

Student Experiences in Art
Under Different Staffing Arrangements

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ABSTRACT

STUDENT EXPERIENCES IN ART UNDER DIFFERENT STAFFING ARRANGEMENTS

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The object of this study was to compare and evaluate student experiences in art under different staffing arrangements. This thesis describes both quantitative and qualitative investigations. Staff arrangements included art specialist, art consultant, and classroom teacher; either alone or in combination. Data was gathered from eleven grade five classes in four schools, during the school year of September, 1979 to June, 1980. - A quantitative experiment focused mainly on the evaluation of student's work. In pre and post tests, students were compared on their acquisition of art concepts, vocabulary, and skills, interest in art, and aesthetic appeal as apparent in their drawings and paintings. Panels of evaluators were used to assess these tests. A qualitative investigation focused on both the teachers' behaviour and the students' portfolios. Descriptions were based on the art consultant's observations, teachers' own responses to questionnaires, and evaluators' opinions of students' yearly portfolios. Results of both methods of research indicated that students whose art program was taught by an art specialist had a better art experience. The results of the study suggest that whenever possible, upper elementary school children should have their art program taught by a specialist.

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Over three hundred grade five students who made art all year.

Table of Contents

Abstract.....	1
Acknowledgements.....	2
Table of Contents.....	4
List of Tables.....	9
Chapter 1 <u>Introduction to the Research Problem</u>	11
Background to the Study.....	11
The Quebec Context.....	11
The Research Project.....	13
Objectives.....	13
What is "Good" Art Education?.....	14
Assessing Art Education.....	15
The Hypothesis.....	16
Assessment in this Study.....	16
Reasons for the Quantitative Research.....	17
Reasons for the Qualitative Research.....	18
Definitions of Staff Personnel.....	20
Chapter 2 <u>Review of the Literature</u>	22
The Canadian Scene.....	22
The Use of an Art Specialist - Advantages.....	23
Effectiveness of Other Elementary Specialists.....	25
Disadvantages of an Art Specialist.....	26
Summary on the Use of Specialists.....	28
Use of an Art Consultant - Advantages.....	28
Disadvantages of a Consultant.....	30
Summary on the Use of Consultants.....	31
New Roles for Specialized Art Personnel.....	31
Summary.....	32

Chapter 3	<u>A Quantative Experiment</u>	34
	Procedure.....	34
	Who did the Project Involve?.....	34
	The Groups.....	36
	Chronology of the Project.....	38
	What Was Done During the Project?.....	38
	The Curriculum:	
	What was Taught and Assessed?.....	39
	Art Curriculum.....	40
	The Collection of Data.....	41
	Analysis of Data.....	42
	Interpretation of Tables.....	43
	Results.....	45
	Interpretation of Results.....	45
Chapter 4	<u>A Qualitative Investigation</u>	48
	The Collection of Data.....	48
	The Students' Portfolios.....	48
	The Teachers' Questionnaires.....	49
	The Consultant's Diary.....	49
	The Consultant.....	50
	Her Background and Role.....	50*
	The Participating Teachers.....	51
	The Art Specialist - Background and Role..	51
	The Classroom Teachers.....	52
	Their Selection .	
	Their Progress Throughout the Project	

Résumé of Schools, Groups and Teachers.....	54
The Staffing Arrangements.....	54
The Descriptive Data.....	55
School A: Groups E1 and E2: Art Specialist....	55
A Description of the School Setting.....	55
Teachers Involved.....	56
Summary of the Teacher's Questionnaire....	57
Teacher Number 1 (Group E1)	
Teacher Number 2 (Group E2)	
Teacher Number 3 (Group E2)	
The Researcher's Diary.....	58
Teacher Number 1 (Group E1)	
Group E2: Teachers Number 2 and 3	
Teacher Number 2 (Group E2)	
Teacher Number 3 (Group E2)	
Evaluators' Comments on Students'	
Portfolios.....	65
Teacher Number 1 (Group E1)	
Teacher Number 2 (Group E2)	
Teacher Number 3 (Group E2)	
School B: Group E3: Generalist and Consultant.	68
A Description of the School Setting.....	68
Teachers Involved.....	68
Summary of The Teacher's Questionnaire....	69
Teacher Number 4 (Group E3)	
Teacher Number 5 (Group E3)	
Teacher Number 6 (Group E3)	

The Art Consultant's Diary..... 71

 Summary of Teachers 4, 5, and 6
 (Group E3)

 Evaluators' Comments on Students'

 Portfolios - Teachers 4, 5, and 6 (Group E3) .76

School C: Group E3: Generalist and Consultant. 77

 A Description of the School Setting..... 77

 Teachers Involved..... 77

 Summary of the Teacher's Questionnaire.... 78

 Teachers Number 7 and 8 (Group E3)

 The Art Consultant's Diary..... 79

 Teachers Number 7 and 8 (Group E3)

 Evaluators' Comments on Students'

 Portfolios - Teachers 7 and 8 (Group E3)..' 82

School D: Group C: Generalist Alone..... 83

 A Description of the School Setting..... 83

 Teachers Involved..... 84

 Summary of the Teacher's Questionnaire.... 84

 Teacher Number 9 (Group C)

 Teacher Number 10 (Group C)

 Teacher Number 11 (Group C)

 The Researcher's Diary..... 86

 Evaluators' Comments on Students'

 Portfolios - Teacher Number 9 (Group C)... 88

 Teachers Number 10 and 11 (Group C)

 Comparative Tables..... 89

List of Tables

All tables marked with * were formerly printed in The Effectiveness of an Art Specialist: A Comparison of Three Roles (Pycock & Wiebe, 1980). This report was published by the South Shore Protestant Regional School Board and submitted to the Minister of Education in Quebec who funded the project. These tables are printed with the permission of the school board.

Table No.	Page
1 Art Interest Inventory - Average Group Scores	44
2 Art Concepts Test - Average Group Scores.....	44
3 Drawing Tests - Average Group Scores.....	44
4 Painting Tests - Average Group Scores.....	44
5 Picture-Compositions - Average Group Scores.....	44
6 Schools, Groups, and Teachers.....	54
7 Twenty-five Art Lessons as Planned by the Art Specialist.....	61
8 Art Projects Done During the Year 1979-80 by Teacher Number 10.....	87
*9 Children's Portfolios - Average Number of Works per Class Group.....	89
*10 Summary of Judges' Ratings of Students' Portfolios...	90
*11 Summary of Judges' Remarks about Portfolios.....	92
12 Summary of Teachers' Responses to Questionnaires.....	94
*13 Criteria for Evaluating Drawings.....	135
*14 Criteria for Evaluating Paintings.....	136
*15 Criteria for Evaluating Picture-Compositions.....	137

	Page
*16 Scores Awarded by Judges in Painting Test, First and Second Judging.....	145
*17 Scores Awarded by Judges on Picture-Compositions, First and Second Judging.....	146
18 Agreement of Judges in Drawing Test Scores.....	147

Appendix D

This entire Appendix was taken from the Report to the Minister of Education, and so the tables retain their original roman numerals.

*VI Mean Raw Scores on Art Concepts Test.....	149
*VII Mean Total Raw Scores and Art Participating Scores, Art Interest Inventory.....	150
*VIII Mean Raw Scores on Drawing Test.....	151
*IX Mean Raw Scores on Painting Test.....	152
* X Mean Raw Scores on Picture-Compositions.....	154
*XI Frequency Distribution of Grade Equivalent Scores on CTBS Pre-Test.....	155
*XII Mean Grade Equivalent Scores, Canadian Test of Basic Skills.....	156
*XIV Pearson Correlation Coefficiencies Between Variables, Pre-Test Scores.....	157
*XV Pearson Correlation Coefficients Between Variables, Post-Test Scores.....	159
*XVI High and Low Academic Students in Experimental Groups	161
*XVII Mean Raw Scores on Art Concepts and Art Interest Inventory, Pre- and Post-Test, High and Low Achieving Students in Experimental Groups.....	163

Introduction to the Research Problem

This research describes a project in which student experiences in art under different staffing arrangements are compared and evaluated.

Background to the Study

As a trained and experienced art specialist as well as an elementary classroom teacher, I have observed that art activities were often used as modes of entertainment, rest breaks for the teachers, or as exercises in following verbal directions. My own personal interest lay in the fact that I felt art was sadly lacking from the schools where I had taught and where my own children attended. It seemed to me that generalist teachers were not providing a good art education. I was particularly concerned with children in the upper elementary grades, ages nine to eleven. This study focuses on that age group.

The Quebec Context

In 1978 and 1979 in Quebec, the Minister of Education declared the teaching of the arts in the elementary schools to be a priority. The Ministry wrote in its newest Plan of Action (1979) that the teaching of the arts had special requirements. It recommended that elementary school children should receive a total of two hours of instruction each week for the four arts; visual arts, music, dance, and drama, and "that the presence of specialized teachers in these subjects is justified in the second cycle (upper elementary)," (Government of Québec, 1979, p. 159). At present there are very

few art specialists or consultants, working at the elementary school level.

At that time, the Ministry of Education was developing provincial programs of study and guides for teaching art in the elementary and secondary schools. These guides were to deal with the teaching of techniques, materials, skills, vocabulary, and the history of art, as well as the fostering of creativity and the expression of feelings through visual images. Before attempting to implement a new arts program, the Ministry of Education wanted to confirm the necessity for art specialists and to see how they could be used most effectively. Because it is recognized that the person responsible for educating the child is an important factor to take into consideration, the government was interested in identifying the most effective type of teacher who could offer a quality art program. Funds were made available through school boards to support research and special projects in art education. It was in this context that the research project which is the subject of this thesis came into being.

Many school boards wanted to know what an art specialist could do that a generalist teacher could not. Why should they hire art specialists? They were looking for systematic comparisons, objective data, and concrete results, hoping to gather information for administrators who had to make decisions about the hiring and training of teachers.

The Research Project

Objectives

In order to address the above issues an experiment was set up. It began in September of 1979 and continued the length of the school year ending in June, 1980. A team of experts was assembled. It included the researcher who planned the experiment and acted as art specialist and art consultant. Jean Pycok, a representative of the South Shore school board, acted as consultant and administrator and made the link to the school board personnel involved. Dr. Mark Aulls of McGill University acted as educational research advisor and was in charge of the statistical analysis of data. Betty Jaques, professor of art education at McGill University, designed criteria on which to base evaluations of the children's drawings and paintings. Eight art educators refined the criteria and judged the children's work.

The project involved over three hundred grade five children and eleven teachers in four elementary schools. The plan was to compare the art experiences of these children who were grouped in different staffing arrangements for their art classes. The teaching staff included an art specialist, an art consultant, and several elementary generalists. The groups were closely matched in all ways except for the teacher. A large collection of children's work was gathered. The evaluation of the art experience was mainly based on an assessment of the quality and

quantity of this work. In addition, the teacher's attitude and performance were considered. From these an assessment was made about the quality of the art experience the child had.

What is "Good" Art Education?

In light of the task it was necessary to define "a good art education." What should children experience in an art program; pleasure, interest, acquisition of skills, an accumulation of techniques, new vocabulary, a knowledge of history, or free expression? Every writer and art educator has his or her own personal set of objectives for art education. In the Programme d'Etudes published in February, 1981, the Minister of Education in Quebec has defined some objectives. According to this document, a primary goal is that the child should be able to make and perceive his own personal images as part of his learning about himself and his environment. The teacher should help him or her acquire knowledge and skills to do this.

L'objectif global de l'enseignement des arts plastiques au primaire est de: Amener l'enfant à faire et à voir son image à chaque étape de son évaluation graphique pour acquérir une connaissance intuitive

(1) de lui-même et de son environnement (p.48).

C'est donc dans la mesure où l'enseignement fait appel à ses connaissances disciplinaires, à ses qualités de pédagogue, aux ressources du milieu en fonction

des besoins de l'enfant, qu'il crée un climat propice à l'apprentissage (p. 51).

Assessing Art Education

Although it is often difficult to measure the success of objectives in art education, efforts have been made to do so in recent years. Since 1974, measuring student achievement in art has been done in the United States by the National Assessment of Educational Progress (NAEP). The NAEP has evaluated data on the art achievement of over 100,000 children. This organization believes that art can and should be assessed. To quote from their literature about what they assess and why:

The assessment focused on four major areas: the value students place on their art, their capability to judge artworks, their knowledge about art, and their design and drawing skills.

The basic assumption is that knowledge and skill acquisition in art are integral to personal appreciation and fulfillment in the arts. The art teacher tries to attend to all aspects of the art experience. The teacher plans for and delivers specific information about art to the student. The student is expected to perform certain tasks, to practice certain techniques and to apply specific rules and knowledge.

NAEP Poster

Like Anway and Macdonald (1971) I also believe:

Research in art education is possible without reducing the creative process of producing art to a mechanical, routinized parody of spontaneous creativity. In a public system the techniques of teaching art can be systematic rather than haphazard and accidental, and the attainment of selected purposes in art education can be measured and researched without stifling the creative experience indigenous to art (p.1).

The Hypothesis

Many factors influence children's art experience - the physical environment, the materials available, the time allotted, the philosophy of the school, the parents, and the teachers, and the child's own attitude towards art. This research is primarily concerned with the teacher's role in the art experience. The hypothesis of this study is that by changing the role of the art teacher, the art experience of the child will change, and that this change can be described and evaluated. To what extent does the teacher's preparation in art have an effect on the child's experience in art? Should art be taught by the classroom teacher who knows the child best, or by a trained art specialist who knows the materials, techniques and concepts best?

Assessment in this Study

For this project it was decided to evaluate three aspects of children's art experience. The first was the value that students place on art, i.e. their own attitudes and

interest in participation. The second was on knowledge about art, i.e. its concepts and vocabulary; the third was skill in drawing and painting, two of the basic media specified in the Quebec program.

Evaluation of student experiences in art was done using both quantitative and qualitative methods of research. The above three aspects of children's art experience were evaluated quantitatively. Their attitudes were evaluated by means of a questionnaire. Their knowledge of art concepts and vocabulary was evaluated by means of a word and picture test. Their drawing and painting skills were evaluated by means of performance tests marked by a panel of evaluators using specified criteria. In addition, a qualitative assessment was done. Three evaluators gave their opinions about children's portfolios containing their total in-school art production for the year. Teachers were also evaluated on the basis of the consultant's observations, her written diary, and questionnaires.

Reasons for the Quantitative Research

There were several reasons why a quantitative experiment was done for this project. Because I am working in the public school system I am interested in possible improvements there. Numbers and statistics are a universal language of communication with administrators in the school board and government. I hoped that by dealing with large numbers of children (350) and eleven teachers in several different schools, a broad base of data could be collected. A budget

was made available to hire a consultant to do a computer analysis of the data. I also felt that I could get the cooperation of classroom teachers because they were accustomed to the structure of the experimental research format, such as a pre and post test situation. They understand its importance and necessity and are willing to participate without suspicion.

Reasons for Qualitative Research

In addition it was decided to do a concurrent study by means of a qualitative investigation. This would include a general description of the eleven art classes and the teachers' behaviour with regard to the art lessons. The description was based on personal observations and recordings by the art consultant, the participating teachers' responses to questionnaires, and three outside persons' subjective evaluations of the students' portfolios. Through the framework of the experimental study, several different art classrooms were chosen that differed on the basis of the art background of the teacher. Observations could also be made about the social situation in the school and the classroom and the interactions of individuals in the context of an art lesson. These observations might uncover other variables in the classroom which influenced the children's art experiences as much or more than the teacher. They could help answer questions about why children perform as they do.

Since this research was studying a complex situation with many variables, it required more than one method of research. Cook and Reichardt (1979) say it best:

There are at least three reasons that attacking evaluation problems with the most appropriate tools available will result in using a combination of qualitative and quantitative methods. First, evaluation research usually has multiple purposes which must be carried out under the most demanding of conditions. This variety of needs often requires a variety of methods. Second, when used together for the same purpose, the two method-types can build upon each other to offer insights that neither one alone could provide. And third, because all methods have biases, only by using multiple techniques can the researcher triangulate on the underlying truth. Since quantitative and qualitative methods often have different biases, each can be used to check on and learn from the other (p.21).

It was hoped that this multi-method approach to the problem would generate some worthwhile information about student and teacher experiences in an art class, and would give direction to some further questions for research on the subject.

Definition of Staff Personnel

For the purpose of this thesis a few definitions are necessary to clarify the different roles taken by various teachers and trained personnel in the public school system. These definitions refer to terms as used in this thesis only.

Classroom Teacher or Generalist Teacher

Generalist teachers are certified professionals who are responsible for most of the children's daily instruction in academic areas of the curriculum. They are not required to have specialized training in any one particular subject of the curriculum.

Art Specialist

Specialists are persons who teach art to classes of children on a regular basis. They are teachers trained in art (materials and techniques, aesthetics, language, history, etc.) with at least four years of post secondary education. In addition they have some training, usually four or five courses, in general education, psychology and methodology. The amount of art teaching done by the classroom teachers in this study who had assistance from specialists was minimal.

Art Consultant

The consultant in this study assisted the classroom teachers with their art lessons and preparations, and she occasionally taught demonstration lessons for students and teachers, but she did not teach classes on a regular basis. Consultants have at least the same training as art specialists,

but perform the jobs of advisor, supervisor, organizer, researcher, demonstrator, public relations person, general helper, and resource person regarding all matters of art education in a public school setting.

Art Educator

Art educators are those with at least the same basic training as art specialists but who are not currently teaching art to classes of school children. They may be working in a variety of jobs such as that of university professor, graduate student, community animator, gallery assistant, or parent.

Chapter 2

Review of Literature

Before describing the procedures of this research it would be helpful to review the literature concerned with the choice and use of specialized personnel in the teaching of elementary school art. There appears to be more literature describing how art specialists and art consultants could and should be used, rather than literature documenting whether or not they are effective. Very little has been written on this subject in the Canadian context. Most of the research has been done in the United States.

The Canadian Scene

The writer was unable to find any Canadian literature describing or evaluating children's experiences in art under different staffing arrangements, or any literature about the actual effectiveness of an art specialist. The recent publication by the Canadian Society for Education Through Art of Canadian Art Education in the 80's documents the decreasing use of art specialists and consultants in the elementary schools. In the large Montreal Catholic and Protestant school boards, art consultants that retire are not being replaced. In a time of restricted budgets and back-to-basics philosophy, art is being given a very low priority. The trend is to let elementary classroom teachers be responsible for their own art classes. The one exception is Alberta (1980) where the school population is increasing and the economic prosperity there provides money for specialized art personnel. In the other provinces, alter-

nate ways are being sought to bring art education to public school children. Nine of the ten provinces, all except British Columbia, have plans for art education curriculum guides which would be provided for classroom teachers. These plans also describe expanded efforts for more in-service training. It seems that the use of art specialists and art consultants in Canadian elementary schools is very limited and perhaps this helps explain why no research has been done to determine their effectiveness.

One study done in Alberta, that of Haughey, Holdaway, & Small (1977) indicates that the traditional consultant's activities are ineffective in today's schools because not enough teachers are interested or willing to use their help. This study suggests that teachers use consultants most during their first ten years of teaching. Thereafter, and as their own years of scholarship increase, teachers become less satisfied with consultants. Trends today show that over half of today's teachers have more than ten years of experience and more than five years of post-secondary education. This leaves a reduced number of teachers who might use consultants.

The Use of an Art Specialist - Advantages

In general, the literature states that it is desirable to have a specialist, but it does not give any evidence that it is really any better for the children.

Authors describe what specialists should and could do. Literature specifically about the proven effectiveness of an

art specialist is virtually nonexistent. Various reports state that only ten to thirty percent of American elementary schools have art specialists (Rockefeller, 1977).

The National Art Education Association (1972) has published two position papers describing the role and function of the elementary art specialist. They recommend that every child at elementary school should receive regular art instruction from an art specialist. Furthermore, there should be one specialist for every 350 to 400 children, or for every twenty classrooms. This instruction should be supplemented by the classroom teachers. The specialist should set the scene for aesthetic growth and creativity as well as provide practical knowledge and advice about skills. "It is only a well-trained and qualified art teacher who can bring the most out of every child through a creative and aesthetic experience" (p.112). Cohen and Gainer (1976) state the same view.

Several writers agree that much more art background is needed by the person who teaches art at the upper elementary school. (Lowenfeld, 1970; Schultz, 1965). Lowenfeld writes that children up to the age of eight will all draw in a similar way almost by intuition. After that age they need training and instruction or their drawing will come to a stalemate. Studies show much similarity between children of ages nine to twelve and adults with no training. A lack of skills becomes a drawback to creative expression. Eisner (1972) agrees with this. Lowenfeld also says that the art product assumes greater importance for the upper elementary school child, who enjoys

experimenting with new processes and needs an extra challenge beyond exploring with the materials. He says that it is through the use of art materials that expression evolves and the artist/child must develop the skills and techniques necessary to communicate.

Davis and Torrance (1965) compared the values of art specialists with those of educators in general. Art specialists favoured independence in thinking, curiosity, adventure, intellectual courage, humour and beauty, more than the others. The study concluded that the values of art educators were more favourable to the development of the creative personality than were the values of other educators.

Many writers agree that the art specialist should perform two main duties, teaching and consulting (Anderson, 1969; Forrest, 1977; Keel, 1964; McPhee, 1964; Saunders, 1964; Sawyer & deFrancesco, 1971). Some felt that specialists should also provide in-service training.

McPhee (1964) describes a practical way of being able to afford art specialists. Within each school, each teacher could be well-trained as an elementary generalist plus one area of specialization, i.e. art, music, science, etc. Teachers would teach their own specialty in several classes, and in addition assist other teachers with the subject.

The Effectiveness of Other Elementary Specialists

Art, music, and physical education are the three subjects in elementary schools where specialists are often hired. Due to lack of research about art specialists, studies in student

achievement with the other specialists, namely music, may be relevant to what might be effective in art.

Hermann (1962) studied different staffing arrangements in teaching music to determine the best way to foster children's sight reading ability. In the classes where specialists taught grades four to six, the children excelled.

Circle (1971) studied the musical achievement under classroom teachers alone, specialists alone, and classroom teachers along with specialists. The best results occurred where children were taught by classroom teachers and specialists together. Both of these studies (Circle, 1971; Hermann, 1962) indicate that a specialist is more effective than a classroom teacher in teaching skills.

Flanders (1972) writes, "There is no substitute for knowledge of what is being taught." (p.81) Sometimes flexible teachers with good social skills can help their classes to have a good learning experience, but they can never match the achievement of those classes whose teachers are both socially skillful and well-qualified.

The Disadvantages of an Art Specialist

Forrest (1977) and Sawyer & deFrancesco (1971) report several disadvantages of art specialists. Where specialists are teaching, the classroom teacher is less involved with art. Classroom teachers feel that an effective art program depends on the input of a specialist, and that their own input is negligible. Art becomes an isolated activity independent of other academic areas. However, classroom teachers feel more

comfortable teaching art than either music or physical education. This study also indicates that art teachers would be the last of the specialists to be hired.

Barkan (1965), Engel (1976), and Schultz (1965) write that teaching the arts requires a double specialty which most art specialists are insufficiently prepared for. Teaching the arts requires full professional skills as a practicing artist as well as knowledge of pedagogy. Most art specialists are not good enough. Barkan also says that most specialists are ineffective because they are required to be itinerant teaching-consulting-specialists and they are overloaded with too many schools and children to visit.

Another set-back for the hiring of art specialists was the philosophy of Victor Lowenfeld, who had a major influence on art education from 1945 to 1965. He insisted that art must meet the needs of the individual through creative and mental growth. Children's drawings were viewed as representing stages of natural evolution. Because the child's development was natural or instinctive, the teacher should not interfere or attempt to change the child's performance. The teacher's role was to provide materials and stimulation, and allow the child to proceed at his own rate and in his own way. Many art educators of the past two decades agree with Lowenfeld, (Eisner, 1972; Feldman, 1970; Taylor, 1977). Many teachers and administrators interpreted the philosophy of these writers to mean that art should be taught by the classroom teacher who knew the children best.

Summary on the Use of Specialists

In reviewing the research on the use of art specialists, there is some evidence that they, acting alone, or in cooperation with classroom teachers might be effective in teaching art concepts and art skills to upper elementary school children. The lack of specialists in today's schools can be attributed to several reasons; budget restrictions, preferences of administrators for other subject areas, some disadvantages to students because specialists do not integrate art into the curriculum, and a strong belief by disciples of Lowenfeld that the process of art was much more important than the art product or the learning of art skills.

The Use of an Art Consultant - Advantages

The National Art Education Association published two position papers on the role of the art consultant or supervisor (1972). They described them as agents for change who were concerned with tasks that involved people, concepts, and skills. They recommended that less time should be spent developing new curriculums. More time should be spent helping staff members clarify their role in teaching art, especially in new situations such as beginning teachers, open classrooms, correlating art to other subjects, and getting involved with the community.

In a paper on the Middle/Junior high school, the National Art Education Association called the role and title of supervisor unpopular because it was reminiscent of authoritarian control. Today's replacements are called specialist-consultants and are useful as resource persons. They are most effective

when they provide in-service training, supplying more background for the new teacher and a fresh outlook for the older one. They must indeed be a "friend" to the teacher (p.79). The description of the supervisor's role is incredibly idealistic - a super-hero, who is strong, humble, active, brilliant, counsellor, leader, prophet, economist, fairy-godmother and artist!

McPhee (1964) describes one of the consultant's regular jobs as curriculum planning and supervision. This was popular in the 1940's and 1950's. The days of rigidly imposed curriculums waned in the 1960's and 1970's in favour of more freedom of expression and individual approaches. With the back-to-basics trend and the return of formal curriculum guides, perhaps the consultant-supervisor role might be revived.

Forrest (1977) studied role behaviours of classroom teachers in two different staffing arrangements for art, music, and physical education. The emphasis was on how the classroom teacher worked with the specialist or consultant towards an effective art program. Her conclusions were that classroom teachers using consultants were more involved in art programs than classroom teachers using specialists. The former had to be responsible for the art program and they needed and used the consultant to help them do a good job.

Anway & MacDonald (1971) concluded that an art consultant was definitely effective in implementing a good art education. This study evaluated three modes of instruction for kindergarten students. The three modes; art charts,

art consultants, and in-service training, were used in all possible combinations ranging from the use of all three modes to a spontaneous unstructured situation using none of them. The highest artistic level occurred when all three interventions were used. The effect of the art consultant was statistically significant. Three of the best four combinations had art consultants. Three of the poorest did not have consultants. The study also found that the experimental program had less effect for lower socio-economic schools. This suggested that other approaches might be needed in low socio-economic schools.

McPhee (1964) says that the use of consultants in the upper elementary grades has been effective if they know enough about the children to allow for individual differences, and if they work with the classroom teacher who builds on the art skills to prepare self-directed and integrated art lessons. Sawyer & deFrancesco (1971) say the same thing but add that if consultants have too many schools to visit, they do not have enough time for individual work with classroom teachers or for in-service training.

Disadvantages of a Consultant

Gaitskill & Hurwitz (1970) describe a flexible school system where the classroom teacher accepts the main responsibility for the art lessons and calls upon the consultant for special needs. This is good in theory but not in practice. In one case, teachers who do not place a high value on art never call the consultant, or else they ask for a special lesson so that they can have a free period. In another case,

the good art teacher calls the consultant to share her own art experience or boost her own ego. Where the consultant's role is scheduled and imposed, the classroom teachers tend to take little interest in art and leave the planning of the program entirely to the expert. In all of these cases, the consultant is not very effective.

Hollinger (1978) reports that consultation is difficult and depends upon establishment of good relationships and meeting needs with individual solutions. She viewed the process of consultation as a learning process for both sides. During the two years of this study, a minimum success was observed. Results of this kind make the hiring of an art consultant seem a risky business.

Summary on the Use of Consultants

In reviewing the literature on the use and effectiveness of art consultants, the response is both positive and negative. The consultant is good in theory but somewhat weak in practice. From the point of view of an administrator with a restricted budget, there is insufficient evidence that an art consultant would be an effective addition to the teaching-learning experience.

New Roles for Specialized Art Personnel

Since the review of literature indicates that art specialists are too expensive and art consultants are rarely effective, one is led to look for alternate ways of bringing art to children. New roles must be developed for specialized art personnel. One current new idea, that of a "resource

person" is being pursued in the Catholic schools of Montreal.

The Rockefeller Report (1979) states, "There is considerable evidence to suggest a serious leadership gap in arts education and a failure to deliver good programs even to the willing learner." (p.253). They then recommend a new type of consultant, an arts education leader. This new breed of professional should connect the arts to the general system of education, schools and other institutions in the community. This person should be a good manager with an ability to mobilize the talents of others, to stimulate human relations, and to arouse political action.

Summary

One can conclude very little from this review of literature except that more positive comments are made about art specialists than about art consultants, yet more art consultants are hired in elementary schools. Since budgets are unlikely to ever provide funds to put specialists in every school, the public school systems tend to hire consultants as a token effort to improve art education. One consultant can serve a much larger population than one specialist. Administrators will probably continue to rely largely on classroom teachers to teach elementary art.

It is also clear from the literature that art educators are unhappy with this situation and are looking for new ways to use trained art personnel to help children have a better art experience. One possible approach is to convince parents and administrators by means of solid evidence that art specialists

and/or art consultants are a valuable asset in the schools.
This research attempts to provide some of that evidence.

Chapter 3

A Quantitative ExperimentProcedureWho did the Project Involve?

Approximately 300 children participated in this research project. They were lower middle class grade five students. Eleven classes were selected from four different elementary schools. All were attending schools under the jurisdiction of the South Shore Protestant Regional School Board in suburbs of Montreal.

The children were exposed to four different staffing arrangements for their art classes. They had their weekly art lessons from:

- Group E1 * -their regular classroom teacher who was also an art specialist.
- Group E2 -an art specialist who was a staff member in the school.
- Group E3 - their regular classroom teacher who had access to the services of an art consultant for one full day each week.
- Group C -their regular classroom teacher without any help or intervention from the project personnel.

*The coding of these groups is the same as in the data tables, results and appendixes.

The art specialist and the art consultant for Groups E1, E2 and E3 was the same person. This could be considered a weakness in the research design because there could be a preference for

one role, and efforts could be made, either consciously or unconsciously, to influence the results. However it could, also be considered to be an advantage because there would be no major philosophical difference in the approach to teaching art and all the children would have access to the same resources. To quote Mark Aulls:

Because she is the same person in terms of knowledge and skill as an art teacher, she acted as her own design control. This assured that what would vary in the instruction was the realistic constraints placed on the instructional opportunities provided by an art specialist acting as a regular teacher of a group of children, by an art specialist regularly working with multiple groups of children in another teacher's class, and a consultant working mostly with teachers on how to do art instruction and occasionally teaching in a teacher's classroom. This is both a clever and well-documented research procedure to cancel variance due to the individual teacher's effect. And it is realistic to assume these different professional roles place differential constraints on how likely children are to benefit from the type of professional services provided in art to a school system.

Letter, June 1982.

It was not logistically difficult for one person to work in all these different roles. The way this was accomplished was as follows. Four days each week the art educator taught her own grade five class all the general subjects including art (Group E1).

In addition she taught art to two other classes in the same school during the time that her own class was in the gym (Group E2). One day of the week, Wednesday, another teacher took over her classroom while she acted as an art consultant to five other teachers in two different schools (Group E3).

The art educator who acted as classroom teacher, art specialist, and art consultant was also the researcher and the author of this thesis. In order to avoid bias in the evaluation, the criteria for marking art products were designed by an outside expert, and the criteria were presented only after all the post tests were finished and collected.

The fourth group (C) was a control group made up of three regular classroom teachers in another school who carried on their regular art lessons without any assistance or intervention from the art educator.

The Groups

Special efforts were made to have the four groups as similar as possible in all ways except for the art teacher.

1. All children had similar socio-economic backgrounds.
2. All class sizes varied from 25 to 29 students.
3. None of the teachers were beginners. All the classroom teachers involved had from four to seventeen years of experience teaching elementary school.
4. None of the classes had the use of a separate art room.
5. None of the classrooms had built-in sinks or running water.

6. All teachers had a budget of approximately \$100. to purchase art supplies for the year.
7. All classes were subject to the Quebec government regulation that children in Cycle II English language schools should receive forty minutes of art each week.
8. The children were matched by academic scores on standard achievement tests in spelling, mathematics and composite language arts. Each group's mean score was almost the same. Hence we were looking at groups of children who performed at much the same level in their regular academic skills. This avoided the possibility of comparing very high achievers in one class against low achievers in another class.

For the final analysis of data, twenty-two children were selected from each of the four groups. It was decided to compare equal numbers of students from each group. The limiting sample was the smallest group E1, where only 22 children had completed all the tasks and tests. The selection of 22 children from each of the other groups, E2, E3, and C, was made on the basis of scores from the Canadian Test of Basic Skills. For each individual in group E1, a child with a similar score was found in each of the other groups. By this method all four groups selected had the same average academic ability. The four main groups comprised eighty-eight children. Later in the analysis, small subgroups of very high and very low academic achievers were compared. This required sixteen additional children to be scored. A total of 104 children were evaluated from the original group of over 300.

Chronology of the Project

- April, 1979 The project was designed and the proposal submitted for funding.
- May to August, 1979 Arrangements were made for teachers, classes and the job of the consultant. General research was done and the tests planned.
- September, 1979 Pre-tests were administered to all classes.
- October, 1979 to April, 1980
Weekly art lessons were taught for approximately twenty-four weeks.
- May, 1980 Post-tests were administered and collected.
- June, 1980 All tests were marked. Results were tabulated. Children's portfolios were collected, evaluated, and returned as promised.
- July, 1980 The computer analysis of data was completed. Results were documented and conclusions made.

What Was Done During the Project?

The project lasted for ten months, September 1979 until June, 1980. Data was collected throughout the course of the project. The largest part of the data was a collection of children's work: drawing and painting tests, verbal tests and attitude questionnaires, as well as portfolios of the year's work. It was considered important to look at many different kinds of experiences that children might have in an art class, such as: increased interest or pleasure, acquisition of skills, knowledge of vocabulary, media, techniques, and the production of appealing artwork.

In the National Art Assessment done in the United States in 1975 and 1979, these same three aspects of art were assessed; attitude and participation, knowledge about art, and production in design and drawing skills. One other aspect, art criticism and evaluation, was assessed in the American study but not in this Quebec study. It was felt that this last aspect would mean an overwhelming amount of teaching and testing for untrained elementary generalists and their ten year old students, so art evaluation was ignored during this project.

The Curriculum: What Was Taught and Assessed?

Groups E1, E2, and E3 were to be taught a similar program with a base curriculum agreed upon at the beginning of the project. It was considered important to have all teachers teaching the same drawing and painting skills so that their work could be compared. If every teacher taught a variety of media such as clay, macrame, mobiles, printing, or a selection of crafts, it would be impossible to compare their work on the basis of skills. This curriculum was based on working documents of the Government of Quebec's written directives for the teaching of art at the elementary school level (Government of Quebec, 1981). It included some knowledge of vocabulary and some production of drawings and paintings. Teachers were not forbidden to teach other things but all agreed that they would include the specified curriculum in their year's program. A description of the specified curriculum follows.

Art Curriculum

Visual concepts and vocabulary

1. Horizontal, vertical, diagonal
2. Symmetry
3. Parallel and branching
4. Spiral and concentric
5. Repetition or pattern

Drawing

1. Variety in line
2. Observation of specific details
3. Human figures
4. Space or distance-size, overlapping

Painting

1. Primary colours
2. Secondary colours
3. Warm and cool colours
4. Paint application - transparent and opaque
5. Variety in brushwork - wet, dry, washes

The Collection of Data

<u>Item</u>	<u>Pre Tests</u>	<u>Post Tests</u>
1. Art Interest Inventory	Sept./Oct.	May
2. Art Concepts Test	Sept./Oct.	May
3. Drawing Test	Sept./Oct.	May
4. Painting Test	Sept./Oct.	May
5. Picture-Composition Test		April
6. Canadian Test of Basic Skills	September	June
7. Questionnaires to Teachers		June
8. Weekly Diary of Consultant	September through June	
9. Children's portfolios	September through June	

Items 1 to 5 of these measures for evaluation were specifically designed for this project. Copies of the tests and instructions for administering them are given in Appendix A. Also included is some discussion of how and why they were created. Items 1 to 6 are all objective tests done on the children's own work.

Items 7 to 9 were instruments used for qualitative evaluation. Since the children's art products occur as a result of their presence in an art class, and involves interaction with the teacher and other students, it was decided to gather some data about the teacher's attitude and activities. This could be helpful in trying to understand just how the classroom environment influences artwork. The gathering of extensive descriptive data such as video tapes and daily classroom diaries was beyond the time and financial scope of this project.

Nevertheless, a subjective assessment of the children's art experiences was made using three sources of information, items 7 to 9, gathered throughout the year to help relate the process of making art to the products. All of this information was subjectively evaluated by art educators during the month of June. A lengthy description of this information is in the following chapter of this thesis.

Analysis of Data

All data was submitted by the first week in June. During the next three weeks a group of evaluators assessed it.

The Art Interest Inventory and Art Concepts tests were corrected by an independent marker. The highest score possible for the Interest Test was 30, and for the Concepts test was 37.

The Drawing, Painting, and Picture-Composition Test were marked by a jury of three evaluators, (see Appendix C). All were qualified art educators. Specific criteria were developed in order to put a numerical value on these art works. The criteria were developed by an outside expert after all the data was collected. This was to prevent the art specialist/researcher from knowing what was being evaluated and being able to directly prepare her own students. The evaluators were trained in the use of the criteria. The Drawings and Paintings each had a total possible score of 12 points for skills and 4 for aesthetic appeal. The Picture-Composition has a total possible score of 20 points for skills, 4 for imagination, and 4 for aesthetic appeal. Appendix B explains in detail how the criteria were developed and scored.

The Canadian Test of Basic Skills was scored by computer and tabulated according to standard grade equivalents.

Individual scores for items 1 to 6 were calculated and recorded. In July these scores were analysed by computer. The computer analysis was of great interest to the South Shore Protestant Regional School Board who had agreed to sponsor this study. The planning of the computer analysis was done by Dr. Mark Aulls of the Faculty of Education at McGill University in Montreal. Jean Pycock, Education Specialist, of the South Shore Board also assisted in the interpretation of the data. The writer was the only art educator involved. The complete results of the computer study appear in Appendix D. The general results of the evaluation of data follow.

Interpretation of Tables

The scores of items 1 to 5 were summarized according to group averages. The following page of tables presents average group scores for the pre-test and post-test results, and also the resulting gain in score. Separate scores were tabulated for skills and aesthetics or personal appeal to each evaluator.

The total possible skills score for a drawing or a painting was 12 points. The totals shown are a sum of all three evaluator's scores, hence 36 possible points. The total possible skills score for a Picture-Composition was 20 points, and the sum of all three evaluator's scores was 60 points. The scores for aesthetic and imagination also represent the sum of three evaluator's scores.

Table 1

Art Interest Inventory - Average Group Scores

Group	Pre-Test	Post-Test	Gain
E1	24.0	23.9	- .1
E2	24.5	23.2	- 1.3
E3	23.2	21.9	- 1.3
C	22.8	21.0	- 1.8

Table 2

Art Concepts Test - Average Group Scores

Group	Pre-Test	Post-Test	Gain
E1	23.5	31.7	8.2
E2	22.1	29.5	7.4
E3	21.9	28.4	6.5
C	22.9	26.4	3.5

Table 3

Drawing Tests - Average Group Scores

Group	Skills			Aesthetic		
	Pre-Test	Post-Test	Gain	Pre-Test	Post-Test	Gain
E1	18.8	21.1	2.6	7.1	7.5	.4
E2	16.7	19.4	2.7	5.8	6.4	.6
E3	17.4	18.8	1.4	6.4	6.6	.2
C	17.2	20.2	3.0	6.5	7.4	.9

Table 4

Painting Tests - Average Group Scores

Group	Skills			Aesthetic		
	Pre-Test	Post-Test	Gain	Pre-Test	Post-Test	Gain
E1	20.8	28.5	7.7	6.9	9.2	2.3
E2	20.7	26.9	6.2	6.5	8.8	2.3
E3	19.3	23.7	4.4	6.0	7.0	1.0
C	21.2	22.7	1.5	6.8	7.1	.3

Table 5

Picture Compositions - Average Group Scores

Group	Skills (60)	Imagination (12)	Aesthetic (12)
E1	40.2	8.9	8.4
E2	34.4	8.2	7.0
E3	31.3	7.8	6.4
C	25.8	8.0	6.6

Results

In four out of five art tests (Art Interest Inventory, Art Concepts, Painting, and Picture-Composition) the children taught by an art specialist, Groups E1 and E2, achieved higher scores than the other groups. In all cases, E1 scored higher than E2. E1 was the group whose regular classroom teacher was also an art specialist. In the Drawing Test, the children taught by an art specialist, Groups E1 and E2, scored higher than the children taught by their classroom teacher with the aid of a consultant, Group E3, but they did not achieve scores quite as high as the control group, Group C.

In the Canadian Test of Basic Skills, the children who were taught by an art specialist, Groups E1 and E2, performed better in Math and Spelling than the children taught by their classroom teacher with a consultant, Group E3. (See Appendix D, Table XII).

Interpretation of Results

By a combination of careful planning and good luck, we were able to get teachers that were very different from each other in art background, interest, and commitment. This led to very significantly different results in the children's work, which is what every researcher dreams will happen. Although the groups in this study did fall neatly into four distinct categories, it is not wise to conclude that every class in an elementary school would do so. One might interpret the results of this study to mean that any art specialist can provide a better art experience than any generalist. The

teacher's ability to provide a good art experience depends on many factors of which art training is only one. The teacher's personality, interest, effort, and time spent on the art program are others.

The test results probably reflect in part the amount of time each group spent making art with the various media. An observed though unmeasured variation in time spent making art was undoubtedly a significant factor. The time spent was likely a reflection of the teacher's background and interest. Probably, because the art specialist had knowledge and experience with materials, her students were given many opportunities to draw and paint. The student's acquired interest and skills probably inspired their classroom teachers to integrate more visual art activities into the general daily curriculum. It is evident from observation and from the results of the Picture-Composition Test, in particular, that the children in the art specialist's classes spent much more time and exerted much more effort to complete their work. The quantity and quality of the childrens' art work is further evidence of the teacher's influence. Anway and Macdonald wrote that "there tends to be an increase in the artistic level of art production with the increase in the amount of time spent on instruction" (p.37). This supports the findings in this study. In further study the time factor would be worth investigating.

In this study it is evident from the scores in Math and Spelling that the children who had a full art program with an-

art specialist did not suffer by spending less time in these traditional "basic" subjects. In fact, there is much evidence today (Arnheim, 1969; Debes, 1974; Sperry, 1975) to show that visual literacy helps verbal literacy. No attempt is being made here to try to prove that art helps Math and Spelling, but the evidence seems clear that the time spent making art at least did not in this case jeopardize test scores in so-called "basic" subjects such as math and spelling.

In Chapter 4 which follows, more attention is paid to the role and effect of the teacher on the child's art experience. Through description we are able to gather information not available through standardized tests.

Chapter 4

A Qualitative Investigation

The Collection of Data

Three instruments were used to record the information for a qualitative assessment of the different staffing arrangements. The children's portfolios were compared and assessed by three evaluators. The teachers themselves, in response to a questionnaire, described their own backgrounds and attitudes towards art. The researcher acting as both art specialist and art consultant described the classroom art experiences that she observed going on under each of the different staffing arrangements. In a weekly diary she described her own art class activities, and she compared them with what she observed in the other classrooms.

The Students' Portfolios

The first instrument was a written assessment by three persons who were asked to evaluate the art experiences of all eleven classes of children, as revealed in the portfolios containing the artwork that these children had done throughout the year. The evaluators were asked to comment on such things as the variety of media, the variety in types of expression such as abstraction, representational etc., the evidence of time and effort, and the evidence of teacher influence. The children were evaluated as groups rather than as individuals. There was no attempt to describe individual children's art experiences.

The Teachers' Questionnaires

The second was a five page questionnaire in which the teachers answered questions about their own art training and background, as well as their attitude towards art and the teaching of art. This questionnaire was developed by the researcher. See Appendix E.

The Consultant's Diary

The third instrument was a diary kept by the art consultant, in which observations were recorded about teacher and student activities, and about the physical environment in the schools and classrooms. The observer was looking in particular for evidence of time spent at art. She noted such things as efforts to teach the required curriculum, time spent in preparation, visible display of artwork, and art-making outside the one weekly art lesson. She was more interested in recording what was being done by the students and teachers, rather than why or how.

The descriptions were written after observing in the classrooms and talking to the classroom teachers, and there were no taped interviews or photographs taken. Two of the teachers were staff members at the same school where the researcher/consultant taught, and they were seen on a daily basis. The other five teachers were observed on the frequent visits made to their schools. These observations were made from September to June.

The Consultant

Her Background

The researcher felt very comfortable as an art consultant, from the point of view of both knowledge and experience. She has taught art as a generalist, as a specialist, demonstrator, lecturer, or advisor in numerous capacities for over twenty years. As a classroom teacher, also required to teach six other subjects besides art, she was well aware of the other school pressures on the participating teachers. As an experienced grade five teacher she was well aware of the needs and interests of the ten year old children whose teachers she was advising about art.

The Consultant's Role

The term consultant has many connotations and the job is described in many ways by different people. In this study the role of art consultant was interpreted as described by McPhee (1964). The consultant worked with the classroom teachers to build on art skills and prepare self-directed and integrated art lessons. The emphasis was on understanding and allowing individual differences in children's expression. In this project, the intent was to document the activities of a "normal" consulting situation such as it would occur in a public school system. There was no attempt to plan an ideal situation and then try to implement it.

The art consultant had one day each week to assist five teachers in two different schools. In addition, she taught in the same region and could reach any of the schools

in a few minutes by car if requested. She made it known that she could be phoned at home or at school at any time. The researcher/consultant made every effort to encourage participants to use her services as much as they wished. They were told that they could have any help they wanted, including after school or weekend workshops if requested.

The specified art curriculum for this project was reviewed and approved before it was finalized. All the teachers agreed to teach this content in their art classes. In general, the consultant tried to discover what each teacher did best and felt confident with. There was no attempt to impose lesson plans on the teachers. They were free to choose the sequence of their art lessons and help was available on request. The consultant regularly brought or sent relevant information to assist the teachers. She encouraged them to adapt the new materials and curriculum concepts to their own style of teaching. The teachers all understood that the children's work was going to be evaluated in September and again in June.

The Participating Teachers

The Art Specialist - Background and Role

This teacher was the researcher and the art specialist in this project. She was also the classroom teacher for Group E1. She had been hired as a grade five teacher since this school board cannot afford to hire art specialists for the elementary schools. This is exactly the solution that McPhee (1964) describes as a practical way of obtaining

specialists for the elementary schools; each teacher is trained as a generalist plus one area of specialization.

The art specialist taught general subjects to her own grade five homeroom class. She taught art to her own class plus two other grade five classes in the same school. She had five years previous experience as an elementary art specialist.

The Classroom Teachers

Their Selection

It was decided to select grade five classes from similar socio-economic neighbourhoods in the same region. The teachers who agreed to participate were interested in art, but felt inadequately prepared to teach it. They were anxious to benefit from having regular access to an art consultant and hoped she would help them to improve their art teaching. None of the teachers knew the art consultant previously. They were experienced and secure enough to accept being observed and compared with others. They were prepared to assist the school board with research whose aim was to improve art education in the schools.

Their Progress Throughout the Project

In spite of the fact that the teachers soon began to admit that they were having difficulties implementing the art program and teaching art, they did their best to handle the art curriculum and fulfill the demands of the research project. No one attempted to withdraw from the project. Of the ten teachers who began, all completed the

pre and post tests for the experimental study. However, two of the control group teachers (Group C) did not keep all the children's work in portfolios to be evaluated.

At the start of the project all five of the teachers were enthusiastic about being involved with the consultant, and they were anxious to proceed with any suggestions made. Two months later, their interest waned, probably due to the pressures of other work. For the duration of the project there were occasional bursts of enthusiasm. The classroom teachers tried to accommodate the consultant whenever she contacted them, but they were clearly finding it a strain. It was requiring more effort than they had anticipated. They appeared to be relieved when June arrived and all their commitments had been fulfilled.

From her previous experience as consultant, classroom teacher, and a participant in educational research, the writer feels that the reaction to this particular research project was typical of what occurs in schools. A considerable effort is required by all participants and usually there are some pains as well as some gains in the end. This was also noted by Hollinger, (1978).

Resumé of Schools, Groups, and Teachers

In order to make it easier for the reader to keep track of all the participants, the following chart is included. In addition the staffing arrangements for each group is repeated.

Table 6

School	Group	Classroom Teachers
A	E1	1*
	E2	2
		3
B	E3	4
		5
		6
C		7
		8
D	C	9
		10
		11

* Teacher number 1 is both generalist and specialist.

She is the only art specialist in this project.

The Staffing Arrangements

Weekly art lessons were given by:

Group E1 -the regular classroom teacher who was also an art specialist

Group E2 -an art specialist who was a staff member in the school

- Group E3 -the regular classroom teacher who had access to the regular weekly services of an art consultant
- Group C -the regular classroom teacher without any help or intervention from the project personnel.

THE DESCRIPTIVE DATA

The remainder of this chapter summarizes the information gathered through the teacher's questionnaire, the consultant's diary, and the evaluators' comments on the students' portfolios. The information has been organized for each of the four schools involved.

School A: Groups E1 and E2: Art Specialist

A Description of the School Setting

School A was a one-story brick structure built in the 1940's. Four kindergarten classrooms were added at a later date. The school was located in St. Hubert, a mixed old and new neighbourhood of working class and lower middle class, multi-ethnic people. It housed eight classes of grade five and grade six English students plus three classes of French kindergarten students, approximately 250 children in all, and was beginning a changeover from an English to a French population. There was a staff of fourteen teachers and one principal. The classrooms were not large, but they were clean, freshly painted, and had one long wall of large windows. All of the grade five students had their art lessons from an

art specialist in the school. They moved to her classroom which was a large carpeted double-sized open area classroom with many windows. About sixty percent of this large space was available for art classes. The other part of the room was sectioned off to accommodate small remedial groups. The larger section was normally a regular grade five classroom, but it was also used by three other classes for their art. There was no sink or water in the room. Within the school, there were no extra classrooms or places to gather, other than the gymnasium. The school yard was small and covered with concrete. Of the four schools in the project, this one was the smallest and had the fewest physical advantages and resources.

Teachers Involved

There were three participating teachers in school A. Teacher number 1 was the art specialist and also a classroom teacher. She taught her own grade five class, Group E1, all the regular academic subjects, including art. She also taught art to two other classes once a week for forty minutes each period. Teachers number 2 and 3 were the classroom teachers for the children in Group E2. Although teachers number 2 and 3 did not officially teach art, they became involved with the art specialist and the art activities of their students. They spent two-thirds of each day with the students of Group E2. They also administered three of the pre and post tests used in this study.

Summary of Answers to the Teacher's QuestionnaireTeacher Number 1 (Group E1)

The teacher of this group was an art specialist. She had eight years of post-secondary education and had taken more than ten courses in art and art education. She had eight years of experience teaching many different subjects including art. She scheduled her art lessons for Monday or Tuesday afternoon and they were always rescheduled if they had to be cancelled for some other event. With her regular homeroom class, art was integrated with most other subjects so that the children were involved with art for some period of time almost every day.

Teacher Number 2 (Group E2)

This classroom teacher had seven years of post-secondary education and seven years of teaching all subjects at the grade five level. He had never taken a course in art or art education, but liked best to teach math and science. For the first time, this year, he said he enjoyed teaching art. As well as a regular forty minutes period with the art specialist, he scheduled another sixty minutes of art integrated with other subjects. He always made an effort to make up lost art periods. He found the art specialist helpful, and to quote his own words:

Having someone within the school was important as a motivator and as an example of what could be done with art. A continuing interest in what I was doing in my own class to integrate art, also encouraged me to try

even more things. An itinerant specialist might not be as effective since he/she would not be in the school a sufficient amount of time to provide adequate encouragement and assistance.

Teacher Number 3 (Group E2)

This classroom teacher had four years of post-secondary education and fifteen years teaching all subjects from grades two to seven. She had taken one compulsory art course in her teacher training and liked best to teach math and science. She enjoyed having a specialist teach art to her class every Monday afternoon because she felt her own background was inadequate. She felt that she had become more aware of basic art concepts this year and had purchased a book to try and improve her own knowledge of the subject.

The Researcher's Diary

Teacher Number 1 (Group E1)

The art specialist taught the required forty minute art period every Monday afternoon to her own homeroom class. Table 7 is a brief summary of these art lessons. Throughout this Table there is evidence that the required art curriculum (see Chapter 3) was taught.

In addition, art was integrated into the daily activities of the classroom, and it was used as a language of learning, a means of communication, and a mode of thinking. The formal art lessons were scheduled for Monday so that the concepts and assignment for the week could be thought

about, talked about, and worked on for the rest of the week. During the week the children had opportunities during spare time and noonhours to work on their art activities. Everyone's art was displayed on the classroom bulletin boards and these were changed regularly every week or two.

For Christmas this class made a slide and tape show of the Christian story of Christmas. The slides were taken from their paintings. This presentation was their contribution to the school Christmas concert.

At the beginning of the year many of the children did not care whether they completed art projects or not. Many had never taken art seriously before. As the school year progressed and all their work was constantly displayed, they began to look at it more critically. They wanted to improve it. They volunteered to spend more time with their artwork and they worked on it during rainy indoor recesses and noonhours. They talked about their work and shared their thoughts with others, remarking on what they thought was good and bad, and comparing results. They started to notice other artwork around the school. They brought related art objects from home to look at and these were also displayed. Some acquired special crayons and markers and brought them to school where they were admired and shared. The teacher valued individual expression and style and tried to encourage it.

In summary, art became a normal everyday activity for these children. Art was a formal part of the curriculum once a week but it was also integrated with other subjects of the

curriculum, and in addition it was often an extra-curricular activity. In short it was a ~~subject~~ with a high priority for these children.

Table 7
 Twenty-five Art Lessons as Planned by the Art Specialist.

Number	Theme	Concepts and Activities	Materials
1.	Introduction	A philosophy of art education	Illustrations, discussion
2.	Running shoes	observation drawing	pencils and crayons
3.	Animals - real or imaginary	variety in line paint washes	wax crayons and paint
4.	Hair	observation drawing of children	large newsprint, charcoal
5. 6.	Organic designs	freely drawn organic designs mixing secondary colours variety with brushstrokes adding texture with paint	manilla paper tempera block prints
7.	Figures in action	gesture drawing quick poses and sketches	newsprint and charcoal
8. 9. 10.	Super Heroes	observation poses a complete composition backgrounds mixing paint colours	large manilla paper tempera block prints mixed media as preferred
11.	Colourful designs	symmetry contrasting colours	coloured construction paper gummed paper and scissors
12.	Angels (Christmas)	symmetry collage with mixed media	white typing paper, variety of other papers
13.	Small "stained glass" tree decorations	technique of stained glass outlined shapes transparencies	black construction paper cellophane glue and transparent tape
14.	Santa Claus as Super Hero	free expression drawing	pencils, markers, etc.
15. 16. 17.	Birds	Pictures are made for different reasons. Draw: 1. A bird picture for a sign 2. A bird picture for a science text 3. A bird picture for an art gallery	Illustrations 9 x 12 inch manilla or cartridge paper free choice of media
18.	Concentric and spiral images	concentric versus spiral formations	Illustrations Crayons etc.
19. 20.	Abstract designs	Designs can be structured many different ways; e.g. horizontal, diagonal, asymmetrical, spiral, etc. Choose one method and plan your own design	Illustrations Faint and paper
21.	Landscape	Impressionism distance and overlapping horizontal arrangements texture with paint	Illustrations paint and paper
22.	Fussy Willows	Observation drawing with individualised gestures	18 x 24 inch manilla paper free choice of media
23. 24. 25.	Dream Houses and Ideal Environments	Free expression Planning a whole composition Free choice of colour and media	12 x 18 paper free choice of media

* Illustrations refer to art prints, books or films which show examples of the concepts being explained.

Group E2: - Teachers Number 2 and 3

For the children in these classes, two types of art experience will be described. First, their weekly art lesson with the art specialist, and second, their art experience with their regular classroom teacher. The National Art Education Association (1972) states that the specialist's instruction should be supported and supplemented by the classroom teacher. In this school an effort was made to do this.

Teacher Number 2 (Group E2)

The class of teacher number 2 had a forty minute art lesson with the art specialist every Tuesday afternoon. The children came to the specialist's classroom for this period. Table 7 is brief summary of the content of these lessons. This was an effort to cover the required art curriculum. These students kept small sketchbooks in which they did drawings, and all their other artwork was kept in large portfolios which they had access to.

The class was unusual in that it was comprised of children who had great learning difficulties and many behaviour problems. The art teacher soon learned that they looked forward to the art class as a welcome release from the verbal reading and writing routine. Although noisy in the art classroom, the children seemed to really enjoy what they were doing. Few of the students had conventional drawing skills but they had no inhibitions about exploring media and they did not hesitate to express their own personal feelings in

their artwork. They especially became involved with the physical activities in the art classes. Their enthusiasm became so great that several children often requested to spend their lunch hours painting or working on art projects. Two boys never wanted to go outside. They would happily spend every noonhour exploring with paint, letting each day's activity lead them into another exploration for the following day. When there was a class assignment that required more time than the forty minute period, the classroom teacher allowed the art period to be extended. Their work was always displayed; often informally or for a short period of time, and sometimes in a formal arrangement along the walls of the school corridor.

The art experience with this class was indeed a success story! Their enthusiasm for the subject became so strong that they converted their classroom teacher. He had no background in art and had always avoided the subject, but he was overwhelmed by the positive effects art was having with the children. The children finally approached their classroom teacher and begged him to let them do more art during the rest of the week. The classroom teacher approached the art specialist for ways to use visual stimuli as motivation in other subjects, and he began to integrate art with all the other subjects in the curriculum. These students just could not seem to get enough of drawing and painting.

An ideal relationship between classroom teacher and art specialist occurred here. The specialist taught the

children about art concepts, materials, skills, and techniques. With the classroom teacher they were allowed to use this knowledge to express themselves and to communicate ideas about their environment. The art specialist taught them how to do it and the classroom teacher let them apply it. It was a most rewarding experience for all concerned; specialist, generalist, and children, as well as many jealous observers all around the rest of the school.

Teacher Number 3 (Group E2)

Every Monday afternoon the children from this teacher's class went to the art specialist's room for an art lesson. The lessons followed the plan summarized in Table 7. Often these students came in at noonhour to work on things they wanted to finish. They saw their art teacher daily in the school. All the children kept sketchbooks and did drawings at home, often from observation. Much of their artwork was displayed in their own classroom, in the artroom, or on school walls. All their artwork was kept in a portfolio where they could go and look at previous work and perhaps add to it, or laugh at it, or gloat over it. These portfolios were always accessible and the children took pride in them.

Teacher number 3 was anxious to co-operate in any way she could. She had no background in art and said that she was very happy that her students were able to have art lessons from a specialist. She gladly administered the pre tests and post tests for the experimental study, during her own class time, rather than have the specialist lose all that

time from the art lessons. She occasionally prepared to allow her class to have an extra half hour of art, if it was needed for an art project such as a painting that took longer than the regular forty minutes allotted. Occasionally she integrated some art activities into her math lessons.

The children in this class experienced a good cooperative relationship between the art specialist and the classroom teacher. Their art activities were discussed and displayed in two classrooms. Art was a visible presence in their school setting.

Evaluators' Comments on Students' Portfolios

Teacher Number 1 (Group E1).

The children in this group had an average number of 25.67 pieces of work in their portfolios.

All three judges rated this the best group of portfolios. There was a large number of very exciting works. Many concepts were taught and a variety of media and techniques were used. There was a good use of outside stimuli; found photographs, literature, and written descriptions. Both abstract and representational works were present. The children's sense of colour had been developed. Concepts were integrated into general picture making rather than taught separately. The work seemed to reflect the enthusiasm of teacher and students.

Teacher Number 2 (Group E2)

The children in this group had an average number of 20.42 pieces of work in their portfolios.

Two of the judges called the work excellent, and assessed it as the second best of the groups. The teacher used a variety of stimuli, a variety of media, and a variety of subject matter. There was good exploration with paint, and a good use of mixed media. There was apparent structure to the lessons yet evidence of free expression. Both teacher and students had spent much time and effort, and seemed interested in producing this work.

The third judge's remarks were unusual in that they disagreed with the other judges. This was the only inconsistency in the evaluations done for this project. This class scored high on tests and there were very positive experiences recorded by both students and teachers. But the third judge seemed to dislike the work of this class. She said that the project was not understood by the teacher, that the work lacked teacher stimulation; that drawings were copied from the teacher or from book illustrations or traced, and that the work was drawn and then coloured in like a colouring book. She said that mixed media was inappropriate for this age. She said that the teacher did not understand the nature of paint.

Teacher Number 3. (Group E2)

The children in this group had an average number of 19.35 pieces of work in their portfolios.

All three judges made very positive remarks about this work. The work was excellent but a little inhibited. There was not enough imagination shown. There was a great variety of drawing, painting, and multi-media work. Both representational and abstract work was shown. There was good use of a sketch book. See Table 11, page 92.

School B: Group E3: Generalist and ConsultantA Description of the School Setting

School B was a new modern two story brick building only four years old. Approximately 500 children, from kindergarten to grade six, attended this school. It was located in a new, lower middle class multi-ethnic suburb of Montreal, called Brossard. Because of the number of children, the school was entitled to a full time principal and vice principal. There was a staff of over twenty teachers. The classrooms were new, bright, colourful, carpeted, and spacious. The teachers worked in large open areas where two or three classes shared the same large room. There were also some closed classrooms. Large windows provided plenty of natural light. One sink provided water to be shared by four classrooms. Children had individual lockers outside the classroom to store coats, boots, etc. Several large open areas outside the classroom were available for activities which did not require a writing desk. If any school in the project group had more physical advantages, it was this one.

Teachers Involved

In school B there were three participating teachers, teachers number 4, 5, and 6. Each taught a class of grade five children and these children were part of Group E3. These classroom teachers taught their own art and in addition they had the regular services of an art consultant.

Summary of Answers to the Teacher's QuestionnaireTeacher Number 4 (Group E3)

This classroom teacher had five years of post-secondary education and four years of experience teaching grades four and five. She had never taken a course in art and liked best to teach math and history. She liked teaching art on Thursday afternoons and sometimes tried to reschedule it if it had to be cancelled. She described herself as "not artistic" but did not care to change this situation. She did not enjoy participating in this art project and found that it was too much work. She did not like the art content specified in the curriculum, and felt that her students did not enjoy it. She would have preferred to make decorations for Halloween and Christmas, or to make a teacher-directed product to be completed in one afternoon. She felt that she had been obliged to teach "formal" art lessons and that this was not appropriate for the elementary school. She said that "at this age, art should be fun!" She said that she saw the consultant a satisfactory amount, and was given many ideas and samples of work as well as a demonstration drawing lesson.

Teacher Number 5 (Group E3)

This classroom teacher had four years of post-secondary education and six years of experience teaching children from kindergarten to grade six. She had never taken a course in art and liked best to teach reading and math. She enjoyed teaching art on Thursday afternoons. She did not like the art curriculum for this project. She referred to it as

"formal art training, more appropriate at the high school level". She would have preferred more arts and crafts, holiday decorations, products completed in one session, or integration with other subjects. She said that she saw the consultant a satisfactory amount, obtained help in the form of ideas, suggestions, and examples of children's work, and did not want any other kind of assistance. She would like more training in art education in order to get classroom ideas and to learn some skills herself.

Teacher Number 6 (Group E3)

This classroom teacher had seven years of post-secondary education and ten years of experience teaching most subjects, in grades five, six, and seven. She had taken one art course, and liked best to teach social studies, science, and reading. She enjoyed teaching art and had her regular lessons for one hour every second Friday afternoon. She found it very difficult to find the time to do what was required for this research project. She described herself as artistic, said she had "a good graphic ability and an eye for colour coordination", and that she would like to take some studio courses to learn more skills. She found the course content of this project was too much for grade five and for her schedule, and would have liked to teach other things in art than the specified curriculum. She said that she saw the art consultant often enough and she received some practical knowledge which was all she wanted. Formerly her art lessons included holiday decorations, ideas from magazines and other

teachers, and integration with other subjects. She planned to continue in the old way but would try to incorporate and develop some of the "basics" as well as the terminology and techniques she learned during this project.

The Art Consultant's Diary

Summary of Teachers 4, 5, and 6 (Group E3)

In school B the three teachers worked closely together and had a similar attitude towards teaching art. They wanted to meet with the consultant altogether. None of them phoned or asked for individual consultation, and they all treated art as a low priority item in their schedule. Perhaps this might have been a reflection of the principal's demands. These teachers spent more than two months just completing the pre-tests, which required approximately two and one-half hours of classroom time. From September until mid-November, they did nothing else in their art classes, and did not want to begin the art program until after the report cards in November.

Teachers Number 4 and 5 worked closely together in the same open area classroom. They had always done their art at the same time with a large group of over fifty children, a tradition which they were unwilling to change. These two teachers said that they would "plan to teach all the art vocabulary concepts before Christmas".

On November 7, the consultant visited the school bringing reference books and art samples of curriculum topics. Several lesson ideas were given. The three teachers

requested that the consultant assemble a "kit" of references for them, to include books, lesson plans, art samples, and ways to integrate art with other subjects. A forty page kit was prepared and provided for each teacher. It included the things they had requested, plus references to some art education texts, as well as some sequential art lessons to show them how to develop a theme or idea. This kit was delivered on November 12.

In early December, the consultant spent fifteen minutes observing in each of the three classrooms where she was to be assisting the teachers. This was intended to be an introduction to the class, in order to get a feeling for the student-teacher rapport and the general teaching method and learning environment in each classroom. All the teachers were warm towards the children, obviously liked them and kept very good discipline in the classrooms. Only one of the classrooms had some artwork on the walls. These were crayon rubbings. Another had pictures of coloured stencils of ships. The students appeared to be well cared-for, mixed racial, middle class students who liked their teacher and their school.

On December 12, the art consultant spent about thirty minutes in each classroom with the children, showing them a slide tape show of the story of Christmas as illustrated by another class of grade five children. She also delivered invitations to the teachers to a display of elementary school art on the South Shore. None of the teachers attended.

On January 25, the consultant visited the school to deliver project schedules for the rest of the year and to see if she could be of any assistance. One teacher apologized that they were not doing very much art for the portfolios because they wanted to make Christmas decorations. The consultant told them not to feel obliged to cover everything in the curriculum, but to do as much as they could do comfortably and still enjoy their art.

On February 27, the consultant visited with teacher number 6 during a spare period in the morning. She said that she had not been able to do much art because she wanted to make "drummer boys" for the three weeks preceding Christmas, and afterwards she had to make decorations for the parents St. Patrick's Day dance, and then more decorations for the school play. She said that she wanted to teach perspective drawing to her class. The consultant suggested that this was perhaps too advanced for an entire class of grade fives, and if she wanted to make them aware of three-dimensional space in pictures, she should first begin with size and overlapping. The consultant suggested some suitable subjects for drawing from observation and this seemed to appeal to the teacher.

The consultant met with teachers number 4 and 5 on February 27 and March 3, and these were very discouraging meetings. The teachers were apparently teaching art in a very mechanical way (like old-fashioned English grammar). They said that neither they nor the children were enjoying

the art classes. The consultant suggested that they do some of their old favourite art lessons so that they might feel comfortable and enjoy the art lessons again. These lessons could probably be adapted to illustrate and incorporate the concepts and vocabulary of the project's curriculum. The two teachers were reluctant to talk about this. They again asked for more ideas for the classroom. There was no artwork visible around the classroom and no evidence that they had tried any of the ideas from the forty page kit which they had requested and received in November. More samples were left with them in early March.

By this time, the project had been in progress for seven months, and by their own admission the teachers were finding it difficult to cope with the demands of the project. They were finding it a strain and it was evident that the children were too.

Teachers number 4 and 5 agreed to have a demonstration lesson, and on March 10th the art consultant conducted a lesson in observation figure drawing. This was very difficult because there were over fifty children in one group who had not been enjoying their art classes.

As pre-adolescents they were critical of their own efforts to produce adult-like drawings. They had apparently never done any drawing from life before and many drew the figures in different positions from the ones in which they were posing. They hardly looked at the models and gave up very easily. The results were far less satisfactory than

any seen by the consultant before. The teachers observed this lesson and expressed gratitude. Follow up activities were done. The children began to do some observation drawings, and both they and the teachers seemed to get a bit more interested and involved in some art making. This activity lasted about three weeks.

Teachers number 4 and 5 confessed that they had not painted even once during the school year. They did not like painting because "it was too much trouble".

Teacher number 6 made very little effort to participate in the project. She scheduled art every other Friday and it was frequently cancelled because there were too many things to do. She said that she would try to get the post tests completed.

Altogether sixteen visits were made to school B. The consultant grew increasingly uncomfortable there. It was clear that the teachers did not have much time or interest for the art program. They were trying to co-operate and teach some art concepts that they did not really understand themselves. They were not able to find time for demonstrations or workshops for themselves to learn more about art, so they patterned their art lessons after structured language arts lessons. These teachers were asked to keep a list or some record of their weekly art lessons but they did not do this.

Evaluator's Comments on Student's Portfolios

Teachers Number 4, 5, and 6 (Group E3)

The children from teacher number 4 had an average number of 10.38 pieces of work in their portfolios. Children from teacher number 5 had an average number of 10.58 pieces, and from teacher number 6 an average of 4.01 pieces of artwork.

Since the work of the students from these three teachers was so similar, and since the evaluators' remarks about the students' portfolios were so similar, their evaluation is being summarized as a group.

All three judges described these classes as being very weak and producing the worst portfolios of the project. The work seemed teacher dominated because it appeared "mathematical, structured, clinical, and with no personal expression or spontaneity". Most of the work was done on 9 x 12 inch manilla paper. All three evaluators noted that there was very little work done, and there was little variety or exploration of media. Many pictures appeared to be traced or made with stencils and prepared shapes. See Table 11.

School C: Group E3: Generalist and Consultant

A Description of the School Setting

School C was situated in St. Jean, a small town located 35 kilometres southeast of Montreal. The large two-story brick building was first built in the 1950's. A big addition was added ten years later. The children in this town school came mainly from a lower middle class socio-economic group. Several lived on an armed forces base, others on farms, and many travelled a long distance by school bus to reach the school. From kindergarten to grade eleven, approximately 300 children attended this school. The elementary school children were in one end of the building and the secondary school children were in the other end. There was a staff of twenty-five teachers plus the principal and the vice-principal. The classrooms were spacious, freshly painted, and had one entire wall of large windows. The lighting was always very bright. Although located 35 kilometres from the larger centre of Montreal, this was not a poor rural school, and it had excellent facilities and space.

Teachers Involved

In school C there were two participating classroom teachers, teachers number 7 and 8. Each taught a class of grade five children and these children were part of Group E3. The classroom teachers taught their own art and in addition they had the regular services of an art consultant.

Summary of Answers to the Teacher's Questionnaire
Teachers Number 7 and 8 (Group E3)

These two classroom teachers gave almost identical responses to the questionnaire so they will be described together. Both of them had one year of post-secondary education and fifteen or seventeen years of experience teaching all subjects from grades one to seven. They had taken one course in art, and liked best to teach language arts and math. They enjoyed teaching art and planned their sixty minute lessons for every Friday afternoon. They sometimes tried to reschedule art if the period was missed. They felt that their students did not like the art program this year and that there was too much course content for grade five. They felt the curriculum for the project was too structured and not flexible enough. They would have liked to teach something else, and felt pressured to do things that they did not want to do. Both said that they saw the art consultant a satisfactory amount, and received help in the form of good suggestions and a demonstration lesson. Neither wanted any more help. One of the teachers hinted that the art consultant was there too often. These teachers said their previous art lessons included holiday decorations, crafts, making "something" in one lesson, free expression, and integration with other subjects. They did not include the learning of skills and techniques nor a developmental sequence of learning vocabulary and exploring media. Teachers

number 7 and 8 said they would try to include art vocabulary in their lessons next year, and that they would like to be more artistic and would like more art training to learn skills for themselves.

The Art Consultant's Diary

Teachers Number 7 and 8 (Group E3)

In school C the behaviour, attitude and responses of the two grade five teachers was very similar. These teachers were very enthusiastic about participating in the project and were receptive to any suggestions for art lessons. They wanted to meet with the art consultant together, usually at noon hour. Neither one phoned or asked for individual consultations or specific lesson ideas. They seemed pleased to take whatever was offered, but they made no extra inquiries or demands.

These two teachers were easily able to cope with the pre-tests and the administrative tasks of the project which were all completed in September. They were ready to begin their art program by the first week in October, and they were interested in having ideas and lesson plans for two or three weeks ahead. They asked for and received sample artwork, and lesson ideas as well as a book on abstract painting and design ideas. On November 2nd they were sent a forty page kit of lesson suggestions related to the art curriculum. This kit had been requested and prepared for school B, but was sent to these two teachers as well, because of their interest.

On November 21st, the consultant visited both classes in order to observe their classroom situations. The classroom environment in both cases was very good. The teachers were very experienced and the children were well-disciplined. The classrooms were fairly new and spacious, with big windows and good light. In these two classes, there were slightly smaller numbers than in the classes in the other school where the consultant worked. A good rapport existed between teacher and students. Both classes had work in their portfolios, and had begun with the line exercises from Artbasics (Peterson, 1978), one of the suggested texts. This was an effort to teach the required art curriculum. Most of the drawings were done with wax crayons and had been done rather quickly. The consultant observed that teachers and students seemed pleased and ready for more activities. They had also experimented with cut newspaper figures. The children had been prepared for the visit of the art consultant. They were expecting to hear more about the different sorts of art lessons that they were experiencing. They seemed excited and anxious to talk about the project and their work. Both teachers were using ideas suggested by the consultant, and they were very enthusiastic about what they were doing. They said that they had much to do in December and did not want any more ideas until after Christmas. On December 12th the consultant visited again to show the classes a slide-tape show of children's drawings which interpreted the traditional

Christian story of Christmas. The children discussed the drawings, asked many questions, and talked about the ones they liked the best. There was a good rapport with the consultant and a good response from the children.

On January 23rd, the consultant gave each class a demonstration lesson on observation and figure drawing. The children were very excited about this. One child said, "It's the best figure I ever drew". Both teachers seemed pleased with this lesson and planned to continue with more figures and drawing from observation.

On March 5th the consultant delivered more art samples and lesson plan ideas to this school. Most of these samples were for painting and colour lessons. One of the classrooms had no art on the walls. The other had some small crayon drawings, tacked up. The consultant made two more short visits to this school, mainly to pick up samples or post-test work for evaluation.

In school C the teachers were always pleasant and agreeable. They were not overly enthusiastic but seemed to feel that they had gained some valuable insight into the teaching of art. In all, ten visits were made to this school. Students and teachers seemed to have tried some new art experiences. The children's work seemed rather mechanical and all very similar, and they needed some help in combining learned skills with their own personal expression and image making.

Everyone involved here, children, teachers, and consultant seemed to have had a pleasant and positive experience.

Evaluators' Comments on Students' Portfolios

Teachers Number 7 and 8 (Group E3)

The children from teacher number 7 had an average number of 14.60 pieces of work in their portfolios. The children from teacher number 8 had an average of 11.04 pieces of artwork.

All three judges described the work from these two classes as weak. One judge stated that "the teacher has no knowledge of child art and no interest in the subject so she failed to stimulate the children". The principal media used were crayon and pencil, and the judges found that the work did not reveal an exploration of materials. There were no abstract works or works from memory and imagination. "The teacher-directed lessons based on concepts and drawing from observation seemed well-understood and well-executed, but in general, this was not a well-rounded program because the classes had been too structured and did not allow for individual expression". See Table 11.

School D: Group C: Generalist Alone

The qualitative data collected for School D is not complete, and so this school is not given equal treatment in this method of research. The groups E1, E2, E3, and C (School D) were established primarily for a quantitative experimental study and Group C was the control group. All the quantitative data is complete for School D. The project's art and administrative personnel deliberately avoided personal involvement with School D because they wanted to observe the results in children's work when the classroom teachers were left alone to do their "normal" art activities. No diary of observations was made in the classrooms of School D. Time and funds were not available to hire an outside observer to record what happened in relation to the art lessons of the generalist teachers in School D. All the teachers did fill out the questionnaire. One of the teachers kept the children's portfolios.

A Description of the School Setting

School D was a large two-story, three-wing, brick building located in the lower middle class suburb of Greenfield Park. Originally built in the early 1900's, the school had several additions built after World War Two and up until the late 1960's. It also had large playgrounds. It was located in a multi-ethnic neighbourhood. Ranging from kindergarten to grade eight, approximately 550 children attended this school. The secondary students were part of a separate section for Special Education students. The staff consisted of a

principal, a vice-principal, and thirty-three teachers. The classrooms were of average size, clean, freshly painted, and with one wall of large windows. There were no sinks in the classrooms. The school had a large, excellent library with a spacious open area adjacent.

Teachers Involved

School D was the control group. The three teachers, numbers 9, 10, and 11, were elementary generalists who each taught a class of grade five children. These children made up Group C. These teachers taught their own art with no additional help provided by the project staff. They administered pre and post tests and taught their regular art program throughout the year, answered the questionnaire, and agreed to collect student artwork in portfolios.

Summary of Answers to the Teacher's Questionnaire

Teacher Number 9 (Group C)

This classroom teacher had four years of post-secondary education and eight years of teaching grades three, four, and five. She had taken one course in art. She liked best to teach science, social studies, math, language arts, and drama. She did not enjoy teaching art but preferred to teach crafts instead. Her regular art classes were scheduled for fifty minutes on Monday or Tuesday afternoon. She usually tried to make up lost periods because her students always asked for it. She described herself as not artistic but said she would like to be more artistic because it would help her in all areas of her teaching. She was interested

in learning more about art.

Teacher Number 10 (Group C)

This classroom teacher had four years of post-secondary education and eight years of experience teaching all subjects from grades one to six. She had taken one compulsory course in art education and liked best to teach art and math. She planned her art lessons to last from sixty to ninety minutes on Thursday afternoons. She said that participation in this art research project was not too much work for her but that the children did not enjoy the assignments. She would not participate again. She said she would be interested in attending sessions in art education, studio work, classroom ideas, and more art skills for herself.

Teacher Number 11 (Group C)

This classroom teacher had two years of post-secondary education and ten years of experience teaching grades four and five. She had never taken a course in art. She liked best to teach art and math. Her regular art lessons were held for forty minutes on Thursday afternoons. She said she always tried to reschedule art classes that had to be cancelled. She enjoyed participating in this art research project and would like to attend some workshops which provided classroom ideas.

The Researcher's Diary

The researcher as consultant had no formal contact with this group and therefore diary entries were limited to the general comments which follow.

This was the control group. It consisted of three classroom teachers who agreed to carry on their normal art lessons alone, and have their students perform the pre and post tests for the experimental study. They also agreed to answer the teacher's questionnaire and to keep their students' artwork in portfolios. At the end of January, two of the teachers decided to withdraw their portfolios. They said that the students wanted to take their work home.

Teacher number 10 submitted a list of art lessons done during the year, Table 8. She did not state that every item on this list had been completed, and there is no actual record of what was actually done. From the list submitted, it might be inferred that the lessons taught were unrelated to each other and product-oriented. There was no indication of planning based on art concepts, or drawing and painting skills.

Table 8

Art Projects Done During the Year 1979-80 by Teacher Number 10

1. Frost windows (chalk and construction paper)
2. Pumpkin faces
3. Sketching - many subjects (pencil and charcoal)
4. Tissue paper pictures
5. Black and white animals - construction paper
6. Initials - construction paper
7. Indian cut apart design
8. Silhouette
9. Japanese art
10. Stained glass window
11. Greeting cards
12. Geometric design - crayon and markers
13. Bugs
14. Wall paper picture
15. Foil art
16. Pastel pictures
17. Cartoon blow ups
18. Splatter painting
19. Name design
20. Stippling
21. Pointilism - marker
22. Cord pictures
23. Modern design "Miro"

Special Events e.g. Xmas, Valentines, St.Patrick, Thanksgiving

Wreathes of cotton

pom poms

nut trees

people

cards

papier mache

murals

bulletin boards

Evaluator's Comments on Students' PortfoliosTeacher Number 9 (Group C)

The children in this group had an average number of 9.35 pieces of work in their portfolios.

All three judges generally considered this work to be satisfactory, and most of their remarks were positive. There was a good variety of media, and motivation seemed to be based on real events, memory, and imagination. One judge wrote that the structure of the program "was mainly technique oriented and there was an interesting variety of materials". Another judge wrote that "the teacher dominates and doesn't stimulate". Two judges wrote that there was a need for more free expression. The portfolios indicated that the teacher had spent considerable effort making art projects with the children.

Teachers Number 10 and 11 (Group C)

At the end of January these two teachers decided that they would no longer keep the students' work in portfolios. The children's work went home.

Comparative Tables

The following tables chart and compare the students' art experiences in the various groups.

Table 9 shows the average number of artworks in the portfolios of each class. It is clear that the children taught by an art specialist produced approximately twice as many works as those taught by classroom teachers with or without the help of a consultant.

Table 9

Children's Portfolios

Average Number of Works per Class Group

School	Group	Teacher	Artworks per Child
A	E1	1	25.67
	E2	2	20.42
		3	19.35
B	E3	4	10.58
		5	10.38
		6	4.01
C		7	14.60
		8	11.04
D	C	9	9.35

Table 10 summarizes the judges' ratings of each group. The judges had been asked to rank the groups and summarize the group's work under the following headings: very good, good, satisfactory, weak, very weak. All judges rated the portfolios from the art specialist's classes as better than those from the classes of the generalist teachers with or without a consultant. In Group C, only one of the three teachers submitted portfolios.

Table 10

Summary of Judges' Ratings of Student's Portfolios

School	Group	Teacher	Judge 1	Judge 2	Judge 3
A	E1	1	good	very good	very good
		2	weak	very good	very good
		3	good	very good	very good
B	E3	4	very weak	weak	very weak
		5	very weak	weak	very weak
		6	very weak	weak	very weak
C		7	very weak	weak	weak
		8	very weak	weak	weak
D	C	9	weak	good	satisfactory

(Pycock & Wiebe, 1980)

Table 11 summarizes the remarks of all the judges as they assessed each group. In general all judges agreed that the children taught by an art specialist produced a greater variety, and a more exciting selection of artworks.

One of the judges, number 1, wrote many negative comments, praised little, and made no comparisons between the different groups. It was more difficult to compare that judge's ratings with the other two judges.

The other two judges singled out the portfolios of the three classes taught by an art specialist and praised them highly. They both also described the work of the consultant's groups as weak and below the standards of the groups taught by an art specialist. The single class from the control group was better than the consultant's group but not as good as the art specialist's.

Table 11
Summary of Judges' Remarks about Portfolios

School	Group	Teacher	Judge 1	Judge 2	Judge 3
A	E1	1	good teacher stimulation variety of new techniques and materials good sense of colour well-integrated picture making freedom to invent	excellent - the best group observation and imaginative works media - colour, paint, collage, and mixed-media many concepts taught good use of outside stimuli - found photos & description	exciting works evidence of such enthusiasm by teacher and students wide variety of media and techniques both representational and abstract works
	E2	2	project is not understood by teacher poor experience with paint mixed media is inappropriate at this age lacks teacher stimulation work drawn and then filled in	excellent work good variety of stimuli, media, and subject matter nice to see frequent use of mixed media good exploration with paint	shows much time, effort, and interest by teacher and students such freedom of expression great variety of works - three times the amount of other groups
		3	teacher is making excellent effort but lacks background variety in techniques personal freedom allowed sketch book used extensively some delightful drawings	excellent but not quite as good as two other groups less imagination and free expression no abstract work much concept-oriented work - e.g. shape, pattern, etc.	shows much time and effort good variety of media, techniques & assignments lots of free expression teacher has influenced but not dominated
B	E3	4	teacher shows little interest no painting or figure drawing many pictures are traced or made from stencils	little time and effort - weak teacher dominated very few works done copying and stencils used no stimulation or exploration	little effort by teacher no variety in work no abstract work work taught as craft not art
		5	no understanding of project teacher dominated no stimulation given no imagination shown few pieces of work	weak - impoverished media, crayon only no guidance or motivation obviously followed a certain structure which was not well understood	extreme organization by the teacher has restricted the children mathematical, structured, and clinical no expression or spontaneity
		6	unbelievably bad no real art done at all no variety or stimulation	teacher directed no imagination or emotion only crayons & felt markers good collection of magazine pictures to illustrate	similar to the last group but more imagination was allowed here too structured little variety of media
C		7	no stimulation from teacher no painting or colour very limited rigid drawings	weak little variety of media no stimulation from teacher rigid drawing with rulers	teacher structured and dominated only crayons used no abstract work
		8	no stimulation from teacher limited materials and experience suggests that teacher has no knowledge of child art and no interest in the subject	not a well-rounded program good lessons on observation and concepts no real free expression no demonstration of technique no exploration of media, nor mixing of media no imagination or emotion	little variety only pencil and crayons used quantity not quality - many fast pieces little stimulation
D	C	9	teacher dominates and doesn't stimulate the children no paintings no imagination shown some effort at pattern covers show some lively drawings but none are inside the portfolios	good variety of media but not enough exploration or actual development technique oriented motivation based on memory, real events, imagination, room for free expression	some evidence of effort by the teacher several craft-oriented techniques in portfolios not such variety in the feeling of the work

Table 12 is a summary of all eleven teachers' responses to the questionnaire. This questionnaire is included in Appendix E. The most interesting differences are in the art training of the teachers and the days when teachers choose to have their art lessons. Scheduling often indicates the priority given to art.

Table 12 Summary of Teachers' Responses to Questionnaires

Group	Staffing Arrangement	Teacher	Years of post-second. educat'n	Number of art courses taken	Years of teaching experience *	Grades taught	Do you enjoy teaching art?	Subjects you like teaching best	Day and time of regular art class	Preferred day for art class	Duration of art class (minutes)	Amount of art-making during rest of week	Rescheduling of lost art classes?	Do you describe yourself artistic?	Interest in attending art workshops?
E1	Generalist/Specialist	1	8	10+	8	K-12	Yes	Art Eng.	Mon. or Tues. pm	same	40-60	60+	Yes	Yes	Yes
		2	7	0	7	5	Yes	Ma. Sc.	Tues. pm	same	40	60	Yes	No	Yes
E2	Classroom teacher plus specialist	3	4	1	15	2-7	Yes	Ma. Sc.	Mon. pm	Wed.	40	-	S	No	Yes
		4	5	0	4	4,5	Yes	Ma. Hist.	Thur. pm	Fri.	40	-	S	No	Yes
E3	Classroom teacher plus consultant	5	4	0	6	K-6	Yes	Ma. Eng.	Thur. pm	same	40	-	Yes	No	Yes
		6	7	1	10	5-7	Yes	Sc. Eng. Soc. St.	Fri. pm	same	30	-	S	Yes	Yes
C	Classroom teacher alone	7	1	1	15	1-7	Yes	Ma. Eng.	Fri. pm	same	60	-	S	Yes	Yes
		8	1	1	17	1-7	Yes	Ma. Eng.	Fri. pm	same	60	-	S	No	Yes
C	Classroom teacher alone	9	4	1	8	3-5	No	Ma. Eng. Sc. S.S.	Mon. or Tues. pm	same	50	-	S	No	Yes
		10	7	1	8	1-6	Yes	Art. Ma.	Thurs. pm	same	60-90	-	Yes	S	Yes
		11	3	0	10	4,5	Yes	Art Ma.	Thurs. pm	Fri.	40	-	Yes	S	Yes

* full-time in public school
S sometimes

Results of the Qualitative Investigation

Results in School A: Art Specialist

This school included groups E1 and E2 where the students were taught by an art specialist. Looking at the three sets of descriptive data, there was a clear correlation between the teachers' attitudes and efforts and the students' work in the portfolios.

The art teacher for these three classes was an art specialist with an extensive background of training and experience in art and teaching. She gave art a high profile among the activities in the school. The art lessons involved serious preparation and learning. Artwork was always displayed around the school and the students frequently did extra work in their own time.

Perhaps influenced by the enthusiasm of the art specialist and her students, the two classroom teachers became involved with art also. They allowed their classes to spend extra time making art, they looked for ways to integrate art with other subjects in the curriculum, they became involved with extra-curricular art activities in the school, and they offered to help administer tests for the art research experimental study.

The portfolios from these three classes were highly rated by the evaluators. Such remarks as, "Exciting works... Shows much time and effort by teacher and students...well-integrated picture making...wide variety of media and technique", were recorded by the evaluators.

In the researcher's opinion, the general results here indicated that the students and the teachers seemed to have had a positive and satisfying experience.

Results in School B: Generalist plus Consultant

School B included three classes in Group E3 where the students were taught by their classroom teacher who had the assistance of an art consultant. In the three sets of descriptive data there was a clear correlation between the teachers' attitudes and efforts and the students' work in the portfolios.

The three teachers had very little background in art and they gave art a low priority for time and scheduling in the week's activities. They had difficulty teaching the art curriculum, possibly because they really did not understand the art concepts themselves. They felt that art lessons for elementary school should simply provide fun and interesting products. It was not considered as a serious learning activity.

The consultant provided materials, references, sample artwork, and demonstrations as requested. She reported a lack of response or enthusiasm from the three teachers in this school. They had little knowledge of art and took little time or interest to prepare art lessons or display children's artwork.

The portfolios from all three classes contained a small number of unimaginative works done in pencil or crayons.

The evaluators rated the work as very weak and commented that the children were dominated by the teacher and there was little real understanding of art by either.

In the researcher's opinion, it seemed that neither the teachers nor the students in this school had a very positive art experience. In fact, both teachers and students showed some strong negative responses to the art program. They did not like what they were doing.

Results in School C: Generalist plus Consultant

School C included two classes in Group E3 where the students were taught by their classroom teacher who had the assistance of an art consultant. In the three sets of descriptive data there was a clear correlation between the teachers' attitudes and efforts and the students' work in the portfolios.

Both classroom teachers had very little formal art training but they enjoyed teaching art and were looking for some new ideas. They had mixed feelings about this research project because it involved learning art skills, concepts, and vocabulary which neither had done before. They felt that there was too much course content and the children did not like it. They did not really understand what they were supposed to be teaching. Nevertheless, they did their best to honour the commitment they had made to participate in the project for one year.

The art consultant noted efficient co-operation with these two teachers. Both were very agreeable and sometimes quite enthusiastic. They were interested in trying out a few new ideas as long as it did not disrupt the rest of their routine too much. They did not plan well enough to cover all the required art curriculum and they rarely ever displayed artwork in their classrooms.

The portfolios from School C contained restricted drawings with only a very limited use of materials. The work seemed to be teacher-structured and teacher-dominated, resulting from a lack of good stimulation and the opportunity for free expression.

In the researcher's opinion, the art experience in this school was poor to mediocre. There was no strong negative response to the art program but neither was there a very strong positive one.

Results in School D: Generalist Teacher Alone

School D included three classes of students who were taught by their classroom teachers alone. This arrangement was set up as the Control Group, (Group C) in the experimental study, and as such there was deliberately no personal involvement of the art consultant with any of the teachers. Because of this arrangement no observations were made in these three classrooms.

However, some descriptive data was collected and this gave some insights into the art attitudes and experiences

of the teachers and the students in School D.

The three teachers had very little art background and two of them scheduled art for the end of the week. One of the teachers thought that the drawing and painting pre and post tests were inappropriate for grade five children. She submitted a list of craft and product-directed activities which she said she had done during the year. She said she would not participate in such an experiment again. Halfway through the year she decided to withdraw her portfolios from the final evaluation.

In the end, only one teacher from School D submitted her class's portfolios. Two of the teachers withdrew theirs. Teacher number 9 said she did not enjoy teaching art, yet the judges felt that her students' portfolios reflected considerable time and effort spent. Although the children's work appeared to be teacher-directed and product-oriented, the children probably enjoyed the activities.

~~Judging only from the portfolios from one class and a few remarks by the teachers, it is not possible to make an accurate assessment about the art experiences of the children in School D. The descriptive data collected suggests that art had a low priority in this school and it was largely teacher-directed and product-oriented.~~

Chapter 5

Conclusions and Recommendations

Evaluation of the Experimental Study

Positive Aspects

This research answered many of the questions that it set out to investigate. It had hoped to reveal the value of art educators in the elementary schools, and to show how they could be used most effectively, either as specialists or as consultants. Both the Minister of Education in Quebec and the South Shore Protestant School Board were interested in identifying the most effective type of art teacher, and they wanted some systematic comparisons made between the teaching done by art specialists and by generalist teachers. This experimental study provided data which showed that an art specialist did offer a better art experience for upper elementary school children, and did do a better job of teaching a specified art curriculum. The students taught by an art specialist learned more art skills and vocabulary and had a more positive attitude towards art. The generalist teachers did not seem to understand the objectives and concepts of art outlined in the set curriculum well enough to communicate them to the children.

Another major objective of this research was to sensitize administrators to the needs and potential of art education in the elementary schools. In this regard, the project was a success. The Director General of the school board realized for the first time that there was a

significant amount of content in art that could be specified, taught, and evaluated. Treating art in this way, as another academic discipline, was helpful in making the participants and observers aware that art is not a "frill" subject and has serious potential in school curricula. For a period of two years following this study, the school board was eager to share their newly researched information. The researcher was asked to make a presentation to the Education Committee, the one group which has power to influence curriculum priorities throughout the South Shore board. On two different occasions the researcher was asked to speak to the collective group of twenty elementary school principals, and on a later date she was asked to share the research findings with English administrators from the entire province of Quebec. Thus far she has been asked to present five different workshops on integrating art with other subjects in the curriculum. As a result of this experimental research study, many administrators and teachers became more aware of ways to help children have a better experience in art.

A third positive aspect of this research was the tests developed for evaluating the children's artwork. At the start of the project, there was some doubt whether it would be possible to develop criteria which could be used consistently by several different judges to evaluate the children's drawings and paintings. The five tests and three sets of scoring criteria proved to be very reliable in this study. They were designed for this particular project and not

intended to be models for future research or comparisons.

Limitations

There were some limitations to this method of research. Although it documented student achievements in art under different staffing arrangements, it focused on the products and did not explain how or why these results occurred. There are many factors which influence children's art experiences. Eight different factors were controlled in this experiment (see Chapter 3, page 36-37), but other factors were not. Among the important factors which could not be controlled, were the philosophy of the school principal who decides on subject priorities, and the time spent or allowed for making art by the teacher. Perhaps these uncontrolled factors were as significant as the ones that were controlled; such as the staffing arrangements, the class size, the socio-economic environment, etc.

One other possible limitation of this experimental study was the fact that the art specialist, the art consultant, and the researcher were the same person. The testing and marking procedures were rigorously controlled and the teachers' responses to questionnaires indicated that the art consultant was performing the job in a satisfactory manner. However, one might be suspicious as to whether the individual involved unconsciously did a poor job as consultant in order to have the art specialist's students achieve better results. As the researcher involved, who acted in both those roles, I believe that I had no vested interest

in proving that the art specialist was superior or more desirable because my position with the school board was not at stake. This study might have been more objective if the art specialist and the art consultant had been two different people. However, that would have introduced another major uncontrolled variable (see Aulls, page 35).

Evaluation of the Descriptive Study

Positive Aspects

The information uncovered by the descriptive data was very valuable in answering the question of "why" some children had a better art experience than others. It documented the attitudes and behaviour of several generalist teachers during a period of ten months. Art had a low priority for them. They did not motivate the children, nor give them any opportunity to explore materials, or express their feelings and ideas in images. They did not seem to understand the concepts they were trying to pass on to the children. It is not surprising that the children had little enthusiasm for art under these circumstances, nor is it surprising that their work was lacking in skills and imagination. The descriptive data also documents how the efforts and attitudes of a qualified and enthusiastic art teacher were reflected in the responses of the students.

This descriptive study provided answers for administrators who wanted to identify the most effective type of art teacher, and who wanted some comparisons made between specialist and generalist. It produced data which indicated

that a written curriculum guide is not adequate preparation or assistance for a classroom teacher to provide a good art experience. The teachers had difficulty understanding the content of the curriculum and in implementing the suggested art lessons.

Limitations

The limitations of this method of research are that the evaluations of the art experience were made on the basis of the researcher's observations, and these observations could be coloured by the researcher's background and experience in art. One might be suspicious that an art specialist would do everything possible to convince others that a specialist was the best person to teach art to children. There is no way of knowing if another researcher would interpret the events in the same way. This qualitative approach does not provide the kind of objective data looked for by school board and government administrators who are in a position to make recommendations for changes in hiring staff or setting curriculum priorities. The results of the descriptive study may be of more interest to people who are involved with training classroom teachers or specialists to teach art.

Conclusions

Both methods of research, the quantitative and the qualitative, arrived at the same conclusions.

The results indicated that the children had a better art experience with the art specialist rather than with their classroom teacher. The quantitative experimental results showed that the children taught by the art specialist made greater gains between their pre-test and post-test scores. They acquired more skills, learned more art concepts and vocabulary, and expressed themselves more personally. See Tables 1-5, page 44, and Appendix D. In the qualitative study, the children taught by an art specialist produced a greater quantity and a greater variety of artwork as revealed in their portfolios. The results of the teachers' questionnaires and the consultant's diary revealed that the art specialist spent more time and effort in the teaching of art.

In the province of Quebec in 1979, the Minister of Education stated that art education was an important part of the elementary school curriculum and lengthy program guides have been prepared outlining what is to be taught at the various levels of elementary schools. The elementary classroom teachers participating in this study had difficulty understanding some of the art concepts selected from the government curriculum. It appears that provincial curriculum guides alone cannot help the classroom teacher to provide a good art experience in the schools, and that teachers cannot teach concepts that they do not understand.

Another option which has been tried as a means of helping to provide a good art experience, is the use of an art consultant. This possibility was also investigated in this study, and the art consultant proved to be less effective, and in fact, sometimes had a negative influence. These findings confirm Hollinger's observations (1978) that consultation is difficult and even over a two year period one is likely to be disappointed with the results. It is difficult to change long ingrained habits. Perhaps, over a longer time period the art consultant might have been more effective.

This study also considered whether spending more time on art would affect the academic subjects of the curriculum. The results of the Canadian Test of Basic Skills given to the children indicated that when extra time was spent on an art program it did not appear to jeopardize the children's learning of basic mathematics and language arts skills. This challenges the notion that art is a wasteful frill.

Although the conclusions drawn from this study are based on a particular experience in a particular school system, and are not necessarily applicable in a wider context, the following recommendations can be made based on the results of this investigation.

Recommendations

The first recommendation is that upper elementary school children would profit by having their art programs taught by an art specialist who has the training and experience in

art necessary to implement the art curriculum. Ideally, elementary schools with ten or more teachers should include one art specialist. Two options are suggested. The first is to have an art specialist teaching all the art classes in the school. The second would be to have a generalist teacher who has further training as an art specialist, and who functions both as a classroom teacher and an art specialist. The latter arrangement offers the school more flexibility in staffing arrangements and budgeting.

This study reveals that classroom teachers definitely need more practical experience in the making and teaching of art and the learning of art concepts. The next best alternative to an art specialist in the elementary classroom would be to encourage classroom teachers to enroll in studio art and art education courses and programs. They first need to learn art skills themselves and then they need to learn how to apply them and integrate them into the curriculum for children. School boards and universities might be encouraged to provide short and long term art education courses for elementary classroom teachers. Art specialists and art consultants could be used to provide in-service training.

Since it is government and school board officials who make the decisions about staff and curriculum priorities in the schools, the results of this study and others like it should be brought to their attention so that they might become more aware of the values of art education and art specialists in the elementary schools.

A question for further research arising out of this study is the effect of the amount and use of time spent making art in elementary classes. Time seems to be a significant factor in the production of good artwork and in the acquisition of a good art experience. It would be interesting to document and compare the times spent by art specialists and classroom generalist teachers in preparing and teaching their art lessons. One could also compare the amount of time their students were given to make art.

It is the author's hope that this study will help teachers to better understand their roles in art education, so that the needs and interests of students can be met and their potential for learning and expression in art may be fulfilled.

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Appendix A: The Tests

Six instruments were used to gather objective and numerical data for this research project. Four were designed specifically for this project. One was designed for use within the school board during the previous year. It was never intended that these tests should be used regularly in a classroom nor that they would be necessarily suitable for other age groups or settings. These tests were administered in the same way to all the groups of children by their classroom teachers.

The word "test" is perhaps misleading. From my experience the students enjoyed doing these tasks. They were not threatening tests to be recorded on report cards. They were short in duration. Much personal freedom was allowed in completing them. There was no right or wrong answer. This was a standardized method of obtaining similar assignments from all the children so they could be compared on specific skills. Some of the teachers did the tasks themselves to see how they measured up against the children.

The six instruments were:

1. Art Interest Inventory
2. Art Concepts Test
3. Drawing Test
4. Painting Test
5. Picture-Composition Test
6. Canadian Test of Basic Skills

Art Interest Inventory

This test was a questionnaire developed in 1978 by Jean Pycock, Education Specialist for the South Shore Protestant Regional School Board. This questionnaire was used extensively in 1979 and a full report details the results,

Report on Art Interest Inventory (Pycock & Wiebe, 1979).

The ten questions were read aloud to students by their teacher. They were requested to circle one of the words; OFTEN, SOMETIMES, SELDOM, NEVER. They were asked to respond quickly rather than to ponder their answers. The questions asked them about their attitude towards art, their interest in visual things, and their active participation in arts and crafts.

Art Concepts Test

Since it is considered important for children over the age of eight to develop a knowledge of the language of art, it was easy to specify some of this vocabulary and test it. Rather than a straight verbal language test, it was decided to use the style of the visual arts problems as presented by the Attleboro Public Schools, Visual Arts Program (Brigham, 1977). Some of the Attleboro questions were used and additional ones were created. To complete this test, children needed to understand the words as they drew pictures to illustrate the meaning. Their answers revealed a knowledge of lines, space, repetition, symmetry, etc. There were 37 marks for

this test and it took about twenty minutes to complete, although there was no time limit set. It was administered in September and May.

Drawing and Painting Tests

In order to develop these two tests it was necessary to decide what media to use and exactly what skills could be taught to grade five students. It was necessary to consider the fact that the study involved over 300 children, eleven different teachers, and eleven different classroom settings. The teachers had minimum time, tight schedules, small spaces, and only the bare essentials for materials. No additional money was available for supplies. These factors made it easy to decide to evaluate only drawing and painting. Three-dimensional work was simply not portable or easily stored. Printing involves equipment which most teachers were unfamiliar with and not prepared to gather. Collage also requires gathering materials from outside the classroom. With any media other than drawing and painting, the art specialist would have had a distinct advantage over the other teachers. Manilla, construction, and typing paper were available in all schools. All children could be expected to provide their own pencils, pens, and crayons of some sort. A complete class set of tempera block paints was made available to participating teachers since many of them did not have paints nor were they prepared to obtain them on their own.

Although the teachers were interested to participate in this project, they were not prepared to disrupt their daily schedules. Extending the time limit to one hour for each of these two tests, required considerable planning for several teachers. Since upper elementary school children change teachers and classrooms for French and gym and sometimes other subjects, it is not always easy for the classroom teacher to plan an hour's activity without interruption.

Drawing Test

It was important that all the children had the same stimulation, time, and materials to produce products which could be compared using the same criteria. It was decided to have each teacher read a story, one filled with several interesting characters and several changes of scene, allowing for everyday reality or a bit of fantasy. The pre-test story chosen was "The Brave Little Taylor", a fairy tale by Grimms. The post-test story was "The Two Ton Wrestler", a folk tale of Pakistan. Both stories took about ten minutes to read aloud. Children had one hour to listen to the story and then draw a picture to interpret any part of it. The children were given an 8½ x 11 inch piece of white typing paper and told to use any drawing tools they wished. This could include pens, pencils, wax or pencil crayon or felt markers. Colour could be used but it was not essential. This test was done in September and in May. Each test was

scored with a possible 12 points for skills and 4 points for aesthetic. These scores were not totalled but treated independently.

Painting Test

The children were given one piece of 9 x 12 inch manilla paper, wax crayons and a six block tray of tempera paints which included only red, yellow, blue, black and white blocks. They were also given brushes of various sizes, a jar of water, and a mixing dish. Since the drawing test tended to bring out representational work, an effort was made to administer a painting test that would encourage non-figurative work for those who wished. In the painting test, they were asked to think of several geometric shapes and arrange them on the paper using a wax crayon to outline them. The picture or design could be organised any way they liked and the entire page was to be painted in the colours of their choice. They were to mix the colours and apply the paint in any way they chose. There was a one hour time limit. This test was done in September and May. It was scored much like the drawing test with a total of 12 points for skills and 4 points for general aesthetic.

Picture Composition

The last task was a more open one with no time limit. It was hoped that the children would really be able to get involved with personal expression as well as careful planning and freely chosen media. There was time for both teachers

and students to put forth their best efforts. It had to be done on 12 x 18 inch paper of any kind. The theme was to design an ideal environment for children's living. This was done in March or April.

The Canadian Test of Basic Skills

These are standard achievement tests for basic language arts, mathematics, social studies and general knowledge verbal skills. They are available for purchase and are regularly administered to many children all across Canada at various ages and at various times of the year. They are given routinely in September to all upper elementary children in the South Shore Board. They were used to match groups in this research project. It was important that the children had similar academic achievement aside from their performance in art. It was also of interest to the school board to learn whether students who spent more than the normal time making art would fall down in other academic subjects.

Art Interest Inventory.Instructions for the teacher -

1. Say to students:

"I am going to pass out a short questionnaire to find out your attitude toward art. Please do not begin until I tell you. We will do it together."

2. Pass out the inventory.

3. Ask students to write their full names at the top of the sheet.

4. Say to students:

"In a moment I will read the questions aloud. Please circle one word in answer to each question: OFTEN, SOMETIMES, SELDOM, NEVER."

"What does "SELDOM" mean?"

5. Elicit answers from students - "not very often", "once in awhile", "hardly ever".

6. Say to students:

"Do not think hard about your answers. Circle the word which first comes to your mind."

7. Read aloud at a steady pace both the questions and the answers.

Do not pause between questions. Do not give students time to think out their answers.

8. Gather the inventories.

9. Place inventories in the envelope.

10. Write the name of the school and the date on the front of the envelope.

(Pycock & Wiebe, 1980)

Art Interest Inventory

1. Do you like to draw or paint?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
2. Do you like to do crafts, like modelling, wall hangings, weaving, macramé etc.
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
3. Are you interested in what other people draw or paint?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
4. Do you notice pictures hanging on walls?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
5. Do you look forward to art at school?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
6. Do you think art is a waste of time?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
7. If you have spare time do you ever choose to do art or crafts?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
8. Would you be happy with a gift of art supplies?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
9. Would you like to learn more about art?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER
10. If there were books of art pictures in the library, would you take them out?
1) OFTEN 2) SOMETIMES 3) SELDOM 4) NEVER

Art Research Project

Concepts Test

Instructions for the Teacher

1. Say to students:

"I want you to try out a different kind of test. I don't expect you will be able to do all the things you are asked to do, but I'd like to find out what you already know so I can plan your program better."

2. Give a copy of the test to each student.
3. Read the instructions aloud to the class, page after page, as students look at their own copies of the test.

DO NOT EXPLAIN THE MEANING OF ANY WORDS TO THE STUDENTS.

4. Ask students to begin on page one and complete the test. (approximate time; 20 minutes)
5. Place the tests, unmarked, in the brown envelope, and return to Jean Pycock at the board office.

(Pycock & Wiebe, 1980)

1

Name _____

Drawing different kinds of lines

Draw some lines that are:-

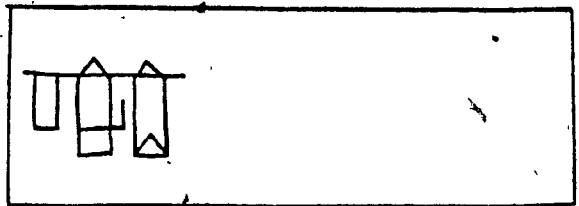
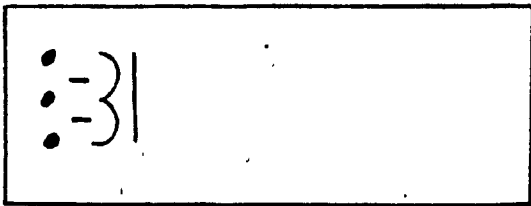
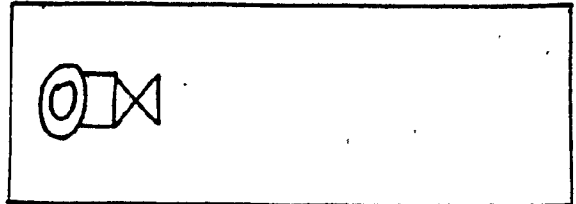
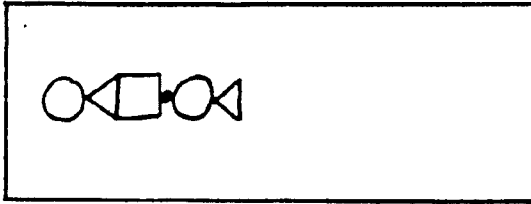
straight	curved	zig-zag
horizontal	vertical	diagonal
thick	thin	broken
parallel	spiral	fuzzy

Sample

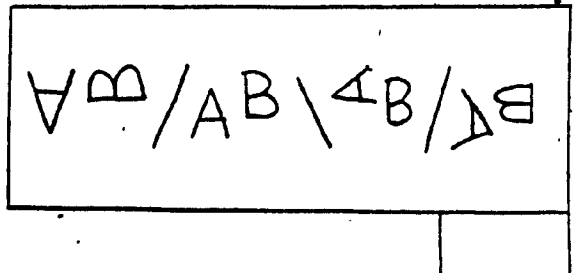
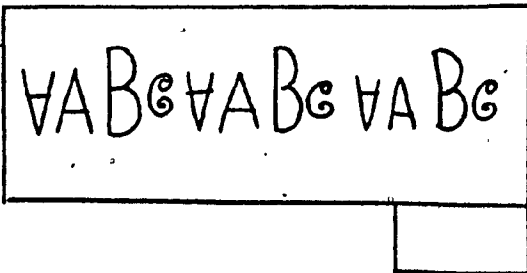
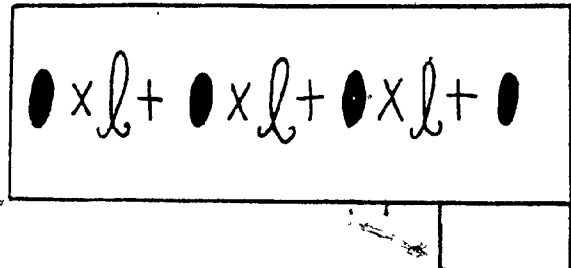
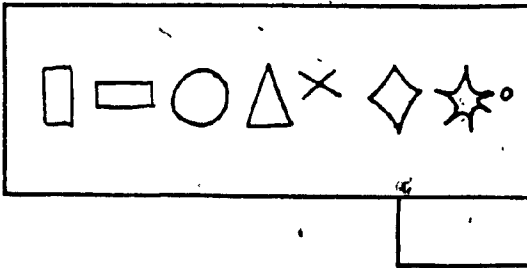
Complete each series found below.



given this, you do this



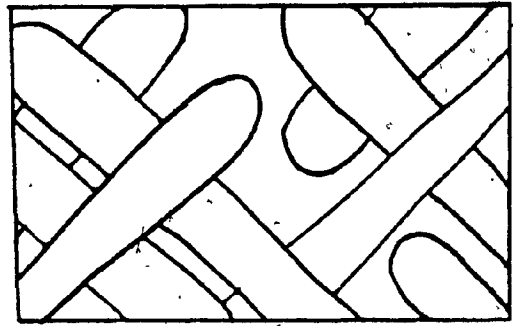
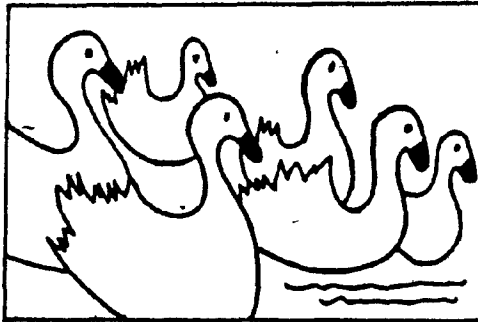
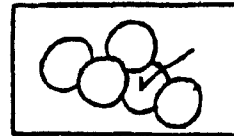
Check (✓) each box that shows shapes in a series.



3

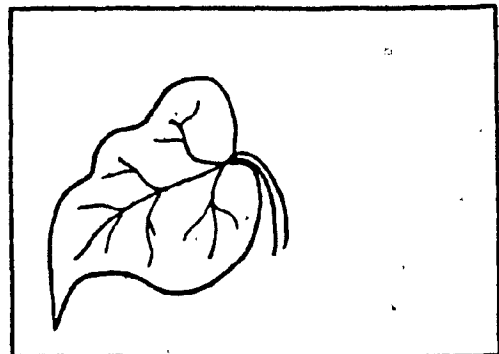
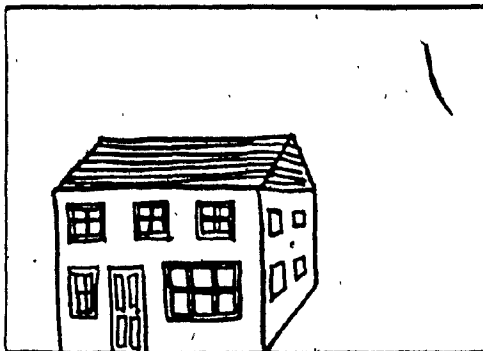
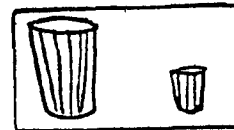
Check (✓) the object in each box which is farthest away.

Sample



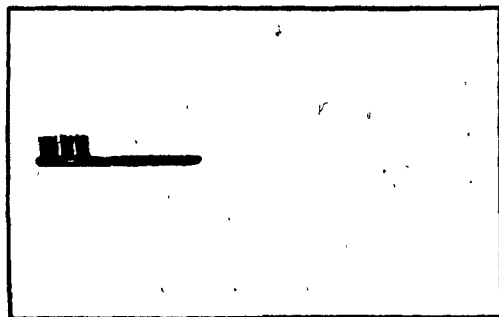
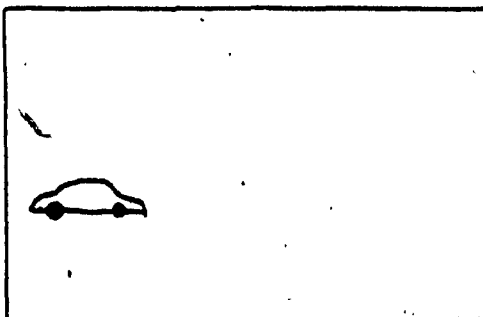
Redraw the object in each picture to make it look far away.

Sample

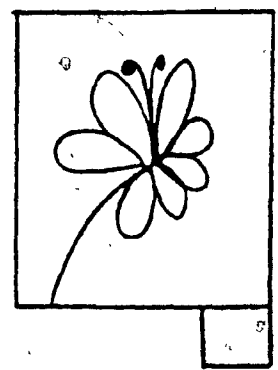
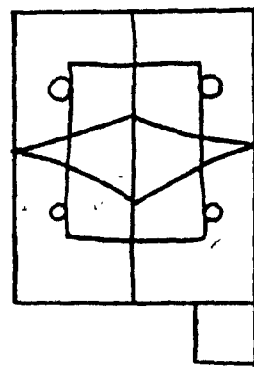
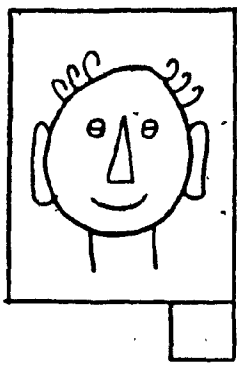
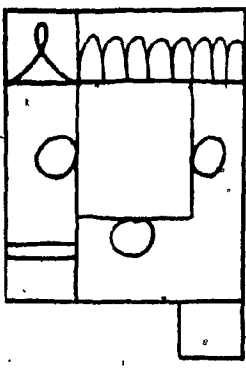


Redraw the object in each picture to make it look very close to you.

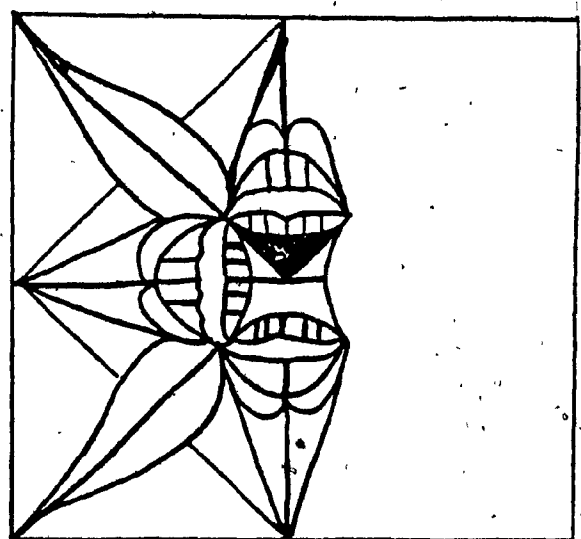
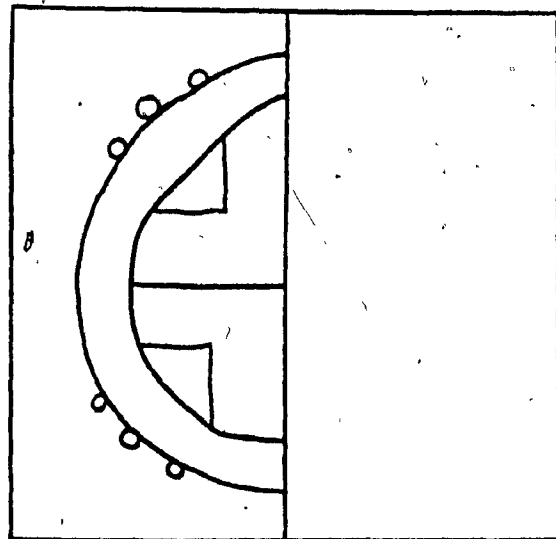
Sample



Put a check (✓) under the squares that show symmetry.



Complete the designs to show perfect symmetry.



5.

Draw a simple diagram to show each of the following basic structures:

radial	branching
grid	concentric
perpendicular	

(Pycock & Wiebe, 1980)

Drawing Test

Approximate time: 1 hour

Instructions to the teacher -

1. Have students get drawing material ready:
Pencils, pens, crayons (pencil or wax), markers or anything they wish that makes marks.
(PREFER NOT OIL PASTELS)
2. Give out paper - 9 x 12 white cartridge paper or mimeograph paper
3. Have students write their name and the date on the back of the paper.
4. Say to students:
"I'm going to read a story and I want you to draw your favourite part of it - any part that interests you.

There will be many different people throughout the story and you should include one or several of them. Try to include a person in your picture.

You may prefer to listen to the whole story before you begin to draw. You can start drawing at any time that you are ready and have decided what you want to draw.

You may not look at the pictures with the story nor any others. Make up your own picture.

You may have as much time as you wish.

You may use colour if you wish to but you do not have to."

5. Read the story aloud (12-15 min)
6. Students draw and/or colour until they have finished.
7. Note the time taken on the drawing after the end of the story (usually 20-40 mins.)
8. Write the time on the back of the child's paper as it is turned in.
9. Note anything else significant:
 1. if child is very insecure and constantly asks "Is this O.K.?", etc.
 2. if child wants another paper because he "wrecked" it, try to talk him out of it. "Turn the page over". "Erase, etc". If he insists or is very upset, give him a second page and keep both, numbering them 1 and 2.

(Pycock & Wiebe, 1980)

Painting Test

Approx. Time: 1 hour

Instructions for the Teacher

1. Materials -

For each pupil

- 1 piece of 9" x 12" manilla
- 1 wax crayon
- 1 paint brush (any size)
- mixing dish (eg. bottle lid)

To be shared among 3 students:

- paint tray containing blocks of red, yellow, blue, black and white paint.

2. Ask students to write their name and the date on the back of their papers.

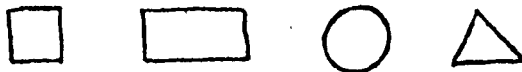
3. Say to the students:

"Today I want to see how you can paint.

With the crayon you will draw 5 geometric shapes.

These are the geometric shapes."

Illustrate by drawing the shapes on the board as you say, "Square, rectangle, circle, triangle".



"The shapes may stand alone."

"The shapes may touch."



"The shapes may overlap."



"You may draw 5 different shapes, or they may be 5 of the same kind."

-2-

"I want to see how you paint when you use the brush, how you can mix colours, so don't spend a long time drawing your geometric shapes."

"When the shapes are drawn, then fill in all the spaces with as many colours as you can make. Fill the whole page with colours - don't leave any white empty spaces."

4. Erase your own drawings from the blackboard.
5. Ask students to begin work (Time limit - approx. 1 hour)

Notes:

- 1) Student question -

"Can I use more than 5 shapes?"

Answer -

"Yes! One or two, if you want to divide up the page more."

The object is to paint - the exact number of shapes is not too crucial. What is important is for students to divide up the page into spaces for painting different colours.

- 2) If students are working slowly, they should be urged to work more quickly in order to finish within the time limit.
6. When the paintings are dry, please place them in the envelope and send them to Jean Pycock at the board office.

(Pycock & Wiebe, 1980)

Art Research Project

Picture-Compositions (due April 30th, 1980)

Instructions for the Teacher

Sometime between now and April 30th, we would like to have one sample of a picture-composition from each grade five child in your class. We would like it to be done without rush or pressure, and in your own manner, hence we are allowing three months. The purpose is for you and your class to have the chance to do some art outside the formal, scheduled limits of the post-tests in drawing and painting.

When the picture-compositions are complete, please place them in a large brown envelope and send them to Jean Pycock at the Board Office, or give them to Wendy Wiebe. The picture-compositions are due April 30th, 1980, but they may come in anytime before that date.

Rules

- Use 12" x 18" paper
- Use any media - pencil, pen, marker, crayons, paint, etc.
- Use more than one colour.
- Put at least one person in the picture.
- Make some kind of background.
- Take as much time as you want.
- All work must be done at school.

Instructions for the Students

Design a home or living space for you and your friends where there will be no adults, only children. Make an interesting large building or place to live in. Indicate in the picture where it is located - arctic, tropics, forest, desert, meadow, etc. Show what you and your friends will do there. Show all the things you would like to have in your home or space.

(Pycock & Wiebe, 1980)

Appendix B: The Criteria and Scoring System

At first, the task of developing specific criteria to mark drawing and painting seemed formidable. Fortunately, a useful model was found which was used as a base to build from. Anway and Macdonald's study: Research in Art Education: The Development of Perception in Art Production of Kindergarten Students, from Michigan in 1971 was an invaluable aid to this project.

In February, 1980 a short replication of the Michigan study was done by the researcher in three kindergarten classes in St. Hubert, Quebec. This gave insight into the actual workings of a jury system, the interjudge reliability in using specific criteria, the time required to make judgements based on a four point scale, the length of time a judge could work effectively, and also the best way of scoring. Using the Michigan model, we found that our judges interpreted the criteria consistently and agreed with each other on the scores. These results were very encouraging. The type of criteria in the Michigan study were adapted for the older children in the Quebec project.

Budget limitations were a major factor in selecting the criteria. Funds were available to pay for only four and one-half days for each of three evaluators. The first half day was to be a training session, so the job had to be completed in four days of marking. These four days were divided as follows: one day for drawings, one day for

paintings, and two days to mark the larger and more comprehensive picture-compositions. To mark 208 drawings in one day meant spending approximately two minutes to judge all required criteria for one piece of work. In short, the criteria had to be simple, well understood, and easily distinguishable from each other.

For the drawings and paintings, it was agreed to objectively evaluate three specific skills for each piece of art work. Each skill was evaluated on a scale from 1 to 4 points. In addition, a personal subjective mark was given for aesthetic appeal. This was also rated on a four point scale. In marking the picture-compositions, five criteria were developed to assess several different skills. The picture-composition was in many ways a combination of the drawing and painting tests.

An experienced art educator Betty Jaques of McGill University, was asked to specify the criteria in writing. Using the Michigan criteria as a model, she was asked to develop measures suitable for the drawings, paintings, and picture-compositions being done by the ten to twelve year olds in our project. This was done and the criteria were then arranged in chart form so they could easily be seen at a glance. Individual charts were made for drawing, painting, and picture-composition criteria.

In a five hour training session, the three art evaluators tried out the criteria. Sample sets arranged for the scores

1, 2, 3 and 4 points, were looked at and discussed. The criteria were revised to clarify certain aspects. Some of the criteria for the picture-compositions were eliminated altogether. For example, a category for plants and animals was eliminated because many city apartment and "Starwars" children do not normally put plants and animals in their pictures. The criteria had to be useful for every child's picture produced. Many small additions or clarifications were made. The resulting final criteria and sample score sheets are presented in Tables 12, 13 and 14.

These criteria were developed specifically for the three tests made to evaluate the grade five student work done in the South Shore project in 1980. These tests may be useful to someone else in the future but they were in no way meant to be used as standard achievement scales for children's artwork.

Table 13
Criteria for Evaluating Drawings

	Score 1	Score 2	Score 3	Score 4
Shape	<p>Images do not dominate the picture space</p> <p>Images all separate, not touching, 'floating'</p> <p>Many large empty spaces</p>	<p>Images dominate but immature - base-line, sky, sun symbols</p> <p>Complete but simple setting indicated</p> <p>Small shape with large ground</p>	<p>Main images dominate picture space</p> <p>Combination of plan and elevation</p> <p>Simple attempts to show depth or distance by variation in size and overlapping</p>	<p>Evidence of understanding of overlapping of shapes and/or variation in size to show distance</p> <p>Several planes or deep space shown</p> <p>Perspective used</p> <p>Completeness - no major shapes could be left out without changing the meaning</p>
Colour	<p>Figure incomplete</p> <p>Static frontal view</p> <p>Stick and blob type figures</p>	<p>Figures complete - head, neck, hands, feet</p> <p>Poor proportion of head and limbs</p> <p>Static - little suggestion of movement</p>	<p>Figures show some movement</p> <p>Figures complete and in good proportion</p> <p>Variety of poses - frontal and profile</p>	<p>Figures complete with good details in limbs, facial features, hair, clothing, etc.</p> <p>Figures in good proportion</p> <p>Figures show movement or action</p> <p>A variety of poses shown</p> <p>Two or more figures interacting</p>
Page Application	<p>No variety of lines used</p> <p>No pattern or texture</p> <p>Many scribbly lines</p> <p>Many plain surfaces throughout</p>	<p>Two different kinds of lines - thick, thin, curvy, broken</p> <p>Simple line relationships, touching, interconnecting, intersecting to form shapes</p> <p>Repetition of a shape such as a flower to create a pattern</p> <p>Simple texture - e.g. grass</p>	<p>At least 3 kinds of lines used - straight, curved, crooked, zig-zag, varied length and thickness</p> <p>Most lines connect, intersect, parallel, outline, and divide shapes</p> <p>More than half the page involved through pattern and texture</p>	<p>Rich and elaborate use of lines</p> <p>Complex line relationships which give rhythms and achieve a sense of completeness over the total paper area</p> <p>Sophisticated use of diagonals</p> <p>Variety of thickness, direction, length of lines</p> <p>Use of pattern and texture to enrich parts of the composition</p>
Aesthetic	<p>Very negative</p> <p>Do not like this picture</p>	<p>Indifferent to the picture</p> <p>Do not really like or dislike</p>	<p>Medium-positive response</p> <p>It is O.K., not bad, has some interesting features</p>	<p>Very positive appeal to you personally</p> <p>You do like it very much</p>

Table 14
Criteria for Evaluating Paintings


Score	Score 1	Score 2	Score 3	Score 4
Shape	Poorly executed shapes Boundaries or edges poorly defined Little effort to combine shapes.	Simple basic shapes used, circle, square, etc. properly drawn. Isolated shapes scattered throughout Very simple shape combinations	Basic shapes altered Sophisticated shapes used, e.g. hexagon Shapes combined or divided and placed within, outside, around and/or beside other shapes. Shapes may combine or connect to form a complex unit.	A definite effort made for some formal arrangement of shapes, e.g. symmetry, concentric, horizontal, vertical etc. Complex unit of shapes where no shape could be left out without changing the meaning. Well-executed shapes. Well-planned arrangement of shapes. 
Colour	Few colours used. Little colour mixing done. Mainly used primary colours straight from the block. More than half the page left uncoloured.	Several colours used but little evidence of definite planning Few new colours mixed or chosen Little interaction of colour Limited contact	Evidence of planning in the colours mixed and chosen. Partial interaction of colours. Contact at points and boundary areas, dominance of boundary contacts. More than half the page coloured	Colours deliberately chosen, mixed, and interacting. Formal colour arrangements, warm or cool, monochrome, tints and shades, etc. Complete interaction. Rhythmic, repetition deliberate Deliberate contrast, blending
Paint Application	Haphazard indecisive application of paint Less than half the page filled. Very messy!	Attempted effort was poorly done: - wet paint running into another wet colour - insufficient paint mixed to cover an intended area - poor edges on shapes - large brush ill-used to cover a small area	Evidence that a definite method of application was intended: e.g. transparent opaque textured dry brush smooth & flat Intent was not well-executed, colours muddled, brushwork sloppy	A definite method of application was planned and well-executed All parts of the painting are covered as intended Some overlapping of colours, texture, lines, shapes painted on top of another colour.
Aesthetic	Very negative. Do not like this picture.	Indifferent to picture Do not really like or dislike	Medium-positive response	Strong positive appeal to you personally. You like it very much.

Table 15

Criteria for Evaluating Picture-Compositions

Skills

	Score 1	Score 2	Score 3	Score 4
Composition Use of Space	Images do not dominate the picture space Very few images, many large empty spaces	Images dominate but immature - base-line, sky, and sun symbols Complete but simple settings indicated Small shape with large ground	Main images dominate picture space Combination of plan and elevation Simple attempts to show depth or distance by variation in size and overlapping.	Several planes, or deep space shown Distance shown by overlapping Variation in size, perspective Evidence of good understanding Completeness - no major shapes could be left out without changing the meaning.
Human Figure	Figure incomplete Static frontal view Stick or blob type figures	Figures complete - head, neck, hands, & feet Poor proportions of head and limbs Static - little suggestion of movement	Figures show some movement Figures complete and in good proportion Variety of poses - frontal and profile.	Figures complete with good details in limbs, facial features, hair, clothing, etc. Figures show movement or action A variety of poses shown Two or more figures shown.
Houses and/or Vehicles	Stereotype house with chimney at right angle to roofline Profile view of cars, boats, aeroplanes	House related to child's environment, not stereotype Vehicles showing details of mechanisms	Details of buildings shown - doors, windows, sidewalk, driveway. Variety of views of cars, boats, planes, etc. Imaginative details shown	House shows texture of roof, walls, windows, environment Vehicle indicates movement and environment. Side, front, back views shown Two or more buildings or vehicles shown.
Pattern and Texture	No variety of line used Many plain surfaces throughout No pattern or texture	Two different kinds of lines used - thick, thin, curvey, etc. Simple texture such as grass Repetition of a shape such as a flower to create a pattern	At least 3 kinds of lines used - straight, curved, zig-zag, etc. More than half the page involved with lines. Suggestion of movement through pattern and texture, e.g. bending trees.	Rich and elaborate use of line Use of pattern and texture to enrich parts of the composition e.g. stipple or brushstroke Variety of thickness, direction and length of lines. Complex line relationships which give rhythm and achieve a sense of completeness over the total paper area.
Colour and Media Application Paint OR Crayon	Few colours used Little colour mixing done - mainly primary colours used straight from the block. Little interaction of colour More than half the page left uncoloured	Several colours used but little evidence of definite planning. Few new colours mixed or shown. Little colour interaction No repetition of colour Limited contact	Evidence of planning in the colours mixed and chosen. Partial interaction of colours Contact at points and boundary areas, dominance of boundary contacts. More than half the page coloured Halo lines around the shapes where the colours are not right next to each other.	Colours deliberately chosen, mixed, and interacting. 'Formal' colour arrangements used, warm & cool, monochromatic tints and shades, etc. Deliberate use of rhythm, repetition, contrast, blending. Shows understanding of contact of tone and hue. Juxtaposition of colours with no halo lines.
	Scribbly lines poorly drawn Crayon used to outline and scribble in the center No uniformity of crayon lines Half of paper left empty	Crayon used to outline and then neatly colour in larger areas Some solid colour areas well done No colour blending or texture	Crayon used to create texture or pattern. Effort to make uniform crayon strokes, all going in the same direction and with the same intensity Some effort to blend colours.	Crayon used in a variety of ways - well-executed: Variety of lines (thick, smooth flat surfaces) Rich thick colours Colours well-blended and ones created Texture created Good contrasts made
Personal Judgments				
Imagination	Formulaic concept - dull or humdrum Stereotype image	Limited to factual images	Some imagination in treatment, or placement, or combination of images.	Very imaginative ideas Combining unusual images or parts of images.
Aesthetic	Very negative Do not like this picture	Indifferent to picture Do not really like or dislike	Medium-positive response It's O.K., not bad, has some interesting features.	Very positive appeal to you personally. Do like it very much!

1 of

Table 15

Criteria for Evaluating Picture-Compositions

Score 1	Score 2	Score 3	Score 4
<p>not dominate the space images, many large shapes</p>	<p>Images dominate but immature- base-line, sky, and sun symbols Complete but simple settings indicated Small shapes with large ground</p>	<p>Main images dominate picture space Combination of plan and elevation Simple attempts to show depth or distance by variation in size and overlapping.</p>	<p>Several planes, or deep space shown Distance shown by overlapping, variation in size, perspective. Evidence of good understanding. Completeness - no major shapes could be left out without changing the meaning.</p>
<p>complete frontal view job type figures</p>	<p>Figures complete - head, neck, hands, & feet Poor proportions of head and limbs Static - little suggestion of movement</p>	<p>Figures show some movement Figures complete and in good proportion Variety of poses - frontal and profile.</p>	<p>Figures complete with good details in limbs, facial features, hair, clothing, etc. Figures show movement or action A variety of poses shown Two or more figures shown.</p>
<p>house with at right angle to view of cars, boats, etc.</p>	<p>House related to child's environment, not stereotype Vehicles showing details of mechanisms</p>	<p>Details of buildings shown- doors, windows, sidewalk, driveway. Variety of views of cars, boats, planes, etc. Imaginative details shown</p>	<p>House shows texture of roof, walls, windows, environment. Vehicle indicates movement and environment. Side, front, back views shown Two or more buildings or vehicles shown.</p>
<p>of line used surfaces through- or texture</p>	<p>Two different kinds of lines used - thick, thin, curvey, etc Simple texture such as grass Repetition of a shape such as a flower to create a pattern</p>	<p>At least 3 kinds of lines used- straight, curved, zig-zag, etc. More than half the page involved with lines. Suggestion of movement through pattern and texture, e.g. bending trees.</p>	<p>Rich and elaborate use of lines Use of pattern and texture to enrich parts of the composition. e.g. stipple or brushstroke. Variety of thickness, direction, and length of lines. Complex line relationships which give rhythm and achieve a sense of completeness over the total paper area.</p>
<p>used for mixing done - primary colours used from the block. interaction of colour half the page left red</p>	<p>Several colours used but little evidence of definite planning. Few new colours mixed or chosen. Little colour interaction No repetition of colour Limited contact</p>	<p>Evidence of planning in the colours mixed and chosen. Partial interaction of colours Contact at points and boundary areas, dominance of boundary contacts. More than half the page coloured Halo lines around the shapes where the colours are not right next to each other.</p>	<p>Colours deliberately chosen, mixed, and interacting. 'Formal' colour arrangements used, warm & cool, monochrome, tints and shades, etc. Deliberate use of rhythm, repetition, contrast, blending. Shows understanding of contrast of tone and hue. Juxtaposition of colours with no halo lines.</p>
<p>lines poorly drawn used to outline and in the center of crayon lines per left empty</p>	<p>Crayon used to outline and then neatly colour in larger areas Some solid colour areas well done No colour blending or texture</p>	<p>Crayon used to create texture or pattern. Effort to make uniform crayon strokes, all going in the same direction and with the same intensity Some effort to blend colours.</p>	<p>Crayon used in a variety of ways - well-executed: Variety of lines (thick, thin) Smooth flat surfaces Rich thick colours Colours well-blended and new ones created Texture created Good contrasts made</p>
<p>judgements</p>			
<p>concept - dull or image</p>	<p>Limited to factual images</p>	<p>Some imagination in treatment, or placement, or combination of images.</p>	<p>Very imaginative ideas Combining unusual images or parts of images.</p>
<p>live in this picture</p>	<p>Indifferent to picture Do not really like or dislike</p>	<p>Medium-positive response It's O.K., not bad, has some interesting features.</p>	<p>Very positive appeal to you personally. Do like it very much!</p>

2 of 3

ART RESEARCH PROJECT - JUDGES' SCORE SHEET - PAINTINGS

In the space beside each number mark a score of 1, 2, 3, or 4 for each of the aspects listed. Use the standardized criteria for evaluating each skill.

Item No.	SHAPE	COLOUR	PAINT APPLICATION	TOTAL SKILLS	AESTHETIC
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

ART RESEARCH PROJECT - JUDGES' SCORE SHEET - DRAWINGS

In the space beside each number mark a score of 1, 2, 3, or 4 for each of the aspects listed. Use the standardized criteria for evaluating each skill.

No.	Composition - Space	Human Figure	Line & Detail	Total Skills	Aesthetic
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Appendix C: Using a Jury System

Three judges were selected to mark the drawing and painting tests. All were qualified art educators, and two were art teachers with more than ten years of experience teaching children. An intensive training session was set up for the judges, in order to see whether the criteria were clear, whether judges had the same response to the criteria (reliability), and to verify whether the criteria would be applied consistently to the same artwork at different times (consistency). The judges received a daily stipend consistent with teacher's wages.

The judges worked four and one-half days and their schedule was as follows:

May 10 - Package of literature arrives in the mail

May 21 - Training session, 7 to 11 p.m.

June 4, 5 - Marking of picture-compositions,
9 a.m. to 4 p.m.

June 11 - Marking of paintings, 9 a.m. to 4 p.m.

June 15 to 20 - Marking of drawings, approximately
6 hours

The package of literature included:

- 1) Summary of project objectives and procedure
- 2) Methods of evaluation
- 3) Judges schedule
- 4) Charts of standardized criteria, score sheets, and art samples from children.

The literature was sent ten days prior to the training session so that the judges could become familiar with the project, the criteria, and the procedures for evaluation.

The training session was essential to help the judges understand and clarify the criteria. Group practice was done first. A preselected set of paintings was displayed as an example of the marking criteria for the judging of shape. The paintings were arranged with scores of 1, 2, 3, and 4 points according to the specified criteria. The criteria were explained and applied to the paintings. They were discussed by the judges. Where there were misunderstandings or inconsistencies, the criteria were modified. The same procedure was done for Colour and Media application. See Appendix B, Table 14.

Secondly, children's paintings were displayed for all three judges to mark individually using the criteria and the score sheets. Results were openly compared and all judges discussed their reasons for assigning scores.

Thirdly, each judge was asked to mark five selected paintings, with no discussion allowed. The completed score sheets were gathered and kept. Two weeks later the same paintings were disguised amongst 200 others and the results were compared over time. Judges were very consistent. The results are shown in Table 16.

The same procedure was followed for the picture-compositions. The results are shown in Table 17. The judging of

picture-compositions took place in a high school art room on two consecutive days from 9 a.m. to 4 p.m. The artworks were spread out on tables where the judges could browse over them all at once and then begin the job of marking each one individually. This was satisfactory except that the judges found there were too many distractions in a public high school setting. They requested that the paintings be marked in a private home. The following week the paintings were spread around a house in groups of twenty-five or fifty and the judges marked them there. This proved more satisfactory.

All works were numbered in random order with pre and post-tests intermixed. The judges were not told whether the work was done in September or May, or from which group it came.

A slightly different procedure was followed for marking the drawings since it was not possible for the same three judges to mark them according to the preceding system. This was due to a problem of time and schedules. Three judges marked the drawings using the standard criteria and score sheets, but they did not have a training session specifically to compare and discuss drawings, nor did they mark them altogether at the same time and place. One of the drawing judges was also a judge of the paintings and picture-compositions and since his reliability had been proven we used his scores as a reliable comparison. Many of the criterion for

drawing were included in the picture-composition skills and so the first group of judges had an opportunity to use and clarify many of them before. The three judges of drawing took the criteria and 208 drawings home for two or three days to mark in their own time. The results were satisfactory, even though the actual judging time and place was not so rigidly controlled as for the paintings. A sample of the judges agreement in drawings is shown in Table 18.

The results of the evaluation were satisfactory. The judges were consistent with themselves over time and they generally agreed with each other. One judge tended to mark slightly higher than the others and one always tended to mark slightly lower, but they were consistent and this averaged out in the end. The results indicated that the proposed rating system could provide a valid quantitative or measureable method to evaluate some art skills.

Table 16
 Scores Awarded by Judges in Painting Test, First and Second Judging

Judge No.	Painting No.	Shape	Colour	Paint Application	Total Skills	Aesthetic
1	1	2	(3)	3	(9)	2
	2	3	4	3	10	3
	3	2	(1)	3	8	(6) 2
	4	3	1	1	5	1
	5	4	4	4	12	4
2	1	2	(2)	2	(3)	7 2
	2	4	4	3	10	4
	3	2	(1)	3	(2)	7 (5) 2
	4	3	(2)	2	6	(5) 1 (2)
	5	3	4	4	4	4
3	1	3	3	3	9	3
	2	4	(3)	3	11	(10) 4
	3	3	(2)	3	8	(7) 2 (3)
	4	1	(2)	1	3	(4) 1
	5	4	(3)	3	(4)	11 4

In cases where the second judgment was different from the first, the second is shown in brackets. (Pycoc & Wiebe, 1980)

Table 17
Scores Awarded by Judges on Picture-Compositions, First and Second Judging

Judge No.	Pict-Comp. No.	Space	Figure	House/Vehicle	Pattern/Texture	Media Applica.	*Line	Total Skills	Aesthetic	Imagin.
1	1	3	0	2 (3)	3	2	2	12 (13)	3	3
	2	2	3	2	2	2	2	13	2	3
	3	2	2	1 (2)	2	1 (2)	2	10 (12)	1	1
	4	4 (3)	3	3 (2)	2	2 (3)	2	16 (15)	2 (3)	3
	5	2 (3)	1	1	2	2	2	10 (11)	2	2 (1)
2	1	2 (3)	0	3	2	2	3 (2)	12	2	2 (3)
	2	3	3 (1)	2	3	2	2 (3)	15 (14)	3	4 (3)
	3	2 (3)	2	3	2	2	3 (2)	14	2	2
	4	3	3 (2)	3	2 (3)	3	3 (4)	17 (18)	3 (2)	3
	5	3 (2)	2 (1)	2	3 (2)	2 (3)	3 (2)	15 (12)	2	3 (2)
3	1	2 (3)	0	3	3 (2)	3 (2)	2 (3)	13	2	2 (3)
	2	3 (2)	3 (2)	3 (2)	4 (3)	4 (2)	2 (3)	19 (14)	3	4
	3	2	2	1 (3)	2 (1)	2 (1)	1	10	2	2 (1)
	4	3	3 (2)	3	2 (4)	3 (4)	2	16 (18)	4 (3)	3
	5	2	3 (2)	1	2	2	3 (2)	13 (11)	2	2 (3)

* This category was combined with Pattern and Texture in the final criteria. (Pycock & Wiebe, 1980)

Table 18
Scores Awarded by Judges in Drawing Test Samples

Judge Number		1	2	3
Drawing No.				
Space	1	3	2	2
	2	2	2	2
	3	2	2	3
	4	2	2	2
	5	3	3	2
Human Figure	1	0	0	0
	2	2	2	2
	3	2	2	2
	4	2	2	2
	5	4	4	4
Line	1	2	2	3
	2	2	2	2
	3	2	3	3
	4	3	2	3
	5	3	3	3
Total Skills	1	5	4	5
	2	6	6	6
	3	6	7	8
	4	7	6	7
	5	10	10	9
Aesthetic	1	2	2	3
	2	1	2	2
	3	2	3	4
	4	2	2	3
	5	3	3	3

Appendix D: Computer Analysis and Tables

All of the material in this appendix was formerly published in The Effectiveness of an Art Specialist: A Comparison of Three Roles, 1979-1980 (Pycock & Wiebe, 1980). This report was submitted to the Minister of Education in Quebec by the South Shore Protestant Regional School Board.

4. Analysis of the data

Duncan's Multiple-Range Test was used to compare the difference in mean scores obtained by each group. In addition, although the students in E_2 , E_3 , and C were selected to match as closely as possible the academic performance of those who happened to be in E_1 , t-tests were applied as though the groups were unmatched. Correlations between variables were also determined.

A comparison between high and low academic students was also made. All students in E_1 , E_2 , and E_3 , who had pre-test scores of 4,2 or lower (one grade below level) in Spelling or Mathematics Concepts, and neither the Composite score nor the other sub-test score above grade level, were considered to be low achieving students. High achieving students were considered to be all students who had scores at least one grade above level (6,2) in Spelling or Mathematics Concepts, and both the Composite score and the other sub-test score at or above grade level.

6. Results and Discussion

6:1 Art Concepts Test

Pre- and post-mean raw scores in the Art Concepts Test are shown in Table VI.

Table VI

Mean Raw Scores on Art Concepts Test, Pre- and Post-Test
Experimental Control Groups

Group	n	Pre-Test	Post-Test	Grouping ¹
E ₁	22 (20)	23,5	31,7 ****	A
E ₂	22	22,1	29,5 ****	A B
E ₃	22	21,9	28,4 ****	B C
C	22	22,2	26,4 ****	C
Total Group	88		28,9	

** $p < 0,01$ **** $p < 0,000$

Figures joined with a — are significantly different.

¹Groups with different letters are significantly different at the .05 level, Duncan's Multiple Range Test.

All four groups made significant progress at the 0,000 level in acquiring art concepts and vocabulary. It can be seen, however, that students in E₁ and E₂, who were taught by the art educator, either as their homeroom teacher or as the school art specialist, have mean scores which are significantly better than the students taught by regular classroom teachers ($p < 0,01$).

6.2 Art Interest Inventory

Pre- and Post-test scores for the Art Interest Inventory are shown in Table VII.

Table VII
Mean Total Raw Scores and Art Participating Scores,
Art Interest Inventory, Pre- and Post-Test
Experimental and Control Groups

Group	n	Total Inventory		Grouping ¹	Art Participation	
		Pre-	Post-		Pre-	Post-
E ₁	22	24,0	23,9	A	12,7	12,7
E ₂	22	24,5	23,2	A	13,2	12,6
E ₃	22	23,2	21,9*	A	12,9	12,0*
C	22	22,8	21,0	A	12,5	11,4
Total	88		22,5			12,2

*p < 0,07

Figures joined with a — are significantly different.

¹Groups with different letters are significantly different at the 0,5 level; Duncan's Multiple Range Test.

It is evident that there is no significant difference between the groups in their attitude towards art, and their interest in participating in artistic activities. There is a significant falling off in interest between pre- and post-test on the part of E₃. In fact, the only group which completely maintained its interest in participating in art activities was E₁ (pre-test = 12,68; post-test = 12,77).

6.3 Drawing Test

Pre- and post-test mean raw scores for drawing skills and aesthetic appeal are shown in Table VIII.

Table VIII
Mean Raw Scores on Drawing Test, Pre- and Post-Test
Experimental and Control Groups

Group	n	Drawing Skills		Grouping ¹	Drawing Aesthetics		
		Pre-	Post-		Pre-	Post-	
E ₁	22	18,8	— 21,4**	A		7,1	7,5**
E ₂	22	16,7	— 19,4****	A	B	5,8	6,4
E ₃	22	17,4	18,8		B	6,4	6,6
C	22	17,2	— 20,2**	A	B	6,5	7,4**
Total	88	19,9					

*p < 0,05 **p < 0,01 ****p < 0,000

Figures joined with a — are significantly different.

¹Groups with different letters are significantly different at the .05 level, Duncan's Multiple Range Test.

Significant differences in drawing skills pre- and post-test, are seen for groups E₁, E₂ and C, and for group C in aesthetic appeal. It appears that group E₂ which had the lowest score on the pre-test has made the greatest progress.

Students in E₁ were significantly better on the post-test for drawing skills compared with those in E₃ (p < 0,05). The aesthetic appeal of the drawings done by both E₁ and C₁ were significantly better than those done by E₂ (p < 0,01 and p < 0,05).

The drawings of E₃ show the least progress from pre- to post-test in skill and aesthetic appeal.

Since all groups show improvement from September to May on the Drawing Test, and since the judges did not know the date of the drawings, the validity of the criteria used to evaluate the drawings is evident.

6.4 Painting Test

Pre- and post-test mean raw scores for painting are given in Table IX.

Table IX
Mean Raw Scores on Painting Test, Pre- and Post-Test
Experimental and Control Groups

Group	n	Painting Skills		Groupings ¹	Painting Aesthetics	
		Pre-	Post-		Pre-	Post-
E ₁	22	20,8	28,5****	A	6,9	9,2****
E ₂	22	20,7	26,9****	A	6,5	8,8****
E ₃	22	19,3	23,7****	B	6,0	7,0*
C	22	21,2	22,7	B	6,8	7,1
Total Group	88		22,5			

* p < 0,05 *** p < 0,001
** p < 0,01 **** p < 0,000

Figures joined with a — are significantly different.

¹Groups with different letters are significantly different at the .05 level, Duncan's Multiple Range Test.

Significant differences between groups are very marked on the Painting Test. All three experimental groups made significant progress in painting skills and in the aesthetic appeal of their work, with the greatest progress being made by students in E_1 and E_2 who were taught by the art educator.

The post-test paintings of E_1 and E_2 are significantly better in skills than those of students who were taught by regular classroom teachers, at the $p < 0,05$ level for E_3 (teachers with access to the consultant), and at the $p < 0,01$ level for C (teachers who were without assistance). Similar differences are seen in the area of aesthetic appeal.

Once again it is clear that the criteria used for evaluation are valid, since mean scores are higher in May than in September, although judges did not know when the painting had been done.

6.5 Picture-Compositions

Mean raw scores on the picture-compositions are given in Table X.

Markedly significant differences between groups can be seen in the area of total skills for space, figure, houses and/or vehicles, pattern and texture, and media application. Differences are in favour of E_1 over E_2 ($p < 0,01$), and E_1 over E_3 and C ($p < 0,000$). Picture compositions from E_2 were judged significantly better than C ($p < 0,01$), and those of E_3 were significantly better than C ($p < 0,005$).

The picture-compositions of E₁ were also judged superior to those other groups in aesthetic appeal: E₂ ($p < 0,05$), E₃ ($p < 0,001$) and C ($p < 0,01$). For imagination, the only significant difference is between E₁ and E₃ ($p < 0,05$).

Table X
Mean Raw Scores on Picture-Compositions,
Experimental and Control Groups

Groups	n	Skills	Grouping ¹	Imagination	Aesthetics
E ₁	22	40,2 ****	A	8,9 **	* 8,4 **** **
E ₂	22	** 34,4	B _*	8,2	7,0
E ₃	22	* 31,3	B	7,8	6,4
C	22	25,8	C	8,0	6,6

* $p < 0,05$ ** $p < 0,01$ *** $p < 0,001$ **** $p < 0,000$

Figures joined with a — are significantly different

¹Groups with different letters are significantly different at the .05 level, Duncan's Multiple Range Test.

Results on the picture-compositions seem to indicate that differences between the groups are even more marked when students are free to spend a long time working on a piece of art. (Students had as much as three months to work on picture-compositions, compared with one hour for the drawing and the painting tests).

6.6 Canadian Test of Basic Skills

Despite the intention to match students from groups E_2 , E_3 and C academically with those of group E_1 , a perfect correspondence on the basis of three scores, Composite, Spelling and Mathematics Concepts, was not possible. A frequency distribution of pre-scores on these variables is shown in Table XI.

Table XI

Frequency Distribution of Grade Equivalent Scores CTBS pre-Test

Test	Group	Number of Students with Score:						
		-25	25-34	35-44	45-54	55-64	65-74	75-
CTBS								
Composite	E_1			1	13	6	2	
	E_2			3	10	8	1	
	E_3			3	11	7	1	
	C			4	10	8	0	
Spelling	E_1	1	2	3	1	9	2	2
	E_2	0	3	3	5	7	3	1
	E_3	0	1	5	2	9	4	1
	C	0	2	1	8	6	4	1
Mathematics Concepts	E_1		0	2	8	11	1	
	E_2		1	3	10	6	2	
	E_3		0	3	6	12	1	
	C		0	5	9	6	2	

The significance of the difference between pre- and post-test scores on the Spelling and Mathematics Concepts sub-tests for the four groups is shown in Table XII.

Table XII

Mean Grade Equivalent Scores, Canadian Test of Basic Skills
Pre- and Post-Test, Experimental and Control Groups

Group	Teaching Condition	n	Composite Pre-	Spelling		Mathematics	
				Pre-	Post-	Pre-	Post-
E ₁	home class art educator	22	52,9	54,2 — 65,1***	54,2 — 64,5****		
E ₂	school art specialist	22	51,8	52,5 — 60,6****	52,3 — 58,6 **		
E ₃	teachers with art consultant	22 ¹	52,7	54,7 — 62,3 **	54,1 — 60,0 **		
C	teachers no consultant	22	51,6	55,5 — 64,1 ***	51,3 — 64,1 **		

* p < 0,06 ** p < 0,01 *** p < 0,001 **** p < 0,000

¹For Spelling Post-test n = 20

Figures joined with a — are significantly different.

It can be seen that all groups have significantly higher scores in Spelling and Mathematics. The post-test scores of E₁ and C in Mathematics are significantly better than those of E₂ p < 0,06.

E₁ was also significantly better than E₃ in the Mathematics post-test (p < 0,06).

It is evident from the academic success attained by E₁, that it is possible to have a rich program in the plastic arts without neglecting other aspects of the curriculum.

6.7 Correlations

Correlations between pre-test scores are shown in

Table XIV.

Table XIV

Pearson Correlation Coefficients Between Variables, Pre-Test Scores

	Spelling	Math	Concepts	Interest	Participation	Drawing Skills	Drawing Aesthetics	Painting Skills	Painting Aesthetics
Spelling	1,00	0,61	0,28	0,09	0,09	0,00	0,04	0,24	0,18
Math			0,39	0,04	0,01	0,13	0,06	0,36	0,26
Concepts				0,07	0,00	0,10	0,17	0,28	0,29
Interest					0,69	0,11	0,19	0,09	-0,05
Participation						0,04	0,12	0,09	0,06
Drawing Skills							-0,02	0,18	0,22
Drawing Aesthetics								0,07	0,02
Painting Skills									0,79

It can be seen that most correlations are rather low. Exceptionally high correlations are seen between skills and aesthetic appeal on the Painting Test (0,79) and between Spelling and Mathematics Concepts scores (0,61). There is a correlation of 0,69 between interest in art as shown on the Art Interest Inventory, and participation in artistic activities. This is not surprising since the participation score is contained within the total interest score. The only other correlations which exceed 0,29 are between Mathematics and Art Concepts (0,39), and between Mathematics and Painting Skills (0,36).

Correlations between post-test scores are shown in Table XV.

Post-test correlations are considerably different from those of the pre-tests. The highest correlation is now between interest and participation on the Art Interest Inventory. However, the correlation between painting skills and aesthetic appeal is also remarkable (0,91). The correlation between drawing skills and aesthetic appeal is now also high (0,71).

Correlations for the picture-composition are all high, between skills and imagination (0,50) between skills and aesthetic appeal (0,64) and between imagination and aesthetic appeal (0,74). Substantial correlations can be seen between drawing skills, and imagination and aesthetic appeal on the picture-compositions (0,35 and 0,43). A strong correlation (0,55) is still seen between Spelling and Mathematics Concepts scores. The following correlations are also noteworthy:

between art concepts and interest, and art concepts and participation in art activities (0,29), between painting skills and picture-composition skills (0,29), between aesthetic appeal of drawings and imagination on picture-compositions (0,29) and between the aesthetic appeal of drawings and aesthetic appeal of picture-compositions (0,32).

It is evident that on the post-tests, the drawings, paintings and picture-compositions which displayed the most skills were also the most aesthetically appealing. Imagination and aesthetic appeal as defined by the criteria are clearly measuring similar things. The negative correlation between drawing skills and aesthetic appeal on the pre-test is surprising. It suggests that students who lack instruction in drawing can nevertheless produce drawings having aesthetic appeal, and that after instruction, the drawings of these students display increased skill. This contrasts with the painting test, where skill is apparently a necessary requirement for aesthetic appeal.

It appears that although mathematics and spelling scores draw on common academic abilities, the students who are most successful artistically are not necessarily high academic achievers.

6.8 High and Low Academic Students in Experimental Groups

Mean grade equivalent scores on the Canadian Test of Basic Skills of low and high academic students in the experimental groups are shown in Table XVI. Groups E_1 and E_2 are collapsed to provide sufficient students to make a comparison between students taught the plastic arts by a trained art educator, and those who were taught by a regular classroom teacher who had access to a consultant.

Table XVI

Group	n	Composite	Spelling		Mathematics	
			Pre-	Post-	Pre-	Post-
E_1 & E_2	(3+7)					
Low	10	43,1	36,9	50,4	42,1	48,8
E_3						
Low	6	44,5	37,8	47,8	44,7	51,2
E_1 & E_2	(6+4)					
High	12	60,4	70,8	73,9	61,9	69,7
E_3						
High	8	64,1	71,9	73,3	62,1	70,6

It can be seen that the pre-test scores of low academic students in groups E_1 and E_2 were below those of E_3 . Growth in Spelling from pre- to post-test is 13,5 months for E_1 and E_2 , while for E_3 the growth is 10,0 months. In Mathematics Concepts

the progress in both cases is similar, 6,7 and 6,5 months respectively.

High academic students in E_1 and E_2 are somewhat behind those in E_3 at the pre-test, 60,4 compared to 64,1 on the Composite Score. Progress in spelling and mathematics is close (3,1 and 1,4 months in spelling; 7,6 and 8,5 months in mathematics).

The mean scores of low and high academic students in art concepts and art interest are shown in Table XVII. It is evident that the low students in E_1 and E_2 make much greater progress in acquiring art concepts than the low students in E_3 . The greatest mean score is attained by the high academic students of E_1 and E_2 .

On the Art Interest Inventory it is noteworthy that the only group whose interest in participating in art activities and whose total interest in art increased from pre- to post-test was the low academic students taught by the art educator. They contrast with most grade V students who appear to experience a falling off of interest in art during the school year (see Table VII).

Table XVII

Mean Raw Scores on Art Concepts and Art Interest Inventory,
Pre- and Post-Test, High and Low Achieving Students in
Experimental Groups

Group	n	Art Concepts		Interest Total		Participation	
		Pre-	Post-	Pre-	Post-	Pre-	Post-
E ₁ & E ₂							
Low	10	21,3	28,4	24,0	25,0	12,3	13,4
E ₃							
Low	6	20,0	25,8	24,0	21,8	13,2	11,7
<hr/>							
E ₁ & E ₂							
High	10	24,2	33,1	23,6	21,9	12,1	11,7
E ₃							
High	8	24,0	29,3	24,0	21,8	13,0	11,9

Mean scores achieved by low and high academic students in drawings, painting and picture-compositions are shown in Table XVIII.

It can be seen that the pre-test drawing scores of both high and low E₃ students are considerably lower than those of E₁ and E₂. The range of scores was as follows: E₁ and E₂ low (13-23); E₃ low (14-17); E₁ and E₂ high (15-30); E₃ high (16-20). On the post-test, three groups have higher mean scores, while E₃ low students have a lower mean score. The range of scores was: E₁ and E₂ low (15-23); E₃ low (8-17); E₁ and E₂ high (12-29); E₃ high (15-24). The aesthetic appeal of post-test drawings reflects the changes in drawing skills shown by the groups.

Table XVIII
 Mean Art Scores, Pre- and Post-Test, High and Low Achieving Students in Experimental Groups

Group	n	Drawing Skills		Drawing Aesthetic		Painting Skills		Painting Aesthetic		Picture Composition		
		Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Skills	Imagi- nation Aesthetic	
E ₁ E ₂												
Low	10	16,7	19,2	5,9	6,9	19,1	28,1	6,2	9,7	34,7	7,9	6,9
E ₃												
Low	6	15,3	14,0	6,2	5,3	20,7	22,5	6,2	6,0	27,3	7,0	5,8
E ₁ E ₂												
High	10	20,3	22,2	6,8	7,5	22,9	28,1	7,8	8,9	38,9	8,6	8,3
E ₃												
High	8	15,3	20,1	5,8	6,8	20,4	23,9	6,8	7,1	30,9	8,0	6,4

The progress of E_1 and E_2 low students in painting skill is remarkable: Although this group has the lowest mean pre-test score, their score in the post-test is equal to that of the E_1 and E_2 high academic group, while the E_3 high academic group is only slightly better than the E_3 low academic group.

Mean scores on the picture-compositions indicate that the low academic students in E_1 and E_2 have created works which excell those of E_3 high academic students in skill and in aesthetic appeal.

These comparisons reveal that an art program taught by an art educator will benefit both high and low academic students by encouraging growth in artistic concepts and vocabulary, and in drawing and painting skills, without interfering with progress in spelling and mathematics concepts.

In fact, it suggests that there may be important benefits for the low academic students whose successful artistic performance in comparison with their more academic classmates and whose increased interest in artistic participation must provide them with satisfactions which are not found in other areas of the curriculum. In addition, they have displayed a remarkable progress in Spelling (13,5 months over a period of 9 months). Is it possible that the visual training provided by a rich plastic arts program has carried over into visual awareness of words in spelling?

7. Summary of Results

The present study compared the effectiveness of an art specialist in three different roles: as classroom teacher, school art specialist and as consultant. The results of the research indicate that in the case of this art specialist, students whose art program is taught by an art educator as classroom teacher, or as school art specialist will make significantly better progress in the acquisition of art concepts and vocabulary and drawing and painting skills, than students whose art program is taught by the regular classroom teacher, with or without access to an art consultant. In addition, it was found that students whose classroom teacher is an art educator can make as good progress in Spelling and Mathematics Concepts as students in other classroom situations.

7.2 Significant differences with respect to drawing and painting skills were not found between students taught by the art educator as classroom teacher or school art specialist, but significant differences were seen between these students on the picture-compositions in both skills and aesthetic appeal. This may result in the greater time available for art in the former situation.

7.3 The picture-composition skills of students taught by the art specialist were significantly better than those of students taught by regular classroom teachers with access to the consultant, which in turn were significantly better than those of students taught by classroom teachers who had no assistance.

- 7.4 Both low academic and high academic students made greater progress in art when taught by an art educator. The low academic students developed higher interest in art as well as increased skill in drawing and painting skills. It is possible that the visual emphasis in the art program contributed to their marked improvement in Spelling.
- 7.5 Students whose teachers had access to the consultant were not significantly different with respect to drawing and painting, but their skills on the picture-compositions were significantly better than those taught by teachers without assistance.
- 7.6 Correlations between skills and aesthetic appeal were very high for drawing, painting and picture-compositions, particularly on the post-tests. The correlation between imagination and aesthetic appeal was also high. Correlations between academic and artistic success were extremely low.

ART PROJECT QUESTIONNAIRE

This questionnaire may take a little time to fill in but we would appreciate it very much if you would give us as much information as possible. Your feedback is very important in doing research such as this. We need teachers' honest opinions on their involvement in the specialty subjects in the elementary curriculum.

Please circle the appropriate answer, or fill in the blank for each question.

1. Have you ever taken a course in Art Education? YES NO
Specify _____

2. Was this compulsory in your teacher training program? YES NO

If yes, would you have taken it otherwise? YES NO

3. Where did you take your teacher training? _____

4. List the grade levels and subjects that you have taught _____

5. Which subjects do you like teaching the best?

6. Do you enjoy teaching art to elementary school children? YES NO

7. About how much time per week do you spend teaching art? _____ minutes

8. If your art period is missed because of a film, field trip, etc., do you make an effort to fit it in during another time in the week? YES NO
SOMETIMES

Is it possible for you to have art at any other
 time than you do? YES NO

10. When is your regular art period held? _____

11. When would you like to have art? Day? Time? _____

12. Do you feel that your school has adequate resources for
 teaching art? Are there things lacking that you feel
 would help you to do a better job?. Check appropriate
 boxes.

Time	Too little	Adequate	Comments
Space			
Facilities			
Materials			

13. Did you enjoy participating in this Art
 Research Project? HALF & HALF
 YES NO

14. Did you find that your participation in this
 project involved a great deal of effort on
 your part? YES NO

15. Was it more work than you expected? YES NO

16. Would you agree to participate in another
 similar project in art or any other subject
 next year? YES NO
 MAYBE

17. List the names of 3-5 children in your class whom you think are good in art. After each name, in a few words tell why you think each is good.

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

18. List the names of 3-5 children in your class whom you think do poorly in art. Tell why.

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

19. Would you describe yourself as 'artistic'? YES NO
Specify _____ MAYBE

Would you like to be more artistic? Why? YES NO
DON'T CARE

20. Would you like more training in art education? YES NO

___ University courses in art education

___ Studio courses in painting etc.

___ Workshops ___ for classroom ideas

___ to learn skills myself

- B. 1. How did you find the list of course content for Grade V art? Check and explain if necessary.

not appropriate (explain) _____

too little _____

satisfactory

too much

2. Would you have liked to teach other things in the art program? YES NO

3. Do you feel that your students enjoyed the art program this year? YES NO

4. Was the art program the same or different from what you think the children had been used to? YES NO

Explain _____

5. Did you see the art consultant not often enough
 a satisfactory amount
 too often

6. Did you feel pressured by the Project, to do things that you did not want to do, or that you felt were inappropriate? Or by a consultant 'breathing' down your neck? YES NO

7. How did the consultant help you?

Specify _____

8. Would you like any other kind of help from the art consultant? _____

9. How would you describe the kind of art program you have used in former years? Check appropriate items.

- 1) No particular plan.
- 2) Making decorations and objects for events, such as, Halloween, Christmas etc.
- 3) Making 'something' to be completed in one period or week. Ideas taken from magazines, other teachers etc.
- 4) Craft-based program - macrame, sculpture, weaving, models, crochet, woodwork, etc.
- 5) Learning of formal skills or techniques, such as, formal drawing, mixing colours according to set rules, printing techniques.
- 6) Free expression. Very little teacher instruction or involvement. Draw what you like.
- 7) Development approach. Learning of skills and vocabulary and media which will carry over from week to week and be built upon.
- 8) Integration with other subjects, social studies, science, etc.,
- 9) Other _____
- 10) Will your experience with this art project change the way you teach art next year? YES NO
- Specify _____
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