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Learning Through the Arts™

*Expansion Study:
Start-up Report*



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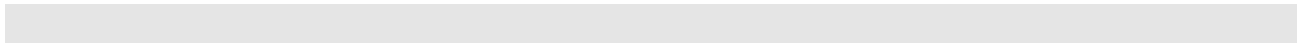
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Context

In July, 1999, the authors were contracted to conduct a three-year National Assessment on the Learning Through the Arts™ program. The six sites were Vancouver, Calgary, Regina, Windsor, Cape Breton, and Corner Brook. The National Assessment was designed to address the following major research questions:

1. Do the students involved in LTTA schools take more interest in learning in general, and in the arts in particular, than do students in other types of schools (control schools)? Does the performance by LTTA students on standardized tests in Language Arts and Mathematics improve over time in contrast to the performance of the students in control schools? Once the effects of socio-economic status are taken into account, what other factors affect interests and achievement?
2. Do the teachers who take part in the LTTA schools become more involved in the arts, and value the arts in more ways, than teachers in other schools, as indicated by reported changes in their personal lives and classroom practices?
3. Do the principals and superintendents of the participating LTTA schools allocate more human and financial resources to the arts, and make changes to the school environment, as a result of the LTTA program?

Two years later, the authors were again contracted to conduct research on Learning Through the Arts™. This time, the research was to involve six new sites (herein referred to as the expansion sites). The expansion sites are Winnipeg, Thunder Bay, Niagara, Ottawa, Montreal, and the Institute of Child Study in Toronto. The research questions outlined above remain for the expansion sites. However, there are several additional issues being addressed through the Expansion Study. These include:

1. The development of French-normed instruments for CAT•3 tests and French-normed criterion referenced rubrics for the constructed responses in both Language Arts and Mathematics.
2. The development of data collection instruments for Kindergarten students.
3. The triangulation of research results from the National Assessment with the research results in the expansion sites.
4. The triangulation of achievement measures (CAT•3 results and criterion referenced scores) used in the National Assessment with the achievement measures used by the Education Quality and Accountability Office in Ontario.
5. An increased sample size upon which to base findings and conclusions (the samples from the two studies will be combined wherever possible for the final report).

This report describes the start-up of the expansion sites which are currently in Year 1 (2001–2002) of the three-year Expansion Study.

Related Literature

Arts Education in the Schools

Despite the demonstrated importance of the arts (Dewey, 1934; Eisner, 1994; Gardner, 1973, 1983), arts education is not a cornerstone in many Canadian schools, and, indeed, in some schools virtually no arts instruction takes place. While some provinces, like Saskatchewan, have strong arts programs (Bartel, Dolloff, & Shand, 1999; Bush & Browne, 1999), many provinces have severely cut or limited their arts instruction and funding. In recognition of the importance of the arts, and in response to the declining support for arts programs in schools, some public schools have become specialised arts schools with staff and students selected for their arts interests and experiences. Although there are benefits to students in such specialised arts schools, other models are more feasible for system-wide implementation in public schools, where there are few, if any, arts specialists. Further, as Pitman (1998) explains, “setting up elite arts schools for those who see their future employment in the arts...does not address the main concern—that every child must be brought to a level of arts literacy that will make life joyful and productive” (p.60).

Recently, several models have been developed to increase the level of arts literacy in public schools across the country (Vagianos, 1999), but empirical research assessing such models is scarce. The research described here lays the groundwork for assessing one such model, *Learning Through the Arts™* (LTTA). In the *Learning Through the Arts™* model (Wilkinson, 1996, 1998), professional artists work directly with students after developing curricula with the teachers. Artists, teachers, and students participate in three 6-week units of integrated curricula per year (for a full description of the program, see Elster & Bell, 1999). The value of integrating the arts across the curriculum as a strategy towards holistic learning is in keeping with the work of Drake (1992) and Miller (1990), who claim that integrated holistic ways of approaching school learning lead to less fragmentation for both students and teachers, and can serve as a vehicle for social change.

Arts Education and Research from 1950 to the present

In the years between 1950 and 1980, arts education proceeded under the mantle of the aesthetic education movement (Reimer, 1970). Theoretical accounts of arts education emphasised three domains: productive, historical and critical. Many curriculum development projects were launched, and large scale implementation initiatives were begun. An interesting belief that was held during this time period was that teachers needed curriculum to be developed for them, which came to be known as “teacher-proof curriculum.” Although this was the strongest movement, other movements did exist and included such trends as the arts and culture, arts and leisure, and arts and healing. Working from the aesthetic education model, arts education was justified by solely aesthetic or intrinsic ends—art for art’s sake—and not, for example, to enhance self-esteem or improve reading skills. To conduct research on the non-arts effects of arts education was “out of vogue at best, out of touch at worst” (Cutietta, Hamann, & Walker, 1995, p. 5). Consequently, little research on the non-arts outcomes of arts education took place in North America in those decades.

In the early 1970s, Eisner (1974) began calling for the evaluation of the educational impact of arts programs. He suggested that special arts programs in schools should be evaluated “because it is important to know what educational impact arts initiatives have, and...when public money funds programs, there is an obligation to determine...whether the programs are effective” (p. 21). Consequently, in the following decades many arts programs were evaluated, and there is now a growing body of evidence showing that arts education affects other aspects of life and learning beyond the value of the arts experiences themselves. In the early 1980s the aesthetic education movement grew into a discipline-based movement in which a fourth domain was added: the philosophical domain. With this movement came an emphasis on the roles of specialists: artists, historians, critics and philosophers. Teachers were now viewed as autonomous individuals and curriculum developers who were capable of developing the most appropriate curriculum for their students. Therefore, the implementation of this change emphasised the professional development of teachers.

The discipline-based arts education movement was prevalent throughout the 1980s and 1990s. During this time period, numerous researchers have studied arts education from a variety of stakeholders' perspectives. In regard to student achievement and interests, a number of important studies took place. Reported benefits of arts education include the development of the imagination (Greene, 1995), the elevation of students' intrinsic motivation to learn (Csikszentmihalyi, 1997), the improvement of children's spatial reasoning abilities (Rauscher, Shaw, Levine, Wright, Dennis, & Newcomb, 1997), and the development of higher levels of self-esteem (Sylwester, 1998). Recent American studies report increased academic achievement for students involved in the arts (Catterall, 1998; Catterall, Chapleau, & Iwanaga, 1999; Hamblen, 1993; Luftig, 1994; Moore & Caldwell, 1993; Murfee, 1995; Music in World Cultures, 1996; Welch & Greene, 1995). However, as Eisner points out, "although there is much material published that claims the arts cause academic achievement scores to increase...it is often difficult to know the basis upon which the claims are made" (1998, p. 8). Indeed, Winner and Hetland (2000) conducted an extensive analysis of the body of research that purports a positive relationship between the arts and academic achievement and concluded that claims are being made that are, by and large, based on unsubstantiated research findings. They stress the need for more rigorously designed, theory-driven, quasi-experimental research with appropriate comparison groups, and also encourage researchers to investigate how school environments, rich in the arts, impact students' motivation, engagement, and understanding. Although Winner and Hetland warn against justifying the arts solely by non-arts outcomes, they argue that there is a clear need for more rigorous research that addresses the link between the arts and academic achievement as this type of research has important implications for education and cognitive science. It is, of course, exceedingly difficult to establish cause and effect relationships between arts education and achievement in other subject areas because it is hard to isolate the effects of the arts curriculum from the other variables that affect learning.

Positive attitudinal changes have also been claimed for students involved in arts-rich programs. Elster & Bell (1999) have identified time, scheduling, teacher resistance, organisational structures, and government cutbacks as the main obstacles facing teachers and administrators in regards to attitudinal change. However, many of these factors are diminished in schools that are rich in the arts, schools that Pitman (1998) describes as alive with relevance and excitement. Several research studies document positive effects of arts education on creativity, dropout rates, self-esteem, social skills, and attitudes toward learning and school attendance (Catterall, 1998; Catterall et al., 1999; Hamblen, 1993; Luftig, 1994; Moore & Caldwell, 1993; Murfee, 1995; Sylwester, 1998; Welch & Greene, 1995).

The report by Catterall, Chapleau, and Iwanaga (1999) cited in the Champions of Change initiative of the U.S. Secretary of Education, addresses the important issue of socioeconomic status. The researchers analysed differences in achievement and attitude for 25,000 students over a ten-year period, treating students who were disadvantaged in terms of socioeconomic status as a separate group. For all students, but particularly for those in the low SES group, academic performance, attitudes and behaviour were all positively affected by high arts involvement. For example, for low SES students, 43.8% of students highly involved in the arts scored in the top 2 quartiles in Reading, compared to 28.6% for students with little or no arts engagement. When the entire student sample was considered, 70.9% of students with high arts engagement scored in the top 2 quartiles in Reading, compared to 46.3% of the students with low arts engagement. Catterall et al. also found that the probability of being highly involved in the arts is twice as high for economically advantaged students.

The LTTA research (both the National Assessment and the Expansion Study) complements and extends the work of Catterall et al. (1999) in two important ways. First, the use of control schools that include schools with a special initiative (usually a technology focus) and schools without a specific school-wide curriculum focus, allows researchers to make comparisons not only within LTTA schools, but between LTTA schools and other types of schools. Second, like Catterall et al. (1999), LTTA researchers account for SES using both lower and higher SES groups. As a result, further evidence of connections between arts education and achievement as related to SES may be determined. More important, however, is that the design allows researchers to demonstrate that changes in attitudes, beliefs, and practices in the arts that occur as a result of the LTTA program *do not come at the expense of academic achievement in language arts and mathematics.*

Teacher transformation is another expected outcome of the LTTA program, as one of the foci of the program is that of professional development for teachers. In an earlier study, using a different model for enhancing arts education in elementary schools, Uptis, Smithrim, and Soren (1999) concluded that profound changes to teachers' practices and beliefs arose when teachers worked directly with artists and experienced the artistic process while making their own art, and that lasting and profound changes occurred for a proportion of participants (20%) after two years of professional development. Data were analysed using a three-level matrix developed by Uptis, Smithrim, and Soren (1999) to assess and describe teacher transformation. The first level of the matrix identified conditions that were necessary, but not sufficient, for teacher transformation (e.g., exploration of new art forms and media). The second level identified the potential for sustained transformation (e.g., changing images of artists). The third level identified ways in which profound changes were operationalised (e.g., long-term pursuits of new art forms).

A bibliography of related references appears later in the report.

Research Sites and Team: Expansion

The *Learning Through the Arts*TM expansion sites are Winnipeg, Thunder Bay, Niagara, Ottawa, Montreal, and the Institute of Child Study (ICS) in Toronto. With the exception of the ICS, which is a self-contained site, there are 6 to 18 schools at each site, including both the LTTA schools and the two types of control schools in each site. Over the course of the three years of the study (2001–2004), close to 4,000 students will take part in the research. All of the 964 teachers and principals of the 51 schools (31 are LTTA schools, 11 special initiative schools, and 9 regular schools) will also be invited to participate in the LTTA research.

The research team includes the two Principal Co-Investigators, Drs. Rena Upitis and Katharine Smithrim, along with research coordinators at each site, and a number of graduate students and staff at Queen's University. Drs. Upitis and Smithrim are also the Principal Co-Investigators for the National Assessment (1999-2002). It is expected that some of the other contributors to the National Assessment will also make contributions to the Expansion Study.

The research conducted and reported by the team is primarily supported by funding raised by The Royal Conservatory of Music. The Millennium Bureau of Canada, the George Cedric Metcalf Foundation, and the Canadian Pacific Charitable Foundation are the major supporters of the research. The research has been further supported by Queen's University and by granting agencies such as the Social Sciences and Humanities Research Council of Canada (SSHRC).¹ It is these additional funding sources that enable graduate students to take part in the research, and that enable researchers to share findings at conferences and through academic and professional journals. In addition, SSHRC funding enables researchers to ask related research questions beyond the immediate scope of the LTTA national assessment, and to compare the LTTA model with other approaches to professional development through the arts.

¹ For a full list of sponsors, please refer to the Acknowledgments section at the end of the report.

Methodology

Ethical Approval

Ethical approval to conduct the research was received from Queen's University and from each of the participating school boards and districts as required. In all cases, parent consent forms were distributed to all of the children taking part in the research. These forms were prepared in English and in French, and were distributed according to the language most frequently spoken at home.

Selection of Schools

Research coordinators at each of the six new sites were identified in the Spring of 2001. One of their first tasks was to identify the control schools for each site except the ICS. Two types of control schools were required: (a) the Special Initiative schools, where a school-wide initiative, comparable in scope to LTTA, was in place (e.g., a school-wide focus on technology), and (b) the so-called "Regular" schools where no school-wide project had been identified. In all cases, research coordinators attempted to match the LTTA schools with the two types of control schools in terms of size of school, socio-economic make-up of students, and so on. Research coordinators were also responsible for determining the random sample of students.

Development of Instruments

Several instruments are being used to address the research questions. Because of the scope of the assessment, a set of measures that can be analysed quantitatively has been developed for use at all sites. Many of the instruments to be used in the Expansion Study (2001–2004) were developed as part of the National Assessment (1999–2002).

In addition, qualitative measures will serve to enhance the quantitative findings by enabling the researchers to ascertain reasons for changes and growth in students, teachers, and administrators. The main qualitative tools will be semi-standardized interviews and focus groups. These will be used in the final year of the study (2003-2004).

Standardized Tests

The researchers involved in the National Assessment agreed to use the Canadian Achievement Tests (CAT•3) in Language Arts and Mathematics as the standardized measures for achievement in those subjects. It was determined that the most pertinent and informative language tests of the several possibilities were those that measured reading vocabulary and reading comprehension for students in Grades 3 through 6. It was further determined that a holistically scored writing sample would be used at each grade to assess writing development, and hence three indicators of language arts—reading vocabulary, reading comprehension, and writing development—would give a composite view of language abilities.

Similar decisions were made regarding the mathematics items for students in Grades 3 through 6 on the CAT•3 test: mathematics computation, concepts, and applications were selected to give a composite view of abilities in mathematics.

For students in Grades 1 and 2, two problem-solving constructed response tasks (criterion-referenced) for mathematics are used. For Grade 1, one task deals with manipulating mathematical figures and the other with money concepts and attention to detail.

The same instruments will be used in three of the sites of the Expansion Study, not only because they have been effective tools for the National Assessment, but because of the goal of merging the two research samples and triangulating results with EQAO assessments (see Context).

Surveys and Interviews

Most of the surveys/questionnaires were developed through the National Assessment (see Appendix). A number of the questions for the student, parent, and teacher surveys were incorporated from the public domain survey questions of the National Longitudinal Study on Children and Youth (NLSCY), allowing for further triangulation of the data. The student questions are designed around issues of attitudes toward schooling and the arts, out of school activities, and achievement. Teacher questions focus on beliefs and practices in terms of arts education and education more generally. Administrator questions involve resource allocation (personal and fiscal) and beliefs and practices. Parents are surveyed regarding such issues as household income, mother's education level, first language, leisure activities, and the importance of the arts.

Sampling

The Expansion Study involves the random selection of close to 4,000 students and their parents. All 31 of the LTTA principals, in addition to another 20 principals in the control schools, and all 468 LTTA teachers, in addition to 360 teachers in control schools, are sampled. One administrator at each board or district is also invited to contribute to the research.

It was indicated earlier that the students representing the two control conditions (Special Initiative and Regular schools) are selected from schools that are matched as closely as possible to the LTTA schools in other dimensions (e.g., SES, size of school). It will be verified that students from the three program types were similar in the measured variables at the beginning of the LTTA program once the Year 1 data is analysed.

Data Collection

Research for the LTTA Expansion Study will take place over the course of three school years; the first surveys and standardized tests were administered in the autumn of 2001 (see below). LTTA arts initiatives in each of the selected schools have a staggered entry by grade, and data collection will mirror the program entry. That is, if a school is beginning with their Kindergarten and Grade 3 students, as is the case in Winnipeg, then the students to be surveyed and tested that year will be those in Kindergarten and Grade 3.

Each student is issued an identification code containing information about the child's grade, type of school, sex, and other characteristics, allowing all measures taken over the course of the study to be coded and analysed by individual. Similar codes are developed for all other respondents.

Instruments are administered according to standardized protocols that accompany the instruments when they are sent to each site.

Testing Schedule

Students, teachers and administrators will be surveyed regularly from 2001–2004. The surveys pose questions about attitudes and practices of each group (see Appendix). Parents are surveyed at the time permission is requested for their child to participate in the research component of the project, and again at the conclusion of the project. The schedule for administering surveys, by site and grade, is indicated below. Generally speaking, students, parents, teachers, and administrators are requested to contribute to the data collection at the beginning of the LTTA program and again in the spring of 2004.

Students in all sites except Thunder Bay and Niagara will construct writing responses throughout the study by writing letters of appreciation according to a standardized prompt. These writing samples will be collected as indicated in the schedule below. Students in Grades 1 and 2, in all sites except Thunder Bay and Niagara, will complete two constructed response mathematics tasks from the CAT•3 battery of subtests. Students in Grades 3 through 6, in all sites except Thunder Bay and Niagara, will be completing the standardized CAT•3 core reading and mathematics subtests throughout the study. The schedule for test administration is appears below.

Writing samples from students in all grades are scored in Regina on an annual basis. Like the CAT•3 constructed response for mathematics, the writing samples are also criterion-referenced. Teachers indicate which students have special programs/accommodations in effect. Arrangements are made for data collection accordingly, and this information is coded along with other individual student information. In addition, students are asked to respond to a survey regarding their interests in such things as school, the arts, reading, sports, and computers. Focus groups, in Year 3, will also be conducted with the older students in each site. Parents respond to a similar survey to that of the students regarding family practices at the beginning and end of the study.

Teacher, principal, and school district surveys are administered regularly. Survey questions are designed to detect changes in practice and to determine relative allocations of human and financial resources to the arts. A limited number of teacher and principal semi-structured interviews for Year 3 (2003–2004) are also planned. Interviewees will be selected to represent the range of teacher and principal responses. These will take place in Year 3 of the assessment.

SURVEYS

	Fall Year 1	Fall Year 2	Spring Year 2	Fall Year 3	Spring Year 3
Students	first cohort ²	second cohort ³		all students	all students
Parents	first cohort	second cohort		third cohort ⁴	all parents
Teachers	all teachers		all teachers		all teachers
Principals	all principals	all principals			all principals
Superintendents	all superintendents				all superintendents

LANGUAGE AND MATHEMATICS ACHIEVEMENT AS APPLICABLE (see footnotes)

	Fall Year 1	Fall Year 2	Spring Year 3
K'garten	Clay observation scales ⁵	Clay observation scales (new cohort only)	
Grade 1	Math CR; writing sample ⁶	Math CR; writing sample (new cohort only)	
Grade 2	Math CR; writing sample	Math CR; writing sample (new cohort only)	Math CR; writing sample (all cohorts)
Grade 3	CAT•3; writing sample	CAT•3; writing sample (new cohort only)	CAT•3; writing sample (all cohorts)
Grade 4	CAT•3; writing sample	CAT•3; writing sample (new cohort only)	CAT•3; writing sample (all cohorts)
Grade 5	CAT•3; writing sample	CAT•3; writing sample (new cohort only)	CAT•3; writing sample (all cohorts)
Grade 6	no Grade 6 students	CAT•3; writing sample (new cohort only)	CAT•3; writing sample (all cohorts)

INTERVIEWS AND FOCUS GROUPS

Spring Year 3

² The first cohort for Winnipeg is students in Kindergarten and Grade 3; for Thunder Bay, Niagara, and Ottawa, students in Grades 1, 2, 4, and 5; for ICS, students in Kindergarten and Grade 1; and for Montreal, students in Cycle 1 (equivalent to Grades 1 and 2).

³ The second cohort for Winnipeg is students in Kindergarten, Grade 1, Grade 3, and Grade 4; for Thunder Bay, Niagara, Ottawa, students in Grades 1 through 6; for ICS, students in Kindergarten and Grades 1 and 2; and for Montreal, students in Cycles 1 and 2 (equivalent to Grades 1 through 4).

⁴ The third cohort for Winnipeg is students in Kindergarten through Grade 5; for Thunder Bay, Niagara, Ottawa, there is no new student cohort in Year 3 (all grades continue); for ICS, students in Kindergarten through Grade 3; and for Montreal, students in Cycles 1, 2, and 3 (equivalent to Grades 1 through 6).

⁵ In the case of Kindergarten students, the observational scales will be administered in the Spring of Years 1 and 2.

⁶ In the case of Grade 1 students, the testing will occur in the Spring of Years 1 and 2.

Grades 5 and 6	focus groups
Teachers	interviews
Principals	interviews
Superintendents	interviews
Site Coordinators	interviews

Data Analysis

Data will be collected from 2001–2004, and interim analyses will be reported in January, 2003, with a final report being issued in April, 2005.

The data collected allow for various individual and group comparisons to be made, although participants have been assured that none of the results will be reported by individual student, school, or region. CAT•3 test scores, writing scores, and student interests, as indicated by both the student and parent surveys, will be analysed by individual over time. Group comparisons will be made between those students in the LTTA model and those students in the two control conditions. For example, it is expected that CAT•3 test scores for LTTA students will increase as compared to students in schools without special initiatives in place, while it remains to be seen if the scores increase in a similar fashion in schools with special initiatives that are not related to the arts.

Student interviews will help determine some of the reasons for changes in test scores and interests. Growth or change in special segments of the population (e.g., all students with identified learning disabilities) will also be determined.

Teacher and principal surveys will be coded and analysed against the teacher transformation matrix developed in an earlier research project (Upitis, Smithrim, & Soren, 1999).

Communication of Results

Interim reports (of which this report is the first) will be prepared for the Royal Conservatory of Music for Years 1, 2, and 3, and made available in January 2002, and January 2003, with a final report to be submitted in April 2005.

In addition, the university researchers will prepare papers for refereed publications, based on conference presentations, and professional seminars and workshops. Graduate students will also be involved in research dissemination through their thesis and dissertation research, and as conference presenters and co-authors of research papers produced by the research team.

Broad dissemination of research results will be of critical importance to the research program. The researchers will address several groups of practitioners and policy makers including preservice teachers, members of arts organisations, experienced teachers who are interested in renewal through the arts, and policy makers who have yet to be convinced of both the importance and promise of arts education, for the intrinsic benefits it brings, for its influence on student and teacher attitudes toward learning, and for its influence on achievement in other subjects. Publications and presentations to the professional communities and to the public will occur through articles in professional journals, newsletters, on the Internet, and in the popular press and broadcast media.

This broad dissemination of research findings will allow researchers to convey the means, value, and spirit of this kind of curriculum infusion so that it may be widely adopted by schools and incorporated into teacher education programs. Like Grumet (1995), the authors hold the view that arts education needs to be more firmly embedded in teacher education, and it is through the type of research proposed here that changes to teacher education can ultimately be advanced, contributing to the improvement of the quality of education in Canada.

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