerships that benefit public schools and to some extent, early childhood education. The literature on this topic is so extensive that only a very preliminary scan was possible, which is summarized briefly here.

The role of partnerships in national and state arenas is addressed by the National Assembly of State Arts Agencies (Ellis and Dreeszen, 2003) and the Arts Education Partnership. The three major state level players include state arts agencies, the state departments of education and the state alliances for arts education. According to Ellis and Dreeszen, "When functioning effectively together, each agency is able to bring its own particular expertise, networks and resources in support of a common agenda for advancing arts education statewide." In California, partnerships among the California Alliance for Arts Education (CAAE), the CAC, and the CDE, along with the California PTA and others contributed to the adoption of arts education policies describe under "K-12 In-School Arts Education Program" above (CAAE, 2003; CAC, 2003b).

In recognition of the need to bring community resources to pubic schools, recent CDE (2001b; 2003b) LAEP and ArtsWork grant programs have required partnerships with local arts agencies and professional development providers. A former CAC (2003b) grant program, "Arts Partners in Education (APE)," was also based on the partnership model, bringing together local arts agencies and school districts to develop community resources to benefit in-school arts education programs. (The LAEP and APE grants — in fact all CAC arts-in-education grant programs — have since been eliminated. ArtWork funds have been reduced and the program's future is uncertain.)

Regional and local partnerships exist for various purposes among several types of entities. A primary purpose has been to improve the teaching of arts in public schools and preschools via professional development and artists-in-residency programs (Gradel, 2001; Silverstein, 2003). A related purpose is to provide enriching and stimulating experiences for students through interactions with working artists, and through attendance at performances and exhibits. Myers and Thomas (1996) call partnerships between orchestras and schools "a crucial link in a lifetime of music education experiences that connect to serve the artistic and cultural well being of entire communities." Partnerships also serve as vehicles for the community at large to channel support and demand for arts education while bringing needed resources to under-funded schools and organizations. Broader-scale collaborations are now emerging that address educational standards and reform, community and school arts education planning, legislative advocacy, and long-term sustainability of arts education inroads.

Researchers and partnership conveners are examining the scope, function, and success of arts education partnerships. Several studies of model partnerships (Desidel and Eppel, 2001; Dreeszen and April, 2000; Arts Education Partnership 2002c; ARTS, Inc. 2000) summarize lesson learned about successful partnerships. Some of most frequently mentioned characteristics of partnerships that can bring about far-reaching change are:

A primary focus on students' and their need for high quality education and high quality arts experiences
A focus on multiple arts disciplines
Attempts to take comprehensive approaches to system-wide arts education reform
Involvement of diverse and multiple community sectors

Conclusion and Recommendations for Funders

The enormous volume of arts education literature available for review — of which only a small portion was selected — reflects a field that has grown dramatically in the last ten years. There are a number of areas of research that are not covered in this review, such as the role of arts in teacher preparation, professional development in the arts for teachers, arts education for special needs students, community arts schools, public arts magnet schools, and except for a very cursory treatment, studies of the role of arts education in overall K-12 education reform.

We reviewed the literature included in this study for recommendations for funders. In general terms, foundations are urged to provide both long-term funding and leadership as partners in efforts to provide comprehensive, high quality arts education for all students. Furthermore, they are asked to support research-based programs with evaluation components, emphasize sustainability, and facilitate the tracking and sharing of information in an increasingly complex and expanding field.

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COMMENTARY

Arts Education: Not All Is Created Equal

By Nick Rabkin & Robin Redmond

When the arts are an interdisciplinary partner with other subjects, they generate the conditions that researchers say are ideal for learning.

Evidence has mounted over the last decade that arts study leads to higher levels of achievement in other subjects. That is exciting news for advocates of arts education, who have resisted its erosion in American schools for five decades without such evidence. But what does the evidence tell us about how and why arts education has these positive effects? What does it say about how the arts can be most effectively and strategically provided in real schools under challenging circumstances? These big questions must be addressed before many schools can be expected to embrace arts education with enthusiasm.

Much of the research about arts education, though, is focused on little questions that do not suggest operational strategies for improving instruction: "Does story dramatization improve understanding by 1st, 2nd, and 3rd graders?" for example. Some of the most widely touted research, such as that showing the strong correlation between arts learning and higher SAT scores, are suspect because of the high correlation between arts learning and higher income, the most powerful predictor of academic success. Encouraging studies that control for income, like those showing that low-income students who are active in the arts do significantly better than those who are not, are not fine-grained enough to distinguish between the arts activities that may provide these benefits. In school or out? Music, theater, dance, or painting? Original creation, exposure, or appreciation?

Over the past two years, we looked for research that asked questions about arts education that matter in more fundamental ways, questions that could guide teachers and artists, schools and districts toward strategies that really deliver the benefits attributed to the arts. We sought research and evaluation that looked deeply into serious arts education programs over time, in multiple schools and classrooms, with particular attention to low- income students. Perhaps our most important finding was that not all arts education is created equal. While virtually all the studies and programs we reviewed showed meaningful benefits for students and schools, some clearly had more powerful effects on student outcomes than others.

We found the most powerful effects consistently associated with programs that *integrate* the arts with subjects in the core curriculum. We also found that these programs are leading to sophisticated ideas of why and how they are so powerful—a theory of teaching and learning that brings the arts into the center of education and is consistent with developments in cognitive science. The effects are less pronounced, and may not occur at all, in conventional, stand-alone arts education.

A study of 23 arts-integrated schools in Chicago showed test scores rising as much as two times faster than in comparable schools. A study of a Minneapolis arts-integration program showed that it had positive effects on all students, but was most powerful for disadvantaged learners.

Gains in these integrated programs go well beyond the basics and test scores. Arts integration energizes and challenges teachers. One researcher said that the Minneapolis program was "one of the most powerful

professional-development experiences for large numbers of teachers.

Students invest emotionally in arts-integrated classrooms. Their thinking capacities grow; they work more diligently, and learn from each other. In arts-integrated rooms, students often work in groups and turn classrooms into learning communities.

These classroom changes lead to a cascade of broader school changes. Schedules shift to accommodate planning and sustained attention to important questions. Parents become more involved. Teachers collaborate and take on new leadership roles. Art and music teachers often become the fulcrum of multiclass projects.

Arts-integrated schools make clear that the arts are not just affective and expressive. They are deeply cognitive.

When the arts are an interdisciplinary partner with other subjects, they generate the conditions that cognitive scientists and education researchers say are ideal for learning. The curriculum becomes more hands-on and project-based. It offers students authentic and challenging intellectual work. Learning in all subjects becomes visible through the arts, and student work becomes the basis of thoughtful assessment. Teachers' opinions and expectations of their students rise.

Arts-integrated schools make clear that the arts are not just affective and expressive. They are deeply cognitive. They develop essential tools of thinking itself: careful observation of the world; mental representation of what is observed or imagined; abstraction from complexity; pattern recognition and development; qualitative judgment; symbolic, metaphoric, and allegorical representation. These same thinking tools are used in science, philosophy, math, and history. That is why arts-integrated schools reach higher academic standards.

The best arts-integration programs demonstrate a strategy that can help close the achievement gap and make schools happier places. It is a strategy within reach of most schools and districts, even those in the poorest communities. What are its most salient principles and characteristics? We found that the best programs:

- Draw on the artistic resources of their communities, building sustained partnerships among schools, arts organizations, teachers, artists, researchers, and evaluators.
- View student achievement and school improvement as pivotal to their mission—they are not only about advancing arts education.
- Engage teachers and artists from all disciplines in serious inquiry about how the arts are related to learning in other subjects and how to make educationally powerful links.
- Use the arts as media for learning—the communication of content—and as methods of learning—through artistic practices like careful observation, inquiry, creation, practice, performance, representation, exhibition, and reflection.
- Respond to a school's particular strengths and weaknesses.
- Provide arts instruction within the context of other subjects *and* on its own
- Raise funds from outside the school system to support their work, while persistently seeking higher levels of commitment from schools and districts.

We have seen programs with these characteristics work.

One fall day, we watched low-income 4th graders in an arts-integrated classroom drawing portraits of each other in a lesson that was part of a unit on descriptive writing. They were focused and coiled with excitement. Rich writing and artwork covered the walls and showed evidence of real learning and [illegible]nplishment. Most other classrooms in this building also integrated the arts with other subjects and [illegible]ed with intensity.

The same day, in another low-income school, we watched 4th graders slump in their chairs, waiting to read a bit of advice to their classmates. They mumbled, "Don't hit your sister," and "Do your homework." There was no children's work on the walls, no evidence of learning. Instead, hallway posters reminded students of rules they must follow. "Stay in line." "Don't forget your uniform." One asked, "What is freedom?" The answers implied that freedom is a reward for self-control.

The best arts-integration programs demonstrate a strategy that can help close the achievement gap and make schools happier places.

Education policymakers may have committed themselves to leaving no child behind, but the boredom and academic failure we saw in the second classroom is the norm in too many schools. The weight of educational habit and high-stakes testing constrain their focus to "basic" academic skills, testing, and discipline. In a postindustrial economy, this can only reproduce and deepen the cycle of failure.

Arts integration is a far more productive strategy. Students will not be prepared for work in an economy that demands higher-order skills if their schools focus exclusively on the basics and measure learning with multiple-choice tests only. Students will not learn to think for themselves in schools that expect them merely to stay in line and keep quiet. They won't be prepared to create the culture of their time if they do not create culture in their schools.

S[illegible]e worry that integrating the arts with other subjects will reduce art to the role of academic handmaiden to [illegible]e core subjects.

That is not what happens. Art engages the world. Artists make work about things, ideas, questions, relationships, emotions, problems, and solutions. Art is a powerful instrument for making and sharing meaning. Arts integration is modeled on the methods and purposes of real artists. We have found that it results in student artwork that is consistently more complex, interesting, and contemporary than work done in stand-alone arts classrooms.

Arts integration is not simple or easy work. The pioneering educators and artists who do it swim against a tide of education policy, and work with meager resources. They need policy support at the federal, state, and local levels, not platitudes about the intrinsic goodness of art for children. Their work needs to be expanded to more classrooms, schools, and districts, and it needs to be more thoroughly studied. Preservice teachers should learn about arts integration, and arts classes should be required for certification. Art and music teachers should learn to integrate what they know about their art forms with other subjects. Arts education deserves far more than a meager $35 million line item in a federal education budget of some $65 billion. And integrated arts education should be the target of a healthy proportion of federal, state, and local allocations.

Nick Rabkin and Robin Redmond are the editors of Putting the Arts in the Picture: Reframing Education in the 21st Century. *Rabkin is the executive director of the Center for Arts Policy at Columbia College Chicago, and Redmond is the associate director.*

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Deep In the Arts of Texas

Dallas public schools are boosting student achievement by integrating arts into the curriculum.

by Christopher Reardon

Winter 2005

Janice Rubin

Students, including these in a multimedia class, are benefiting from a partnership between artists and teachers that focuses on classroom goals.

Dallas—Ever since Texas adopted a statewide curriculum in 1998, fourth graders here at James S. Hogg Elementary School have spent several weeks each fall studying 19th-century pioneer life in the American Southwest. Their understanding of this dynamic era—when the region's Comanche hunters and Mexican traders crossed paths with English- and German-speaking settlers—initially came from classroom discussions and library books. But now the school is teaming up with local artists and cultural institutions to make this history come alive even more.

In Dallas, thousands of elementary school teachers are integrating field trips and artist residencies into their lesson plans for such core subjects as reading, math, science and social studies. Since 1998 all but a few of the city's 157 public elementary schools have been working with museums, theaters and other arts groups for the express purpose of boosting students' academic achievement. In that time the nation's 12th-largest school district has built a stronger teaching force, engaged students through new ways of learning and brought marked improvement in literacy, particularly writing. As a result, Dallas now serves as a model of curriculum reform for communities from Baltimore and Charlotte, N.C., to St. Louis and Jackson, Miss.

These gains are credited to a hard-won alliance between city government, the school district and the city's arts and cultural institutions. Called ArtsPartners, it has trained 4,500 elementary school teachers

A ballet class takes position in a school foyer. The enriched programming of ArtsPartners is already showing results in improved student achievement.

The cost of running ArtsPartners averages roughly $2.7 million a year. The school district picks up about a third of the tab, or $880,000, which pays for buses, artist fees and admission charges. Another $220,000 comes from the city's Office of Cultural Affairs, which also gives $4.1 million directly to arts groups and cultural institutions. Federal initiatives provide about $625,000, much of it for ArtsPartners' work in after-school programs. The other $1 million comes from the private sector, including businesses, foundations and individual donors.

As it grew, ArtsPartners had to contend with instability at the school district, where six different people held the top post between 1996 and 2001. But the program won favor with Mike Moses, who became superintendent in January 2001. Moses had previously served as the state's commissioner of education, and led the movement to promote standards and accountability in public schools. Like many others, he came to value ArtsPartners because it brought measurable benefits.

"In Texas, there's almost as much pressure for teachers to boost test scores as there is for coaches to win football games," says Larry Groppel, who was named interim superintendent when Moses resigned to take a university job last summer. "Here in Dallas there's probably more. If somebody wants to criticize ArtsPartners as fluff, they should look at the test scores."

Indeed, initial analyses of standardized tests administered throughout the district show that students make bigger strides in literacy, particularly writing, when their teachers book performances, artist residencies and other cultural activities through ArtsPartners. The effect is greatest in schools that receive help integrating these activities into their lesson plans. The scores of students who received the greatest exposure to ArtsPartners' programs rose 10 points in a statewide reading test between 3rd and 4th grade compared to a three-point rise for a control group. What is more, the program seems to benefit students of every ethnic, socioeconomic or academic grouping.

'I'm using movement and performance to help them remember details and make connections that they can use later when they sit down to write.'

Dennie Palmer Wolf, a scholar at Brown University's Annenberg Institute for School Reform, heads a continuing effort to measure the effects of the ArtsPartners program in greater detail. In 2001 her team of researchers began monitoring four first-grade classes and four fourth-grade classes—including some at Hogg and Marsalis—that work closely with ArtsPartners. Looking beyond test scores, they have been observing classes, interviewing students and assessing writing samples to gauge the program's influence on how students behave, think, talk and write. The researchers have also followed several comparable classes that set up field trips and artist residencies through ArtsPartners but did not receive additional training or help in tying these activities into their lesson plans.

The researchers are now following the younger set of students into fourth, fifth and sixth grades. Data from the first three years of the study show that students performed better on their writing assignments—which were scored according to their use of ideas, organization, voice, word choice and syntax—when they received enriched programming through ArtsPartners. For example, in one study, fourth graders scored an average of 2.39 for use of ideas in conventional writing assignments. But when

they wrote following an ArtsPartners activity, the average score climbed to 3.06.

"This program makes a difference at exactly the moment in exactly those areas where kids with fewer advantages begin to fall off the map," says Wolf, noting that many disadvantaged students slip far behind between first and fourth grade.

Janice Rubin

An African drumming class gives students another way to grasp mathematical concepts like fractions and ratios.

"The students at Hogg, for example, who are mostly English-language learners from poor neighborhoods, are turning out the kind of writing you usually get from wealthier, more advantaged students. By fourth grade, a number of them are writing as well as sixth graders elsewhere in the district."

Still, ArtsPartners faces many challenges. The organization's work with teachers throughout the school district has clearly had an effect on teaching quality. Still, most schools only have the money and time for two ArtsPartners activities each year. Funding is always uncertain, and the cost of expanding the enriched program beyond the four treatment schools, or into higher grades, could be prohibitive. Personnel changes also pose a threat, especially with the district again looking for a new superintendent. But advocates for ArtsPartners have proven adept at winning over newcomers.

"The trustees will make this part of the interview process" for superintendent, says Ken Zornes, a member of the school board since 1999. "I suspect that if a candidate said it's no big deal, that interview wouldn't last much longer."

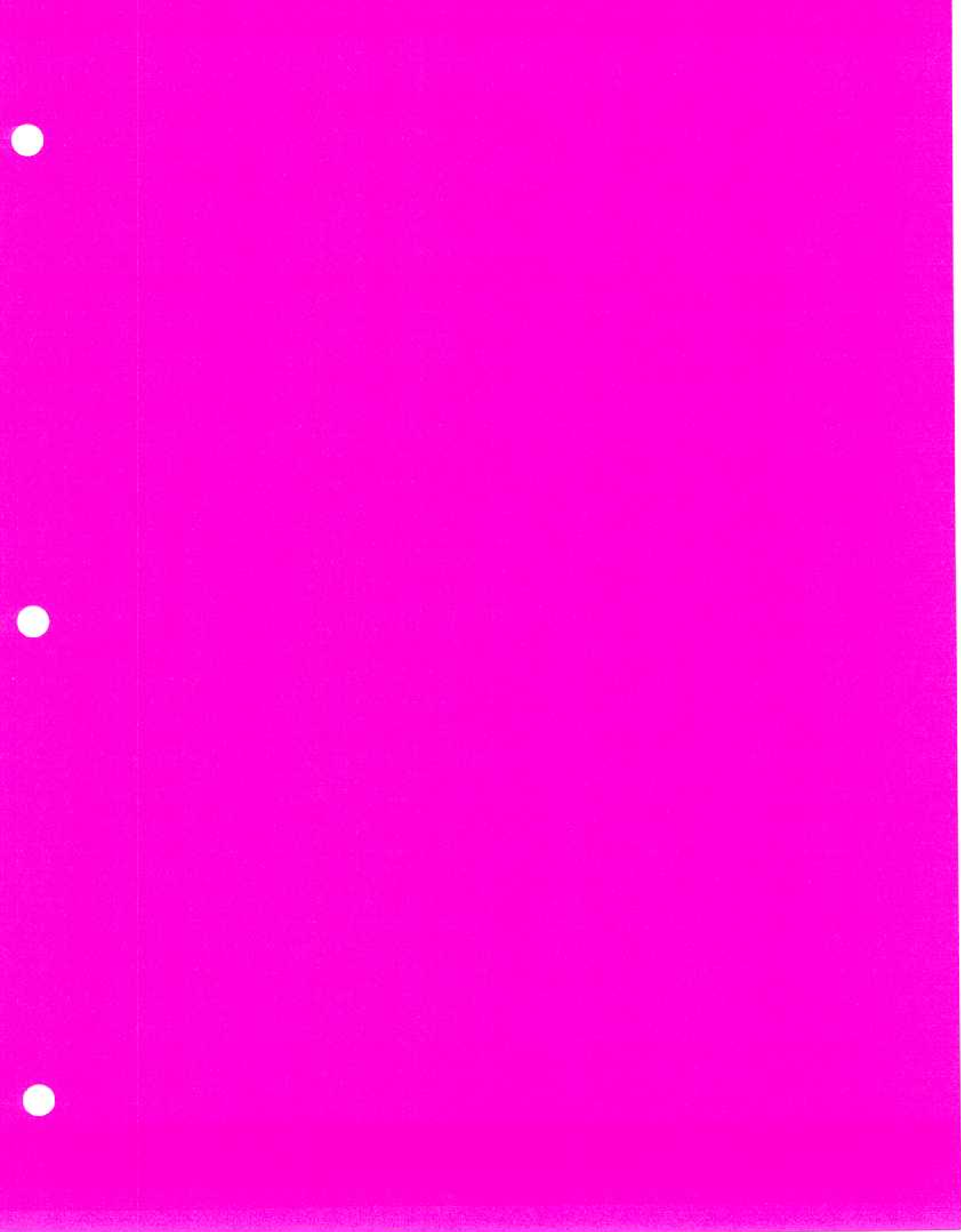
ArtsPartners has so many champions within the school system, from teachers and principals on up, that it would be hard for anyone to eliminate it. But Antoni is taking no chances. To shore up support for the program, and its expansion, her staff has begun working directly with parents to build a broader constituency. Such a groundswell, coupled with the testimony of educators like Debra Polk, would be hard to resist.

"We used to take trips to free, affordable places," says Polk who teaches language arts to fourth graders at Marsalis. "Now we go to places that connect with what we're doing in the classroom and make a difference in student achievement."

That enthusiasm was palpable one Friday last fall, when Sara Weeks paid a visit to Marsalis. "When the bell rang at the end of the period, my students did not want to leave," Polk recalls. "And at the end of the last class of the day, my students did not want to go home for the weekend."

The Art of Teaching

The Ford Foundation's support for Dallas ArtsPartners is part of a larger effort to re-envision urban schools, in part by integrating the arts into classroom instruction. The back-to-basics impulse drives curriculum reform in many U.S. communities, and some leading school districts see the arts as a vital way to promote learning in core subjects like reading, writing and arithmetic. By working with half notes and quarter notes in a musical exercise, for example, students get a better understanding of fractions and ratios. Many educators who incorporate the arts in classroom instruction say it promotes



RELATED RESEARCH IN ARTS EDUCATION/INTEGRATION

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There is considerable research that points to the value of arts education and integration in the learning process. Two methods of data analysis used in examining research projects in arts education, as well as other areas, are correlative and causal.

Correlative analysis is designed to search for and discover relationships. For example, if a researcher is studying the effect of integrating visual arts and math, he/she will collect data that will support or not support the hypothesis that integrating these two subjects is beneficial to a student's learning in both areas. The researcher will not necessarily exclude all other factors, but will report on the whole process with and without visual arts integrated into mathematics.

The second means of analysis, causal, shows a direct link from one issue to another. For example, a hypothesis might state that studying music reading, with all other factors either excluded or controlled, will directly and positively impact students' test scores in science.

It is noteworthy that most of the studies in regarding the importance of the arts in the educational process are correlative. At the present time and based upon current research, it is not possible to unequivocally state that the arts alone will, for instance, increase test scores. However, it is possible to state that those schools whose teachers and curriculum engages students in developmentally appropriate, quality arts education learning and experiences have a higher and more consistent degree of success in critical areas of education including overall test scores. It is also important to understand that arts education and arts integration are not and should not be looked upon as a quick fix to learning. As evidenced by much of the material in this document, the arts are for the long term and more comprehensive than merely learning and regurgitating facts.

In subsequent pages, studies or meta analysis of selected studies will be cited with a summary of findings that provide evidence in both correlative and causal analysis as it relates to arts education and integration.

test, and therefore came further along using dance movement as the modality for reading skills (Bradley, *Critical Links*, pp.10-11)

Moore, B. and Caldwell, H. (1993). *Drama and drawing for narrative writing in primary grades*. Journal of Educational Research, November/December, 83 (2), pp. 100-110.

Summary:
This study found that when the curriculum is designed to develop specific writing skills and the teachers are trained on the substance and implementation of the planned exercises, drama and drawing can significantly improve the quality of narrative writing for second and third graders. This is consistent with a limited number of other studies that have used drawing to enhance writing, and a more abundant array of studies that connect dramatic activities with verbal skills. In general, the differences between the program and control students were substantial and significant. (Catterall, *Critical Links*, p. 32)

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

Summary:
This study draws on data collected from more than 25,000 students contained in the 10-year database of the National Educational Longitudinal Survey. The author examines the relationships between students' arts participation and their achievement, attitudes, and behavior in secondary school. The analysis establishes a significant correlation between eighth and 10th grade students' arts activities and their grades, standardized test scores, staying in school, and being interested in school. This study lays the groundwork for a viable rationale for arts inclusion in the schools. . . . the research show than an arts-rich learning environment is associated with a host of positive educational measures. The study connects the arts to academics and to other "valued-added" outcomes. (Winner, *Critical Links*, p. 68)

Corbett, D., McKenney, M., Noblit, G. and Wilson, B. (2001). *The a+ schools program. school, community, teacher, and student effects. (Report #6 in a series of seven policy reports summarizing the four-year pilot of a+ schools in North Carolina).* Kenan Institute for the Arts, Winston-Salem, NC.

Summary:
(The A+ Schools project is a whole school reform movement. One of the critical elements of the A+ project is the importance of the arts and two-way arts integration. Arts integration became a centralized theme for each of the schools and placed on a level of equal importance with all other subject areas.)

Taken in sum, the effects described in this report show that the A+ project schools clearly addressed their educational goals and realized the benefits of giving the arts a higher status in the learning process. (Seaman, *Critical Links,* p. 88)

Asmus, E.P. (1990) *The influence of music education on non-musical indicators of educational attainment.* Paper presented at the National In-Service Conference on the Value of Music Learning. Winston-Salem, NC, November 10-12, 1990.

Summary:
Asmus analyzed data from national, state, and local sources and found strong correlations between student/music teacher ration, music class enrollment, and music background and knowledge with students' academic achievement. The student/music teacher ratio was the strongest predictor of student achievement, while student/all teacher ratio, per pupil expenditure, and enrollment were the weakest predictors.

Collett, M.J. (1991). Read between the lines. *Music Educators Journal, 87(3),* 42-45.

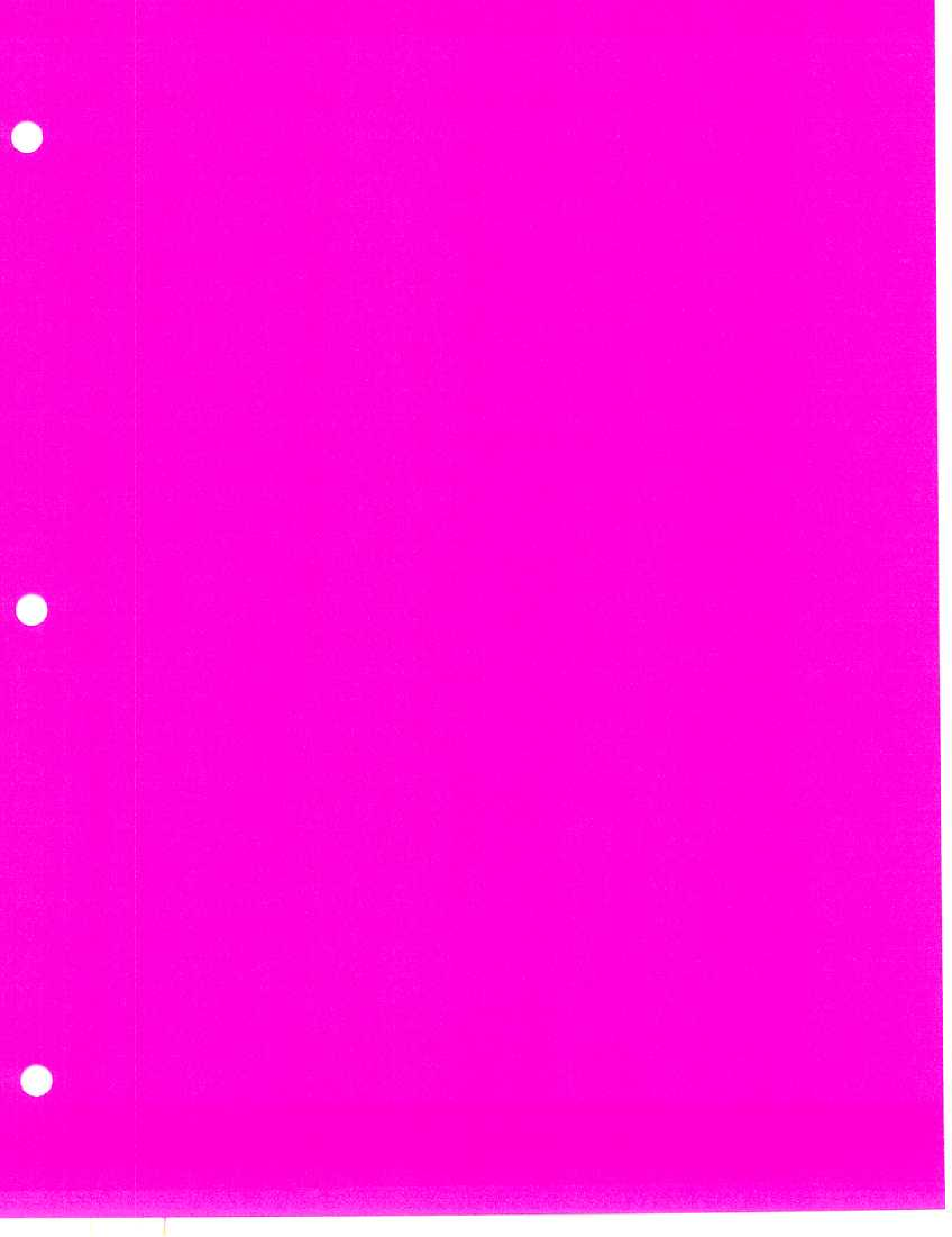
Summary:
Reports indicate that the *Learning to Read Through the Arts* (LTRTA) program results in improved attitudes toward the arts, reading, and learning in general, as well as improved academic achievement. LTRTA used the arts, including music, for teaching reading, writing, and higher-level thinking skills.

Vaughn, K. (2000). *Music and mathematics: modest and support for the oft-claimed relationship.* Journal of Aesthetic Education, Fall, 34 (3-4: 149-166.

Summary:
This study helps confirm the relationship between music study and performance on standardized mathematics tests. The analysis adds substance to the widely publicized correlation between music and SAT scores by synthesizing 10 years of SAT analysis with 10 other studies chosen through stringent selection criteria. The study shows positive, unanticipated benefits of music learning that should be of interest to school administrators and policy-makers. Sustained participation in music education programs likely supports the development of thinking skills applicable to mathematical reasoning, which may, in turn, be reflected in mathematics scores. (Horowitz, *Critical Links,* p.130-131)

McBee, R.H. (2001). Why teachers integrate. *The Educational Forum (64), 254-260.*

Summary:
The author carried out in-depth interviews with 10 elementary teachers and compared the findings of her qualitative study with an extensive literature review. She concludes that curriculum integration "has never really taken hold in the



How Arts Integration Supports Student Learning: Students Shed Light on the Connections

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Abstract: *Learning in and with the arts has been linked with increased student achievement, but the means by which the arts may support cognitive growth in students is relatively undocumented. Thirty students across ten classes in veteran teacher artist partnerships were selected to help explore the processes and outcomes associated with arts-integrated learning units versus learning processes and outcomes in comparable non-arts units. The student sample evenly represented comparatively high, medium, and low achievers.. Even though we observed differences in levels of arts integration across classrooms, students from all achievement levels displayed significant increases in their ability to analytically assess their own learningfollowing arts-integrated units. No such gains associated with traditional instructional experiences. Students also described their arts-integrated versus non-arts learning differently. Arts-integrated instruction: 1) created more independent and intrinsically motivated investments in learning, 2) fostered learning for understanding as opposed to recall of facts for tests, 3) transformed students' characterizations of"learning barriers" into "challenges" to be solved, and 4) inspired students to pursue further learning opportunities outside of class. We suggest future research avenues based on this work.*

ARTS INTEGRATION AND STUDENT LEARNING

Since the publication of *Champions of Change: The Impact of the Arts on Learning* (Fiske, 1999), research has increasingly examined the correlation between arts learning and general student achievement (Deasy & Fulbright, 2001; Various, 2000). Arts education in its various forms—from traditional art classes to extracurricular arts activities, from music to drama to visual arts—consistently associates with higher individual achievement. At the school level the phenomenon holds true: the 1999 evaluation of arts integration that appears in *Champions of Change* found that Chicago Arts Partners in Education (CAPE) schools showed growth along several different measures of student achievement. And when compared to other schools in Chicago serving comparable student populations, CAPE schools attained stronger standardized test score increases over time on the city's standardized test scores (Catterall & Waldorf, 1999)
.

The growing recognition of a link between arts learning and achievement creates an emergent, critical question for research, one that presses beyond questions of ***whether*** the arts impact student learning and moves into deeper explorations of ***how*** the arts might facilitate student growth. *If learning with and through the arts is correlated with higher achievement and other*

[1] Thanks go to James S. Catterall, Professor of Education at UCLA, who also assisted in the design and interpretation of this research.

interpretation, investigators did not find statistical differences between non-arts or arts units in growth in students' analytic interpretations. However, a clear qualitative difference in the arts unit samples versus the non-arts samples emerged. At all three points on the achievement spectrum, post-arts writing samples offered more developed analyses of the importance of the subject matter. In non-arts units, when students did offer analytic interpretations of why the subject matter was important, they most often provided explanations that focused on extrinsic fact accumulation-oriented purposes, as the examples below show:

> *Because if you learn about the early explorers, we can grow up to be explorers. And we learn about our history. (3rd)*
>
> *It is important because kids need to know about the solar system because we would never learn about the solar system. (4th)*
>
> *I think research might be important because in situations you might have to look for history, records, or files on a certain thing, which is research. (8th)*

In contrast, the tenor of students' analytic assessments was quite different after arts units. Following their final events, students were more likely to provide statements making causal links between the subject matter and society in general or their own lives in particular. Their assessments of the subject matter went beyond the practical, moving into realms that could affect their actions and values in positive ways:

> *I think that this subject is important. If a person does not know that a tree gives you oxygen, they may cut down trees more than they have to. (4th)*
>
> *Narrative writing might be important to maybe learn more of your inner self, to help you express yourself and to help you understand what you are writing and doing. (6th)*
>
> *Romeo and Juliet was important to learn because they taught many people who have read this book that if you love someone, nothing should stop you. And you shouldn't be so judgmental about different races or different people. You should respect all people the same way. (9th)*

This qualitative difference was most prominent in the analytic assessment paragraphs, but the investigators had noted such commentary in the other domains as well. To gauge the extent to which the writing samples taken as a whole might demonstrate stronger analytic assessment growth, scorers rated the writing samples holistically for this quality, incorporating all three paragraphs. This analysis demonstrated a statistically significant increase in the frequency of analytic assessments after their arts units compared to their non-arts units. In non-arts units, only 37% of students' responses offered any kind of analytic interpretation of the subject matter's importance. Most of the time students simply repeated content that they had learned. After arts units, however, 61% of the students offered their analyses of why what they studied was important. These differences were consistent through all achievement groups, as Table 3 demonstrates.

Table 2:
Percentage of Student Writing Responses Reflecting Analytic Interpretations of the Importance of the Subject Studied, By Type of Unit and By Student General Achievement Level.

Student Achievement Level	Non-Arts Units	Arts Units	Percent Difference
Highest achievement*	44%	78%	78%
Medium achievement*	44%	72%	66%
Lower achievement*	33%	56%	70%
Average	37%	61%	71%**

* As identified by teachers when asked to select students who represented a range of competencies as traditionally measured in academic subjects
** Statistically significant difference at $\leq .01$, one-tailed t-test.

Students at the lower end of the traditional achievement range offered fewer analytic interpretations across the board than their counterparts, but the rate at which the arts units fostered their analytic assessments was slightly *higher* than students at the middle areas of the achievement spectrum. Indeed, arts have been found in national samples of students to be associated with a smaller achievement gap (Catterall, Chapleau, & Iwanaga, 1999). Facilitating students' analytic interpretations is perhaps one way in which arts may help foster increased student achievement.

Evidence from Students' Writing: Affective Connections to their Learning

To assess students' growth in affective connections, investigators examined whether the writing samples in this domain shared personal experiences, feelings, or narratives that students associated with the area of study. This domain evidenced the largest differences in overall gains between arts and non-arts units, though the differences did not reach statistical significance. Statistical non-significance was perhaps due to sample size, or perhaps because students in the middle ranges of performance on formal academic achievement measures posted slightly higher affective scores in their non-arts units, suppressing the overall strong effects in the other two student groups.

In particular, students at the low end of the spectrum expressed markedly more explicit connections with the subject matter after studying their arts units than their non-arts units. In both arts and non-arts units, they articulated very general sentiments in their pre-writing about the subject matter they were to study. However, their expressions about their learning after the arts units demonstrated more positive associations, while post-non-arts samples often noted discouragement.

This seventh grade student's writing samples offer a clear illustration of the various kinds of differences the investigators found apparent across the sample. The student had been selected as one of those in the class challenged by formal academic achievement measures. The non-arts unit was a study of the American Revolution; the arts unit was a study of the Mexican-American War. In the pre-writing samples for both units, this student indicated an interest in learning more and situated his expectations within the topic to be studied: the wars were "important" and the introductions made some "sense" to him. As would be expected from pre-writing samples from units so similar in nature, little substantive difference between the two exists, with the exception of slightly more detail in the writing about the American Revolution, a much more common topic, and one the student likely had much more familiarity with.

arts to enrich their learning. The investigators found three clear, almost universal themes when comparing students' discussions about learning in general, learning in non-arts units, and learning in arts units.

Improved Learning Environments: Students' learning in arts-integrated units offered them methodologies and class climates that liberated their learning from traditional boundaries and inhibitions. These learning experiences translated into students' assessment of their learning as deep understanding, as opposed to simply remembering information for tests.

Engaged Content: The arts work they participated in transformed their experiences of the academic content mastery from one of disliked difficulty to one of constructive challenge, potentially indicating arts integration as a mechanism for retention of students' engagement in the learning process.

Broadened Learning Communities: Arts-integrated units broadened students' experiences of learning, extending the boundaries for learning well beyond the traditional classroom.

Improving Learning Environments by Liberating Learning Approaches

What is "Fun?" From Entertainment to Engaged Learning

During the investigators' years in arts evaluation work in Chicago, students routinely have spoken about arts learning as "fun." The study sought to parse out what students might mean by "fun" by probing their enjoyable experiences in arts units and in learning in other contexts. In response to questions about what makes learning fun, students have a great deal to say. Across all grades, groups, and learning experiences, they emphasized that they like learning; learning makes them feel good. The similarities, however, stopped there. Students provided drastically different examples of the "fun" of learning depending on which experiences they recalled.

"FUN" AS THE TEACHER'S EFFORTS TO ENTERTAIN: GENERAL ASSESSMENTS OF LEARNING

In their first set of interviews, students spoke about what made learning enjoyable in general. A handful of students noted different favorite subjects, but most students talked about their teacher's approaches. Many students spoke of teachers' personalities or efforts to make learning fun for students, as this eight grader noted:

> *It's the way that the teachers put it. Some teachers put it boring, and some teachers put it more fun and interesting. Like instead of just reading out of a book, they tell more and just help you learn about things. It makes it more fun when the teacher puts more energy into it.*

Students appreciated teachers who told jokes, sang songs, and generally made them relaxed in their learning. Throughout these interviews, students' sense of the "fun" of learning was heavily dependent on the teacher.