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Creating non-representational art by students who are severely intellectually disabled through a pictorial and musical program

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EDITH COWAN UNIVERSITY

**Creating Non-Representational Art by Students who are Severely
Intellectually Disabled through a Pictorial and Musical Program**

By Jane Riddoch B.A., Dip. Ed.

**A thesis submitted in partial fulfillment of the requirements for the award of
Master of Education**

Supervisor: Dr. Russell Waugh

August 2001

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

DECLARATION

I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by any other person except where due reference is made in the text, or contain any defamatory material.

Signature.....



Date.....

7/8/2001

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ABSTRACT

The main purpose of this research study was to investigate the worth of a recently developed Pictorial and Musical art program for severely intellectually disabled students, and to compare the non-representational art work produced by lower primary students in a special education school to similar art work being produced by lower primary students in a regular school, when taught in the same program. A subsidiary purpose of the study was to investigate teacher reactions in the art classroom of each participating school, and to observe the extent of the Pictorial and Musical program interventions on the students' attitudes and production of their art work.

Twelve participants were chosen from each school to take part in the experimental art program. This involved the use of pictorial and musical interventions to test the outcomes, and by utilising a quantitative methodology to determine the relationship between variables. Each group of students in the study was subjected to three different art experiences within the Pictorial and Musical program, that is, Pictorial only, Pictorial with Rock music and Pictorial with Classical music. All the participants supplied the researcher with an original non-representational painting from each segment of the program. The non-representational paintings were then marked by three independent teacher markers, and the marks of the 72 paintings produced by the students were analysed in a 2 way ANOVA, to ascertain if there was any comparable difference in the non-representational artwork of children with special needs and regular primary students.

The descriptive statistics showed that the regular students scored higher marks for art quality than the special students, when the Pictorial only method was used, and there was more variation in the regular students marks than in the special students marks. There was no significant difference between the scores

of the regular and the special students when the Pictorial and Rock music method was used, but the regular students scored higher than the special students for the Pictorial and Classical program, although variation was about the same for both. The observed attitude to the musical additions were similar for both the regular and the special students. There were marked changes in the students' attitudes during the Pictorial and Rock music method. Both groups became agitated and overexcited during this segment and initially refused to keep on task, preferring to sing and keep time with the music than to go on with their painting. The Pictorial and Classical music program had the opposite effect on the students, helping to create a calming atmosphere in which they were willing to return to their task, and appeared more stimulated and creative, completing better quality non-representational paintings than before.

It is anticipated that the outcome of this study may provide significant evidence of the importance of pictorial and musical interventions in art programs, and may lead to further study on this subject. The introduction of the Pictorial and Classical music program to students with severe intellectual difficulties may become an additional aid in the production of their artwork.

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CHAPTER ONE

INTRODUCTION

" Createdness is expressly created into the created being "
- Heidegger (1993).

Background

Art education in Australia began in about 1872 in NSW, and provided the basis of a common school pedagogy which was based on the origins of English drawing. Because of the development of the new colony and the effects of the industrial era, an ability to read and write had become imperative in order to read instructions and keep records. Plans and designs for new buildings were necessary, and for this to take place, drawing was required to be taught in schools. In NSW, the ability of students to learn to draw was considered by officials in the new colony to be an important part of the early school curriculum. Executed on a slate with a slate pencil, it was believed to be a means by which children could observe the country in which they lived, and be able to depict the seasonal changes, rural lifestyle and the landscape peculiar to their country (Efland, 1990).

Art education has been taught in colony schools in various Australian states, including Western Australia, since before Federation (1901). In 1872, when the government passed the first compulsory and secular education act in the Australian colony, requiring all children to attend school, drawing was taught as part of the curriculum content, which also included reading, writing and arithmetic. But these early government schools made no provision for children

arithmetic. But these early government schools made no provision for children with special needs. Unfortunately this 'out of sight, out of mind' attitude was adopted by governments and society in general (Ryan & Malone, 1996).

In special education, art has been included in the curriculum, in some form, since the beginning of the last century, when a few special schools for intellectually disabled children were being established by charitable institutions or religious establishments. Because these schools were reliant on charity, funding was an important issue for them. The amount of resources that could be provided in the art area, and the type of art programs that could be provided for these children, depended directly on the funding available year-by-year (Ashman & Elkins, 1994).

In England, during the early part of the twentieth century, children's art became an important feature of art study, and schools were encouraged to incorporate painting as well as drawing into their art programs. For the first time it was essentially regarded as "art". Children's art was believed to be executed by artists and not just as a child's primitive work of no intrinsic value. Efland (1990) states that it was largely due to the strenuous efforts of Frans Cezek (1865 - 1946), that this rather sudden discovery of the input of child art was considered as a valuable addition to art study. In Australia, at this time, art education programs were mainly based on the British model and, as well as painting and drawing, the art curriculum in the regular school started to include craft subjects. A more expansive outlook was developing towards art study as a form of 'expressive art for its own sake' (Efland, 1990).

It was not until after World War 2, that economic and social changes in Australia forced the Federal government to extend educational funding to independent schools and, between 1950 and 1965, old school buildings were provided for

special education. Also, a few special schools were built according to the label of disability, such as schools for the deaf and the blind. In 1973, the Karmel Report proclaimed the advantages of integrating students with disabilities into the mainstream, stressing the advantages that may be gained for the regular students in the classroom, and marked the beginnings of effective change in Australian policy towards the disabled (cited by Casey, 1994, p. 27). Some of these advantages for students with special needs in mainstream education were that they would be able to benefit from the development of social relationships with non-disabled children, and that they would have the opportunity to model their behaviour and learning on that of their peers. They could also take part in role play, shaping, rehearsing and group tutoring. These strategies were considered to be successful for developing and improving the social skills of students with disabilities (Carter & Sugai,1988).

Students with disabilities within the mainstream can reverse the negative affects of labelling in the more natural classroom environment. By taking part in normal classes, and wearing the school uniform along with their non-disabled peers and siblings, the disabled student gains a sense of belonging to a regular school community. But, to be successful, inclusion into the mainstream for students with special needs requires an individualised educational program that carries a concise statement of the disabled students unique learning needs, and a list of any appropriate modifications and outcomes. Furthermore, such a program should be implemented by teachers with expertise in the field of special needs (Maltby, Gage & Berliner 1995).

In Great Britain, the Education Act (1981) profoundly changed the face of special education with its focus on integration, where there were changing educational attitudes towards a more humanitarian outlook for students with disabilities

(cited in Casey, 1994, p. 27). This change in attitude provided students with special needs an opportunity to experience a greater interaction with their non-disabled peers, and they were more likely to be educated in their local setting with their siblings. The greater contact with students with disabilities enhanced the attitudes of the regular students towards these children, and a greater tolerance for individual differences was developed in the general school community (Casey, 1994).

In Western Australia, this new attitude towards education for disabled students was given further support by the Beazley Report (1984), which made strong recommendations for the integration of disabled students into regular schools. It included the proviso that school resources were adapted to the needs of children with disabilities, provided that the regular students' needs were not adversely affected, and "proper" use was made of public resources. It also required that the wishes of parents and other school members be considered. The Beazley Report recommended that severely handicapped students be provided with special units either on the regular school site or in a special unit within the school building. This report generated criticism from a certain section of the community. Some individuals wanted to retain complete segregation of students with intellectual disabilities from regular schools. They believed that these children would not be able to learn anything, and that their tax money would be wasted on them. This belief was contrary to the emerging view of educational professionals that students with an intellectual disability were capable of much higher levels of achievement than was previously believed possible (Education Department of Western Australia, 1993).

In the light of these educational changes, programs for education were being re-evaluated. This also included art programs for special education students which,

up until this time, were largely left to the discretion of the teacher and, more often than not, based on the disability of the students. It was now believed that it may be possible for educators to develop suitable programs that could be taught to regular students and to students with disabilities and include similar content (Cannon, Idol, & West, 1992).

The twenty-first century, in Western Australia, sees art education as an important part of the school curriculum in both primary and secondary areas. It gives students from Years K - 12 the unique opportunity to develop their art appreciation and to freely express themselves in their own particular style, within the many different forms or specialised areas of artistic endeavour that the art curriculum provides. These specialised areas include Drawing, Painting, Ceramics, Sculpture and Leatherwork and also provide for instruction in Art History (Curriculum Council, 1997).

In Western Australia, at the present time, there are special schools for students with severe intellectual disabilities. Although educators have often recommended that some students with intellectual difficulties should be educated in inclusive mainstream classes (Westwood, 1987; Carter & Sugai, 1988; Morsink & Lenk, 1992), or be given access to as normal an education as possible (de Lemos, 1994; Department of Employment, Education and Training, 1990; Education Department, 1994; Harvey, 1992; Schultz, 1992), this has not been fully achieved. Students with intellectual disabilities can sometimes receive a lesser quality of education than their peers in the regular school. This applies to the teaching of art to the severely and mildly intellectually disabled students. Mild intellectual disability refers to persons with IQ's from 50 - 70 (this follows ICD - 10 classification). Severe intellectual disability refers to persons with IQ's from 20 - 34, DSM - 4 and, in common usage, this term refers to persons of a very much

lower level of competence than those with mild disability. While inclusion is not practised as much as it might be for students with severe disabilities, there is still a need to provide them with good quality art education programs.

In Western Australia, similar programs are set down for special education students as those that apply to students in the regular school, but some of these are very difficult for the special education teacher to implement in the classroom, because of the differing disabilities of the students in the special class. For example, students in the regular school are allowed to do leatherwork as part of their art studies. This type of work is difficult for special education students because of the danger involved in the handling of the very sharp tools. So in some cases, the art curriculum for these students must still be at the discretion of their teacher.

In America, programs such as those introduced by Dirr and Anderson, 1974, Gair, 1975, and the New Jersey Governor's Teacher Grant Programs, 1990, have been found to be effective for children with special needs. These programs were based on research which included the opinions of special education teachers in general practice, as well as teachers from the regular schools. The knowledge of these teachers was combined to give the researchers access to strategies that may provide for a better program outcome for all students. In Western Australia, parts of these programs, and other programs from Australia and overseas, are being used in current art education for students who are considered to be severely intellectually disabled, but they do not involve as much stimulation as they might, and, while this is understandable because of the difficulties in teaching severely intellectually disabled students, they can be improved upon.

There is a need to devise some stimulating art education programs and to research the effectiveness of these programs for students who are severely disabled, in Western Australia. For example, the introduction of an effective Pictorial and Musical Program could aid special education students in the production of non-representational art and to improve their use of colour, composition and creativity. To also add to their art appreciation and enjoyment through music and painting, which is ultimately the intention of this research study.

Because art education is an important outlet for self-expression. It also gives the child with special needs a means of experiencing success. Even if the special needs child's painting lacks balance, the composition is poor and the colour monotonous, just by the act of manipulating the brush to take up the paint and move it across the paper, the special needs child has achieved a successful outcome in self-development. The main purpose in providing for these special children, is not in trying to produce masterpieces of art, but in motivating the children to want to paint. Painting can also help the child's motor development as well as being an outlet for self-expression, through learning how to use the materials that are available. It can also be a valuable tool for these children in learning to co-ordinate their hand and eye movement (Alkema, 1971).

A direct relation to this current study can be noted in the music and art combination theme by Hallam and Price (1998). They examined the reactions of a 'mood calming' effect caused by the addition of a musical intervention to a class of special education students who were experiencing some behavioural difficulties. Their findings indicated that the result of the musical intervention for these children showed a marked improvement in their co-operation with

teachers, less aggressive behaviour and an improvement in their quality of work.

Purpose of the Study

The main purpose of this study will be to see if a pictorial and musical program will lead to improved art work by students who are considered to be severely intellectually disabled, and to question if there is any comparability between the art achievement standard of special education and regular primary students when they produce art in pictorial and musical programs, with non-traditional teaching strategies. A subsidiary purpose is to investigate teacher reactions in the art classroom of each participating school and to observe the extent of the interventions on the student's attitude and production of their art work.

Early Teacher Interviews

Before this research study began, the class teachers in both the regular and special education school were invited to fill in a questionnaire. The questionnaire was concerned with their attitudes and expectations for their pupils. Taped recordings were also taken at a later date about their opinions of the success, or otherwise, of the Pictorial and Musical program, and the effect that the program, introduced in this study, may have had on their students' attitude and art work. These results will be presented and discussed later in the appropriate section, but a few of the teachers early comments are given here. Questions to Class Teacher

Question:1 Do you consider art programs to be an important part of the curriculum for your students ?

R/Q/1 Answer: Yes, Most definitely. Children need to be creative, use their imagination and develop their colour sense and to find motor control.

Question:2 What strategies do you use in implementing your current program ?

R/Q/2 Answer: Painting, collage, crayon drawing, soap making all come into our program. Using co - operative learning in groups which is the main emphasis.

Question:3 Do you feel that this program could be improved ?

R/Q/3 Answer: Yes. With a more suitable art area. Our work space is very small.

Question:4 How would you go about improvements for you students?

R/Q/4 Answer: For starters, I would require a special art room, and be able to have recourse to better and more varied art supplies for the students. Paper and paints are often in short supply.

Question:5 Is obtaining communication with students a problem during art instruction ?

R/Q/5 Answer: No. Students need to know the limits and what is expected of them before the lesson begins.

The primary teacher of the regular students was supportive about the prospect of partaking in the research project. She expressed an interest in the Pictorial and Musical program and the positive outcome that it may provide for her art students.

Questions to Special Education Teacher

Question:1 Do you consider art programs to be an important part of the curriculum for your students ?

S/Q/1 Answer: Of course, that goes without saying. It helps them to experience and to experiment with colour.

Question:2 Are your students showing an interest in their art work ?

S/Q/2 Answer: Because most of these students are autistic and have multiple disabilities, they can differ in their attitude from day to

Question:3 What strategies do you use in implementing your current program ?

S/Q/3 Answer: The main aim is to get the students to make random marks on the paper using a paint brush, to experiment with the colour using the colour randomly and to be able to choose more than one colour. To be able to mix the paint from the pallet and to be able to finish the piece of art work on their own.

Question:4 How would you go about improving this program for your students ?

S/Q/4 Answer: At the present time, considering the many disabilities that these children have to overcome, I believe that we have obtained a high level of competency with these students in the art area.

Question:5 Is obtaining communication with students during art instruction a problem ?

S/Q/5 Answer: There a number of variables to be considered in teaching severely disabled students. To begin, they must be organised to sit

quietly at the art table. Obtaining focus for autistic students may be a problem and constant prompting is necessary for them.

Question:6 How do you obtain focus for the students ?

S/Q/6 Answer: Clapping, using a bell, and using bright patterns within a close vision range for them.

Question:7 What do you consider to be the most difficult task for these students when attempting their art work ?

S/Q/7 Answer: Some of the most difficult tasks for these students to accomplish are being able to sit still long enough to get started on a task, and then getting them to stop once they have begun. They always require a constant use and variety of prompting strategies to keep them on the required task.

After this questionnaire had been completed, the special education teacher expressed the opinion that the proposed Pictorial and Musical Program about to be trialed in this research study, was not likely to be a success with the severely disabled students he was teaching. The main reason for this assumption was that the program required too many changes of pace during the lesson. After the Pictorial and Musical Program had been trialed with these students, the teacher's opinion was again sought, and his statement will be produced in a later chapter on results.

Proposed Pictorial and Musical Art Program

The new and recently developed program is divided into three sections. In the first section, the students are asked to focus their eyes on a Kandinsky print. When the teacher is sure that the student has gained focus, the colours in the

print are pointed out to each student, who will then be able to point to the same colours in the paints that have been provided for use in the painting that is about to be executed. After this first painting has been finished, fresh paper will be provided, together with cleaned brushes and the teacher will start the recording of a rock musical background before the students will begin to paint their second painting. This has a high volume and a quick tempo. A third painting will be required in the same manner, but the musical background will be changed to a soft classical music background. During these program interventions, the reactions of the students will be noted by the researcher and also the class teacher. The three paintings produced by each of the participants in the study will then be collected by the researcher for marking by three independent markers and subjected to a 2 way ANOVA.

Research Questions

Within this study, the main questions to be answered are:

1. Does a Pictorial and Musical (Classical or Rock music) intervention teaching program improve the non-representational art work of students with severe intellectual difficulties when compared to a pictorial program without music?
2. Does a Pictorial and Musical (Classical or Rock music) intervention teaching program change the quality of non-representational art work of regular students when compared to a Pictorial program without music?
3. What are the teacher's attitudes to the Pictorial and Musical program and their views of the effects upon their students and their art works?

Significance of the Study

With the introduction of the new Pictorial and Musical program to students in the special education school, it is believed that this stimulating instructional program for severely intellectually disabled students will enhance these student's art appreciation through music and painting. It is also considered that the addition of a pictorial and musical intervention to the art program will introduce the students to great works of art at an earlier age than has been previously thought necessary. It is expected to help them to be more creative in their own work and to help them to increase the use of their own natural talent and skills, that was not evident in previous programs. The musical accompaniment will provide the right environment in which to achieve this goal.

This Pictorial and Musical art program was recently developed by the author. It has been trialed by the author in a special education school and the results seem very promising. The new program stands in direct contrast to the current art programs in special education schools, and which are very staid in comparison. Special education children in current programs are simply given some paint and paper and told to paint. This new program may have the potential to improve the painting ability of special education students to a level that is near to that of their peers in the regular school.

The Pictorial and Musical Program

The basic layout or design of the Pictorial and Musical program requires a conceptual framework; that is, the coming together of ideas in a structure to fulfil the expectations of the programmer. Initially, the researcher is required to contact the principal of the specific school/s where it is to take place. When permission is received, the principal will choose a class and inform the class

teacher of the basic requirements of the project. The researcher will then contact the class teacher for a more detailed discussion of the research project and of the general background of the students that she/he has chosen to take part in the program. A lesson plan of the proposed program will then be given to the class teacher (see Appendix I). During this informal discussion, and with the teacher's permission, a tape recorder is generally used and any behavioural or learning problems that the students may have will be noted at this time.

The researcher will then enter the art classroom on a day and time convenient to the class teacher, for observance only of the usual art class teaching procedures and program, and to allow for the researcher to become familiar with the students. This first instance of contact with the students is quite important, and should only be omitted, if the researcher is already familiar with the class. On the next day, or as soon as this can be arranged, the researcher can proceed to assist in the art class and introduce the pictorial and musical intervention program to the students. In this instance, the researcher will act as teacher observer, taking responsibility for guiding the class teacher in the correct procedures involved in the presentation of the intervention program.

Before the introduction of the pictorial and musical program begins, the students' desks will have been prepared with the necessary tools; that is, waste paper to cover desks, painting paper, pots of paint (usually the four primary colours), brushes and water for cleaning them, and also the students' painting aprons.

The first part of the intervention program to be introduced to the students will be the pictorial program only. This will require at least two colourful prints by a well known abstract artist; the artist Kandinsky's works are suggested for this

purpose (see Appendix II). The Kandinsky prints were chosen for this study because they show a vibrant use of colour, the shapes expressed by the brush strokes are broad and easy to see for the students, but this artist is only one of a number of abstract artists whose works could be used with this program, with equal success.

At the beginning of the program, the teacher will show the prints to the students, noting the strong use of colours, and relating these colours to the ones that they will be using in their own paintings that they are about to execute. After the students have completed some non-representational paintings, a rock musical background will be added, and the students will be asked to do some non-representational paintings to the accompaniment of the rock music. When this has been accomplished, the students will be asked to complete a third set of paintings, the difference being, that the strength of the background music has been changed to that of softly played classical music. At this stage of the intervention program, it is important to point out that, in the special school, the rather disrupting sound of the rock music is not a problem. Unfortunately, in the regular school, due to the close proximity of other classes, it is, and arrangements must be made beforehand with the teachers concerned, in order to circumvent any problems that may occur due to the additional noise.

Because it is the researcher's intention to ascertain from students in both the regular and special education school if a Pictorial and Musical (classical or rock) program will improve their non-representational art work, and to be able to compare this work, it is imperative that these students are given an equal opportunity to perform at their best. Therefore, all parts of the intervention program must be adhered to as near as possible for each group. It is only during the point of focus on the pictorial intervention that a slight change must be

made. Owing to their lack of focus, special education students may not be able to see the prints, unless they are placed directly in front of their face in a one-to-one procedure. Students in the regular school do not have this disability and will only require the prints to be displayed for them in front of the class by their teacher.

The proposed intervention program will allow the researcher to analyse the non-representational paintings that are produced by the regular and special student participants. This analysis of the art works will help to ascertain the worth of using a pictorial program alone, or, whether a pictorial and musical (classical or rock) background addition, will produce a more stimulating art program for these students. It will help to provide relevant information as to the comparability of the art work of the regular and special education students, their attitudes to the different patterns within the program, and also their contrasting reactions to the interventions used in the program.

The art work that is produced by the students in the study will all be of a non-representational composition. It will be essentially exploring spatial concepts through abstraction and colour. Only prompts and positive reinforcement will be used to encourage the students during the progress of their work, and the same conditions will apply to all of the participants throughout the study. These conditions are that all work must be the original art work of the student, working tools will be the same in each school, and the time allowed for the art lesson and structure of the intervention program will be the same for each group of participants.

Structure of the Thesis

This research study has been organised into five chapters. Chapter Two will be a literature review. This chapter will include general literature on art education and

the place of the teacher in its instrumentation, and an overview of the importance of good quality programs for students with disabilities. A section on literary studies that have been found to contain elements similar to the current study will be included in this chapter.

Chapter Three will begin with a brief introduction, followed by an outline of the theoretical framework. A plan of the proposed Pictorial and Musical Program, the sample of the students taking part in the study, and some brief case histories of the special education students are included. The teacher interview questions will also be included in this section, and this chapter will conclude with the study design

Chapter Four will begin with the procedure to be implemented in the field and also the data collection as it occurs during this empirical part of the study. The marking and analysis of the art work for validity and reliability will be explained and the results of the interventions and their main effects will be recorded.

Chapter five will conclude this account of the research study with a discussion on the effects and implications of the study in general, and also the implication for schools and administrators, the teachers and the students.

CHAPTER TWO

LITERATURE REVIEW

Introduction

In order to cover the range of recent and relevant background literature for this research study, it was necessary to obtain books and journals from the Edith Cowan University library catalogue, electronic data bases, and the University of Western Australia and Murdoch University libraries. This included relevant information on art and music as it applied to regular and special education during the 1900 -1999 era. The knowledge gained from these readings was added to a personal library gleaned from over thirty-five years of art teaching experienced by the researcher.

This chapter will include classroom learning from a group perspective, and a broad outline of the benefits of art education for students with disabilities. It will compare the basic requirements of the curriculum outcomes for children with special needs in America and Australia, and how successful art programs can be found for these students. There will also be an attempt to answer the question about what research needs to be done on combined musical and art programs for disabled students in Western Australia.

Classroom Learning from a Group Perspective

It has been stated many times that group learning is an integral part of the learning process (Durkheim 1956; Perry 1995; Vygotsky 1978). The importance of the group effect within the special and regular education classroom has equal relevance because in both cases, it effects the quality of the students' learning.

The following quotes from sociologist Durkheim (1956) and educational psychologist Vygotsky (1978) stress the importance of the group perspective.

A class, indeed, is a small society, and it must not be conducted as if it were only a simple agglomeration of subjects independent of one another. Children in class think, feel and behave otherwise than when they are alone. There are produced, in class, phenomena of contagion, collective demoralization, mutual overexcitement, wholesome effervescence, that one must know how to discern in order to prevent or to combat some and to utilize others (Durkheim, 1956, p112).

Every function in the child's cultural development appears twice: first on the social level, and later, on the individual level: first between people (interpsychological), and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relations between human individuals (Vygotsky, 1978, p57).

Within each classroom setting, the teacher has the task of establishing a good group climate in order to create a sense of security for the students. This climate can be established by the positive attitude generated by the teacher as a role model, by the use of well thought out programs that include group activities for the class, and also endeavouring to create a calming atmosphere by the use of suitable background music in the classroom. It is also possible for the teacher to create a sense of tone by introducing classical music and art to the students at an early age. This development of 'tone' in the classroom should be high on the teachers list of importance when establishing a good classroom environment (Barry & King, 1999).

If it can be observed that the addition of suitable background music can improve the atmosphere of the classroom and have a positive effect on the student group, by expanding their senses and adding to their creative ability, then it is the role

of the teacher to enhance this atmosphere, to structure the program in such a manner that will build a strong relationship between the teacher and the group. In this way, every effort will be made to optimise the chances of learning from a group perspective.

Art Education for Children with Disabilities

From a very early age, most children enjoy drawing and filling in colouring books with pencils or crayons. But for children who are born with, or acquire through accident or illness severe intellectual disabilities, this is an activity that may be rarely experienced. Therefore, in the special education school, the very basic elements of art education must be taught to these special needs children, before they can begin to grasp the rudiments of creativity for themselves.

In Australia, and in particular Western Australia, art education for children who are considered to be severely intellectually disabled, is required to be given to these students in special schools rather than in special units attached to the regular school. Because of this segregation from these special units, where they may have the chance of being integrated into the mainstream for some subjects, art education being one of the most favoured, severely intellectually disabled students can miss out on the many opportunities that may be available to them in this area.

If students are severely multi-disabled, their needs may require the individual care and attention of a special school, although for many of these students it is expedient and preferable to integrate them into mainstream education. In this way they are able to foster peer models and receive the right of play and also to experience problem-solving within the regular school environment (Carter & Sugai, 1988 ; Morsink & Lenk, 1992).

A well structured art education is not always possible for students in the special education school. This is due in some part to the diversity of the multi-disabilities experienced by the students, but also to the lack of educational funding allocated to the school for materials and qualified staff. Special education teachers work with the tools that they have, often under very difficult circumstances, to accomplish near miracles, daily. This lamentable lack of funding is not confined to disabled education in Australia. In America, Rozelle (1994), states that the limited funding for art education has been the cause of many problems for teachers of students with disabilities.

Mirenda (1990) believes that the act of communication between teacher and student is one of the most important features of art education whether in regular or special education. But, for students with severe intellectual difficulties, it is often extremely difficult to accomplish this goal. This researcher stresses the importance of the teacher as role model for students with severe disabilities. In art education, there is one form of communication for students with disabilities whereby the disabled student's ability to communicate can be enhanced, through the use of colour and the application of paint on paper, without the need for verbal expression. In this non-communicative interaction, the student can, with the assistance of the teacher, and by using other forms of communication, such as facial and hand movements, reach an understanding of what is required of them to be able to complete the task.

Hutinger, Betz, Bosworth, Potter and Schneider (1997) stress the importance of art education for students with disabilities, and the role art can play in these children's lives in helping them to gain self-esteem, especially when it is begun at an early stage in their education. They also believe that art education can be of benefit to the students' learning when it is applied over a number of other

educational domains, such as in the use of a pictorial addition in teaching students to read.

Art education is one form of communication for students with severe intellectual disabilities whereby the student's ability to communicate may be enhanced through listening to the sound of music and beating time to the rhythm. For example, they can also learn to paste brightly coloured pieces of paper to form an interesting collage, or to make brush marks on paper to form a colourful painting. These activities can be performed without the need for verbal expression. In this non-verbal interaction between student and teacher, the role of the art teacher is an essential factor in order to guide the student through a stimulating structured activity and to gently lead that student to ultimate success (Smith, 1988).

Art education can also be an instrument of successful teaching practice for special education teachers, when it is used effectively to develop in the student with severe disabilities a sense of self-worth through successful accomplishment. Unfortunately, this desired achievement is not always possible because it can only be obtained through organisation, time management, better new teacher education programs and the use of appropriate and meaningful curriculum art programs. These difficulties not only apply to the special education school, but are evident in the research results on the benefits of integration of special needs students into the mainstream (Maltby, Gage & Berliner, 1995).

Art Curricula and Programming for Students with Disabilities

Art Curricula

A Federal Government, 'Statement and Profiles for the arts in Australian schools', was issued from Canberra by the Minister of Education in February,

1994. This document required all states to regard the arts in education as a 'Key Learning Area', and to include the areas of dance, drama, media, music and visual arts within the art education syllabus for all schools (McPherson 1995, p.2).

In Western Australia, the curriculum framework for arts education is devised by a special Curriculum Council of the Education Department. Arts education covers foundation activities in gradually developing phases for students from K - 12 in dance, drama, media, music and visual arts and combinations of these subjects. In the primary school, the study of the arts in education is structured into two learning phases, from Years K - 3 and from 3 - 7.

In 1998, The Curriculum Council in Western Australia presented to all schools a format of required outcomes for students to obtain in all areas of education, including the six arts areas mentioned. Art educators are expected to provide quality programs for their students so that they are able to understand the tasks required of them, and can then reach a suitable level of competency in all the required areas. The Council understands that all children may not reach the required outcome in all levels of the arts curriculum, especially those students who may have certain learning difficulties through intellectual or physical disabilities. They instruct teachers of these special students to plan their programs with care, and, if necessary, to select alternative ways to seek competency in the arts outcomes for these special needs students.

The Curriculum Council (1997, p. 64) stated that all students need programs that challenge them to move on, and they indicated that teachers need to 'identify students' current understandings', and build programs that will 'cater for students' needs and styles of learning.' This statement applied to programs for special education students as well as their peers in the regular school. Although there is a more flexible attitude towards the arts learning outcomes for special

education, this attitude puts the full responsibility on the teacher for each student in her/his class, and an obligation to provide them with a stimulating activity at each lesson. Consequently, there should be no excuse for a paucity of value in the standard of programming for students with special needs.

The Curriculum Council of Western Australia (1997), points out that, when teachers are planning their arts programs, they must be aware of the great diversity in the Australian population. Teachers must be prepared to construct art programs around the diverse interests and abilities of their students, because all students need opportunities to work individually and in groups in order to express their own ideas, and to develop focus and organisational skills in the creation of their art work. Therefore, it is important that art programs should give students the encouragement they need to express themselves within a supportive and safe learning environment.

In America, the states provide for the art curriculum to schools, in a fairly similar structure to that which applies in Australia. For example, The New York State Learning Standards for the Visual Arts, include outcomes in multi-media, painting, ceramics, tile mosaics, water colour, jewellery design and murals. The curriculum framework is designed around these standards in much the same way as applies in Western Australia, and students also have the opportunity to enjoy a wide range of art experience and creative expression from the programs provided by their arts educators (Kennedy, 1999).

Art Programming

In America, nearly thirty years ago, Dirr and Anderson (1974), provided a project for the implementation of art programs to be given to children with severe disabilities at primary level. They interviewed seventeen special education

teachers and thirty-eight third grade students, and also tested thirty students, in order to evaluate their ideas on program improvement. These researchers believed that their report on a project design for improved instructional programs for handicapped children had been able to accomplish a new learning style to initiate, evaluate and document a crisis-intervention program, and in developing and using three computer programs for thirty-eight third grade students. They encouraged the teachers, in both special and regular education, to give their students in the art class wider options of choice, and to produce programs that were more interesting for them. The researchers reported that all sections of this project had a positive outcome from the professionals who were involved in the study.

Their study motivated Gair (1975), in the following year, to carry out an evaluation study on art-based programs for students with disabilities. This researcher analysed the work of twenty children with learning difficulties to ascertain the effectiveness of the art program on the psycholinguistic abilities of these children, with a positive result in both aptitude and attitude in the participating students. The researcher studied the regular art program for students with disabilities and included an intervention which provided for the naming of the colours by each student as they used them in their art work.

Kearns (1981), produced a number of articles pertaining to the provision of quality art programs for students with disabilities in Pennsylvania, U.S.A. These articles contained instructions for the special education teacher in programming for music, drama and creative dance. The programs could be adapted by the teacher for children with specific learning and physical difficulties. This research used the expertise of various consultants of the 'Arts in Special Education Projects of Pennsylvania.' The project was instigated by these educators in order to

provide more stimulating and appropriate quality art programs for students with special needs. The programs included a wide range of options for the special education teacher and encouraged combinations of music, movement and art as a useful tool for teaching handicapped students in other academic areas of education.

Morreau and Anderson (1984) believed that art teachers should be able to create individualised art programs for their students, especially for those who were severely disabled, so that they could develop in these students the basic skills of art expression and art appreciation. They advocated the use of small group tuition, and the modelling of the task by the teacher. Their theory was that by reducing the disabled class numbers, each child could work at his/her own pace to learn the basic skills to complete the required task.

Brieger, Kendall-Dudley and Sarmiento (1997) expanded on Morreau and Anderson's theory by teaching a fine arts-based program for second and third grade students with disabilities. They presented their cooperative arts program to the second and third grade students from a bilingual learning disabled school in the U.S.A. This program included the use of visual components, including pictorial and historical references, and a cooperative painting experience that was performed by all of the targeted students. The results were based on student self-assessment and teacher observations of the program and the student reactions. The researchers conclusion was that the students used more terminology and principles of construction in each of the art areas through the use of pictorial and historical references. They also found that all of the participating students showed a rise in self-confidence and self-esteem, and increased levels of appropriate behaviour when engaged in the arts activities.

Research on Pictorial Art Programs for Students with Disabilities

In special education, the use of pictorial tools have been utilised extensively by a number of different researchers. Kamps, Dugan, Leonard and Daoust (1994), when they were researching instructional strategies for small groups of students with disabilities, found that teaching special students receptive and expressive skills was enhanced by using pictures of household items and popular food products. They asked the students to produce the appropriate pictures for these categories. For example, to show them a picture of something that they could eat (an apple), or a place where they could sleep (a bed). Their findings showed that the students gained increased levels of responding and decreased levels of inappropriate behaviour, over time.

Pierce and Schreiberman (1994) stated in the introduction to their research on pictorial self-management for students with autism, that autistic students were able to use pictorial activity schedules in a self-management instructional program to change their attitude towards independence. This study was confined to three autistic children at lower primary level, and the purpose of the study was to use some elements of a traditional self-management program with pictorial additions. In this way they could assess the advantages of using picture prompts and to note the generalisation of the method in different settings. The researchers also examined the extent of stimulus control of the pictures used and their ability to motivate behaviour changes in the students. The students in the experiment were all given a picture colouring book containing the relevant pictures and were required to point to the one that most fulfilled the target behaviour and fill in the picture. Prompts and instruction was gradually faded until all children had completed three tasks successfully on their own. All of the students results were 100% correct after the trials had been completed. Pictorial

prompts were shown to be successful, as the tasks they were given to complete became routine, the children showed greater independence, and did not have to rely on the pictures to complete the tasks.

An innovative art program has been devised for learning disabled students in Washington, D C, at The Lab School of Washington, where the students learn to paint ceilings and frescoes. This school uses arts as the core of their curriculum. The teachers believe that visual and performing arts skills relate to those used in everyday activities. For example, collage in relation to planning. Architecture in reference to history and to visual detail. Puppetry for language, social skills and hand-eye coordination and print making and painting for the development of reading readiness through the use of left-right orientation. These ideas for the school were based on the work of Sally Smith (1988), and the results have been well documented (Yanow-Schwartz,1994).

Livermore (1996) describes the advantages of providing learning disabled students with pictorial enhanced art lessons. Her answer to critics who ask if this strategy encourages the students to copy, is that students with disabilities do not copy, "they create". This art teacher believes that the use of pictorial additions to the art lesson can enliven the students use of colour, composition, and act as a stimulant to their own creative powers. In viewing the reproductions of famous artists, the students get a chance to discover how and why the artists created their work. The teacher also models her own art work for them, and then asks the students to go ahead and make their own painting for her. It is understood from her remarks that all of the students are able to complete their task quite successfully.

Music Art Programs for Students with Disabilities

Within special education, the role of music in the arts area is sometimes provided as a form of therapy for the students. Programs are planned around the idea of producing a mood calming effect in an attempt to reduce inappropriate behaviour in the classroom. However, the goals of the music program can also seek to increase self-esteem in the student and encourage self-expression through improvised music, singing, listening to music and through combined music and movement.

Davidson and Edwards (1998) point out that students with severe disabilities can benefit in many ways through the use of music in their education. In their on-task behaviour, development of auditory skills, in an increase of the student's ability to follow directions, and also in the incorporation of tactile, visual and aural stimuli to enhance the students attention to task and improvement to their work. They believe that through the use of well thought out music programs, the special education students can gain participation skills that will help to improve relationships with their peers in integrated settings.

Lacina (1991) presented a study showing the extent of the use of music and movement in special education and regular schools in Louisiana, Kentucky. Questionnaires were sent to 114 primary teachers, including 27 special education teachers and 87 regular teachers. The questions covered the areas of art, mathematics, science and social studies. Teachers were asked how often they provided their students with learning opportunities by visual and auditory means; movement and gestures; manipulatives and music; working alone or with a partner, and working with a group. Except for the students working alone, the special education teachers used all of the modes of presentation far

more than the regular teachers, who failed to use movement, or to work with a partner, in two areas of the study. The researchers noted that both groups of teachers failed to use music as much as was expected in all areas, although the researchers contended that music and movement are known to improve the student's attention, retention, and retrieval span.

In England, according to Gee (1997), special schools for students with disabilities have been provided with an innovative musical experience by the 'Sonic Arts association.' This group is comprised of a body of concerned music teachers, composers and performers. The association provides the special schools with a regular visit from professional music teachers and performers, and gives the school access to special technology, so that children with disabilities are able to enjoy, and become involved with a musical performance of good quality, which takes place within their usual class environment.

Anderson, McLaughlin, Ripp and Tuffs (2000) advocate the use of background music to increase the level of students' work. Their findings showed that the addition of background music helped the students to concentrate and produce a higher quality of work.

Research on Combined Pictorial and Music Art Programs for Students with Disabilities

In America, Kaskell and Lauer (1990), carried out research on a creative art program for students in the primary grades of the regular school, which was also considered to be suitable for students with disabilities in special education. The program was structured into two parts. The first part used visual components and an historical analysis of works of art to encourage the students to perform their own 'landscape painting'. There was also a 'listening to music'

sequence, whereby the students would combine the listening and looking in the art process. The painting activity of the lesson came in the second part and immediately after the first sequence had finished. The Researchers were convinced that the format of the program would enhance the student's art appreciation and, at the same time, produce an atmosphere in the art classroom that would be conducive to creative endeavour.

During research for this current study, it was difficult to find a comparison study in Australia, directly concerned with the non-representational art work of severely intellectually disabled primary students being compared with their peers in the regular school. Research in the area of the art program combination of pictorial/music/art for these students was not well documented. Although, in America, it was discovered that the combination of the music and art theme for students with severe disabilities had been advanced by Hallam and Price (1998). These researchers examined the reactions of the disabled students to the addition of a 'mood calming' music to their usual art program. The program incorporated a pictorial sequence in which the students were shown a picture of a dog or a kitten, or some other familiar object that they were expected to attempt to paint. The participants in the experiment all had various behavioural difficulties, such as, out-of-seat, poor attention to task, and showed some aggression to their peers during the art class. After the musical intervention had been put in place, the findings showed a definite decrease in the students aggressive behaviour, and an improvement in the out-of-seat behaviour and better attention skills of the students. It was also noted by the researchers that all of the students in the study appeared calmer at the end of each lesson, whereas, without the musical background they had appeared even more restless than at the beginning of the lesson.

What Research needs to be Done on Pictorial and Music Art Programs for Students with Disabilities ?

What research is being done on Pictorial and Music Art programs for students with disabilities in Australia? Unfortunately, at this time it would appear to be very little. In the current study, this researcher has devised a new and stimulating art program for students with severe intellectual disabilities that will enhance the students art appreciation and enjoyment through music and painting. The program uses some findings from recent research with severely disabled students, namely, a reliance on small group tuition (Kamps, Dugan, Leonard & Daoust, 1994) and the use of stimulus control and direct instruction (Bauman, 1988); (Cole & Chan, 1990), through an interaction with art and music.

What further research needs to be done on Pictorial and Music programs for students with special needs in Western Australia? Special education is the special victim of poor funding for education generally, which applies to many public schools throughout the educational system, in Western Australia. Without extra funding for research, educators cannot afford to give their time and effort to something that is perhaps not considered to be worthwhile, and special needs programming would seem to come into this category. The formation of new and interesting quality programs for students with severe intellectual disabilities is left to the special education teachers, who usually follow the line of least resistance and stick to 'old tried' and 'true' programs, or worse, take the 'near enough' approach to their programming where their students are concerned.

It is not being disputed by this researcher that special education teachers are not doing a tremendous job under frustrating circumstances within the educational field, with little outside support or encouragement. But it must be understood

by those who hold leadership positions, that special needs children are creative students who need the chance to reach their creative potential, and this can be facilitated when they are presented with educational art programs that will encourage them to reach this goal.

There is a clear need to establish Pictorial and Music Art Programs for students with difficulties and to research the effectiveness and outcomes of these programs in Western Australia. The Literature research showed that, in Australia especially, (but also overseas), there is a gap in our knowledge of the outcomes of Pictorial and Music Art Programs for students with disabilities. The current study aims to partially 'plug' the gap in research and to partially solve the pictorial and music art needs of students with disabilities in at least one school in Western Australia. The next chapter explains the methodology used in the current research study of a Pictorial and Music Art Program for students with disabilities.

CHAPTER THREE

CONCEPTUAL MODEL AND METHODOLOGY

This chapter will include a description of the Conceptual model and the Pictorial and Musical Program, the measurement tools being used, and the design of the study. It will also detail the procedural methodology and will conclude with a presentation of the hypotheses to be tested.

Conceptual Model

Group Feelings and Mood Created by Music

It is essentially the group atmosphere and the group mood created in the classroom by the Pictorial and Musical program that gives, even for students who are severely intellectually disabled, the chance to put their creativity in art to work. For when the students are able to experience this group atmosphere, the teacher can then gain their attention to focus on colours, brush strokes and non-representational forms of some of the 'great' artists. An additional attention-seeking strategy for these students will be to hold the colourful art prints of the great artists directly in front of each individual student's face, so that the student may be able to focus on them.

The logic of the conceptual model can be summarised as follows. Both Regular and Special students can produce non-representational art after viewing prints of non-representational art by the 'greats'. Rock music will produce an exuberant group effect in class, changing their mood and feelings to focus more on singing and dancing. Therefore, their non-representational art work will decrease in quality. Classical music will produce a calming group effect in class, changing their mood and feelings to focus more on the art. Their non-representational art

work will increase in quality compared to that produced after the prints only or rock music (Hallam and Price 1998).

Sample

The student sample for this study consists of 12 students who are severely intellectually disabled lower primary students from a special education school in the Perth metropolitan area, and 12 year two regular students from a country primary school. The regular students were used as a convenience sample for comparison purposes only. It should be noted that it was difficult to obtain the samples. Special students are only taught in groups of 6 - 8 students, and there was some reluctance to try the Pictorial and Musical program. Some teachers believed that it would not be of help to the students.

The regular primary school used for this research study was situated in a large northern wheatbelt town in Western Australia. The school catered for approximately 700 students from pre-primary to year 7. The school was understaffed and over-crowded, and was also under-funded. There was no special art room provided for students, so students were forced to remain in their desks to complete their art tasks and were required to share their art materials.

In contrast, the special education school in the Perth metropolitan area was a 'state of the art' facility that included a swimming pool and gymnasium and a large art room, used solely for that purpose. This educational facility catered for students who were severely intellectually disabled, and provided for very small classes of one-to-one tuition for the students. The art room was provided with excellent lighting and a long table with the chairs placed wide apart to create space. Students were provided with their own painting palette and brushes. The

contrast between the two classrooms used in the study was most noticeable for the lack of space and paucity of materials in the regular school.

Case Histories of Special Education Students

When the Pictorial and Musical program was trialed in the regular school, a class of students for this study was easily obtained. In the special school, however, twelve students could not be accommodated in the one class, because of the rule to allow only six students with severe disabilities in the one class. Because of this ruling it was suggested that there would be two classes provided for the study, giving six students in group (a), and six students in group (b). It was also a requirement of the school that a special education teacher and an aide would be present during the class instruction. This ruling was necessary because of the many diverse disabilities of the students.

For the special education students in this study, there were many variables to be encountered through the students various disabilities. For example, the students being out of seat inappropriately, flaying of arms, rolling on the floor, hitting themselves and others, and the constant vocal interruption of the lesson. These behaviours often lead to interruptions so that instruction and learning cannot take place in a controlled and orderly manner.

Group (a) students

Leanne: Aged 8 years, was very severely intellectually disabled. She was ambulatory and tended to be constantly out of seat in class. When in her seat, she was very easily distracted from task, pulled her hair and yelled out frequently during class activities. Leanne was diagnosed autistic and did not show many receptive or communicative skills and she did not want to react with her peers at all.

Rachel: Aged 10 years. Rachel had a severe intellectual disability and sometimes exhibited aggressive behaviour towards her peers and herself, and her interaction with her peers was very limited. Rachel was diagnosed autistic.

Stewart: Aged 9 years. Although he was considered severely disabled, and also diagnosed autistic, Stewart was a quiet student. He was vocally impaired, but socially approachable.

Susie: Aged 7 years. Susie was very severely intellectually disabled and could become very aggressive on demands and uncontrollably vocal in class. She was visually impaired and her interaction with her peers was very limited.

Robert: Aged 8 years. Robert was severely disabled and suffered from severe epilepsy. He was subjected to constant fitting, although heavily medicated, which often caused him to fall asleep in class. He used a wheelchair and sometimes required medical support when in class.

John: Aged 9 years. A severely intellectually disabled student who was diagnosed autistic. John required constant prompting in class to get him to focus on task. He did not seem to be aware of his peers and had great difficulty in maintaining any interest in instruction.

Group (b) students

Adam: Aged 10 years. Adam was inflicted with cerebral palsy since birth. Although severely intellectually disabled, he tried hard at his work and was not disruptive in class.

Ben: Aged 6 years. Ben was severely intellectually disabled and had many behavioural problems, was considered by the school to be autistic, but as yet had not been diagnosed.

Rhonda: Aged 10 years. Rhonda was autistic and severely intellectually disabled. She tended to be very verbal during class activities.

Christopher: Aged 10 years. Christopher was autistic, and severely physically and intellectually disabled. He was non-verbal and required the use of a wheelchair.

Dennis: Aged 5 years: A victim of Landau-Kleffner Syndrome. He was non-verbal and required the use of a wheelchair.

Janice: Aged 5 years, was autistic, visually impaired and also physically and intellectually handicapped. She was non-verbal and required a wheelchair.

Mario: Aged 6 years. Mario was autistic, non-verbal and severely intellectually disabled, he was also often disruptive in class.

As almost all of the severely intellectually disabled students taking part in this study were professionally diagnosed as suffering from autism, it was considered important to document some aspects of this disability when compiling the case histories of these students.

Autism is considered by professionals, concerned with its outcomes, to be a severe neuro-biologically determined disorder. It is a disorder that has a considerable effect on how children cope with learning, the ability to communicate, understand their environment and how to relate to other people. Symptoms are usually shown during the child's first three years of life and appear to be more prevalent in boys than girls. A diagnosis of this disease is usually only obtained after the child has undergone many medical tests.

Autistic children have great difficulty in focusing or concentrating on one 'thing' for long periods. They often keep repeating a movement over and over. They

can also become extremely attached to routines and can become very distressed when this may be broken. Special education teachers find that the same task may have to be repeated many times for these children before it is understood and assimilated. But once a skill has been gained, autistic children find it difficult to let it go and move on to the next one (Harris, Handleman & Alessandri, 1990). This tendency is one reason why the special education teacher who was involved with this research study was initially uncertain as to whether the severely intellectually disabled students could receive any benefit from a Pictorial and Musical program that included three distinct segments within the one lesson. The teacher pointed out that the art students already had a painting program and a separate music program in which the students were encouraged to wave their hands and conduct to the music and that bringing them together in the one program may cause some conflict for these students.

It is believed that teaching autistic students basic skills such as getting dressed and feeding themselves at an early age, is extremely important, especially with children with severe intellectual disabilities, because this can alleviate the amount of time that teachers have to give to the students in the classroom, and also helps to expedite the learning process for these students, according to Pierce and Schreibman (1994). These researchers also investigated the effectiveness of using pictorial learning strategies with autistic children and discovered that students with autism were aided by pictorial prompts and were stimulated by the use of pictures in their daily learning activities.

Measurements

The dependent variable is the production of non-representational art works. The quality of this art will vary due to the effect of the Pictorial and Musical program used to teach lower primary students in the regular and special education

schools. In order to take account of any variance in the quality of art produced, each student taking part in the study ($N = 24$) produced a number of paintings under the three different instructional methods and 1 from each student in each method was chosen at random (72 paintings in total). These paintings were then marked by twelve markers, from the School of Education (Edith Cowan University), as a trial to check on the validity of the marking scheme. A further three independent teacher markers were used for the main marking scheme. The measurement tool used for marking was in the form of a questionnaire (see Appendix III). The questionnaire used a five point scale to assess each of the three outcomes, colour, composition and creativity, expressed in the students' art works. The markers were also provided with the following criteria description.

1. Use of Colour: One mark each is awarded for showing some understanding of the use of complementary colours (1), an ability to use the colours cleanly (1), a combination of colours (not necessarily complementary) used to show some understanding of the spatial concepts taught in the lesson (1), and a fair attempt to use more than one colour (1). A further mark will be awarded if all of the criteria are found in the work. This provides a total of 5 marks for colour.
2. Composition: One mark each is awarded for attempting to cover the picture plane (1), use brush marks cleanly (1) show some knowledge of spatial concepts in the composition (1) and use a strong application of brush strokes to give a balanced overall composition (1). A further mark will be awarded if all of the criteria are found in the work. This provides a total of 5 marks for composition.
3. Creativity. To obtain marks for creativity the student must have shown good ability in the use of colour and composition. For instance, the student would have showed a good use of colour, used brush strokes cleanly and clearly, showed some knowledge of spatial concepts and produced an interesting overall

composition. In addition, the student must show some original and creative ability in producing the painting, involving colour and composition. This provides a total of 5 marks for creativity.

The scale of measuring the quality of the student's non-representational art work ranges from 1 (lowest quality) to 5 (highest quality) in each of the three aspects and, on a scale from 1 to 15, for overall quality of non-representational art. This is an attempt to produce an interval scale where the difference between marks of 1 and 2 and marks of 4 and 5, and marks of 10 and 11, represent the same amount of art quality. So not only must a mark of 2 represent more art quality than a mark of 1, and a mark of 5 represent more art quality than a mark of 4 but they should form a linear scale, much like a ruler measuring length in centimeters, marking the quality of the students' art work on an interval scale.

As a result of marking the art works on a five point scale for each aspect, it is possible for each student to obtain a top score of fifteen marks, if they can gain five marks in each aspect. For example, in aspect 1, the student could gain one mark for using more than one colour. Another mark could be gained for using the colours cleanly. A further mark would be given if the student portrays some understanding of complimentary colours. A fourth and fifth mark may be obtained in this section if the student uses the colours to express spatial concepts, for example, in shading. In aspect 2, a mark would be given if the brush marks were used effectively in the composition, and another mark if they were cleanly executed by the student. A further mark would be awarded to the student if there was an attempt to provide some form of spatial concepts in forming their composition. The fourth and fifth marks would be allowed if all of the forgoing criteria had been complied with, in order to form an interesting and well constructed composition. In aspect 3, the painting would require to have at least

some of the criteria required for sections 1 and 2, but marks can also be given if the student has shown some effort to produce clean, colourful art work that is not obviously copied work, and shows evidence of creativity in the use of colour and composition, but still requires a mark from 0 - 5. This marking scheme was piloted in order to check that it would work as intended. By using the above criteria, the quality of the non-representational art work produced by the participants in this study, can be judged fairly, reliably and validly. It is also a simple assessment strategy for the teacher to use, and once it is mastered, can be easily put into place. A further section on the reliability and validity of the marking will be covered in Chapter Four.

Study Design

The study used a 3 by 2 factorial design, as set out below. There are three stimulus types (Pictorial only, Pictorial plus Rock music and Pictorial plus Classical music) and two student types (severely intellectually disabled and regular). The 12 students with severe intellectual disabilities (and separately the 12 regular students who were a convenience sample) had no previous knowledge of the study intentions. Each student type received identical treatments for identical stimulus types. The dependent variable is the measure of non-representational creative art.

The first independent variable in this study is the two student types. The difference between regular students and special students relate to two aspects. One is the physical situation for art teaching at the two schools and the second is the IQ of the students. In all other aspects, the regular and special students who had physical and sensory disabilities as well as behavioural problems, were treated exactly the same, as far as possible.

At the regular school, art classes were scheduled between other classes, such as Maths, English and Social Studies. There was relatively less space in which to operate, desks were pushed close together, and the regular students were required to work in conditions that were cramped, compared with those in the special school. In contrast, the special education school provides for a separate venue for teaching each subject. Teachers in special education require a simple program that will allow for the students to be taught in short steps, and classes for the special students are kept small (average 6 students). Teacher strategies for special students must allow for many behavioural difficulties during the lesson, so a teacher assistant is provided for each class. Students are also placed some distance from each other, at a long table, in order to circumvent any aggressive behaviour between the students during the lesson.

Another variable to be considered is the difference in the behaviour of the regular and special students. The regular students are considered to be of normal intellectual ability; that is, the students are believed to have a normal cognitive functioning, and can complete their tasks at a normal level of skill. Their IQs were expected to be in the range 75 - 115. The students in the special education art class of this study are all considered to be severely intellectually disabled with an IQ assessment around 40. In Australia and New Zealand, students with intellectual disabilities are considered to have an IQ less than 70.

The second independent variable in this study is the stimulus type. The same three stimulus types were used to teach the regular and special students. It was important that each student received the same treatment. The length of time allowed for each lesson was 45 minutes, and students were given the same materials to produce their art work. All teacher strategies for showing the art print to the students were carried out in the same way, as near as possible, with

the exception of the focusing of the print for the special students. Positive reinforcement was given by teachers in both schools, and the paintings in each of the three pictorial and musical sequences were chosen at random by the researcher for analysis. All participants in the study were unaware that their work was being included in the research study.

Table 3 . 1 **Study Design**

<u>Methods</u>	<u>Group type 1</u>	<u>Group type 2</u>
	<u>Severely Disabled</u>	<u>Regular</u>
<u>Artwork stimulus</u>		
	<u>n = 12</u>	<u>n = 12</u>
1. Used pictorial only (Kandinsky) no musical background	1 painting	(same method for both groups)
2. Artwork stimulus pictorial (Kandinsky) plus rock music background	1 painting	(same method for both groups)
3. Artwork stimulus pictorial (Kandinsky) plus classical music background	1 painting	(same method for both groups)

Procedure

Regular Education Art Class

The principal of the regular primary school was contacted by the researcher and permission was granted for the pictorial and musical program to be presented to a class of year two students. The class teacher was informed, and a note requiring consent for their child to take part was sent to the parents. A meeting was then arranged between the teacher and the researcher for discussion of the proposed program and the required teacher strategies. A suitable date convenient to both parties was then decided upon.

The year two art lesson, which was required to last for forty-five minutes, included thirty-two students, all of whom would be partaking in the pictorial and musical program. Twelve students were chosen at random by the researcher at the conclusion of the lesson, and three of their art works were taken for marking.

At the sound of the bell, the students marched into the classroom in an orderly manner, quickly took their painting aprons from a peg at the rear of the room, and seated themselves at their desks. The desks had already been prepared for their art lesson by their teacher. They were neatly covered with paper and a paint palette containing primary colours, and a water jar and brushes were at hand. The class teacher began the lesson as soon as the class had settled. She began by introducing the researcher to the students, explaining that this art lesson was going to be a little different to their normal one. The teacher then produced the Kandinsky print "The Park" (see Appendix III), explaining to the students how the artist had painted this work whilst listening to music. She held the print so that all of the students had a chance to see it, and pointed to the

artist's use of bright colours painted in a free and abstract way. It was also explained to the students how it was possible for them to paint in this way, using many of the same bright colours that could be found in their own palettes. The students were then requested to write their first name on the back of their paper and to begin their first painting.

The first part of the Pictorial and Musical program had taken approximately twenty minutes to complete. After the paintings had been removed from the desks, brushes cleaned, and fresh paper given to the students, the teacher held up the Kandinsky print again and informed the students that their next painting was going to be done to music. They seemed to be quite enthusiastic about this possibility. The teacher showed the print again to the students and switched on the music. The music for this rock sequence was chosen from the television series "Heartbeat". The students then began to sing and beat time to the music. The music was quite loud and the noise level in the classroom had become extreme. The teacher got the class to focus on painting and the students managed to complete another painting, but not before they had been reprimanded for their inappropriate behaviour.

During the first part of the final sequence of the program, the atmosphere in the classroom was rather subdued, the former noisiness had subsided. Fresh paper was given out, brushes cleaned, and students were given another viewing of the Kandinsky print. The sound of soft classical music from Pachelbel's "Canon in D" filled the classroom. It was observed by both teacher and observer that the students suddenly became very quiet and appeared to sit straighter in their seats taking on a listening aspect to the music. This attitude was only broken when the teacher requested them to begin painting. This time they all began painting immediately, and after finishing their first painting, they all requested more

paper. As there was enough time left before cleaning up time, the teacher complied with their request. During the final classical music sequence of the program, the teacher found it difficult to stop the students painting, she allowed them to continue until it was imperative to begin cleaning up in order to prepare for their next lesson. At the end of the lesson, the researcher chose twelve students at random and collected three of their first paintings completed in the pictorial and musical program.

Special Education Art Class

The principal had been consulted and permission given for a special education art class to take part in this research study. Parents and guardians were contacted for their permission, and informed that names would be changed to protect privacy. The art teacher then arranged a day and time suitable for trialing the pictorial and musical program with the art class. The special school has a policy of allowing 6 to 8 students in each class, and only two classes were able to be obtained for this study.

Class (a)

The art lesson included six students with severe intellectual disabilities whose ages ranged from five years to ten years. For this lesson, all students were required to wear a painting overall. This procedure was accomplished quickly with the help of an aide. This teaching assistant, before the class had begun, prepared all the necessary equipment that the students would be using during the class. Each student had a large palette containing primary colours, a number of brushes and a sheet of A3 art paper in front of them, so that they could begin work immediately. None of the students began to paint before they were encouraged to do so by their teacher.

Before they began painting, the colourful print of Kandinsky's painting "The Park" was shown to each student individually, in this way they were able to see the bright colours used by the artist and identify with those in their palette. The print, which measured 10 inches by 12 inches, was held directly in front of each student's face so that their eyes were able to focus on the print without distraction. When the teacher was sure that the student had been able to recognise the colours, the students were then encouraged to begin painting by guiding their hand to the palette, the choice of paint was up to the student. The teacher refrained from helping the student to paint, only returning their brush to hand if it was dropped, prompting, and giving positive reinforcement when necessary.

The Pictorial only painting for the special education students was accomplished without any inappropriate behaviour. Only one student, Susie, was out of seat momentarily, refusing to work when seated, but eventually began her task. After the students had completed their first painting, fresh paper was provided, and the teacher gave them another viewing of the Kandinsky print, again referring to the identical colours that they could use in their palette.

For the second segment of the art program, the teacher used the same rock background music that had been played for students in the regular class. The students were asked to begin their second painting. At the beginning of this part of the program some of the students became quite disturbed and were slow to begin working. Adam was very aggressive, until the teacher managed to calm him with pleading and an edible reinforcement. He eventually settled down and began working, but not before Susie had left her seat again and began hitting one of the other students with her brush. Susie eventually was seated and completed a painting very quickly. Rachel was showing great enthusiasm and

painting in tune to the music. Robert was very methodical and worked steadily at his task, but seemed not to notice the music or the classroom disturbance.

Before the final sequence of the pictorial and musical program was introduced, the teacher repeated the exercise with the Kandinsky print. Fresh paper was given to each student, and the classical music began to fill the art room. After the start of the music, it was noted by the teacher, the aide and also the observer that the students had become quiet and appeared to be listening to the music. The teacher waited a few moments before asking the students to begin their painting. Susie became less vocal and completed her painting without leaving her seat. Rachel showed the same enthusiasm that she had done in the former musical intervention, but needed no prompting to continue her task. Robert worked quietly, but Stewart wanted to listen to the music and required prompting and positive reinforcement in order to complete his task. The other students worked well, including Adam who was praised for his good behaviour. It was agreed that inappropriate behaviour was minimal during this stage of the program. All of the students were given an edible reinforcement at the completion of the pictorial and musical program and received praise for work well done.

Group (b)

The same conditions applied for this group as for group (a). Using the same Kandinsky print before each segment of the program to gain the student's focus, the teacher was concerned to keep as near as possible to the strategies used for the first group.

When the teacher was convinced that all of the students had gained focus and were aware of the colours in the print and those in their palette, the students

were encouraged to begin their first painting. For this pictorial only segment of the pictorial and musical program, all of the students, although fairly slow to begin, showed little inappropriate behaviour. After they had completed their painting, fresh paper was produced and the rock music was started. The music seemed to be very loud in the large room. Nearly all of the students began waving their brushes around in time to the music. The teacher tried to gain control of the class by turning the music down, this improved some of the classroom disturbance and the teacher and aide managed to calm most of the class down. Dennis had become very excited by the music and refused to begin his painting. All of the students required a great amount of prompting before they could finish their task.

The teacher left a few minutes for the students to become calmer, before introducing the Kandinsky print again in the final sequence of the art program. At the sound of the classical music in the background, the students appeared to notice the music, and they began painting quickly with quite strong brush strokes as though they were keeping time with the music. The teacher expressed some surprise at the student's changed attitude as they all kept on painting and needed little prompting to complete their work. Some of the students even requiring more paper to complete another painting. No inappropriate behaviour was noted during this last segment of the program. Only the occasional prompting and positive reinforcement was needed for these students. At the end of the lesson students were rewarded with an edible reinforcement. The researcher/observer collected three paintings from each student in group (a) and group (b), for marking and analysis in this research study.

Hypotheses

HO₁ : There will be no significant difference in non-representational art work, between the regular and special education students, when a Pictorial addition is added to their Pictorial art program.

HA₁ : There will be a significant difference in non-representational art work, between the regular and special education students, when a Pictorial addition is added to their Pictorial art program.

HO₂ : There will be no significant difference in non-representational art work, between the regular and special education students, when a Rock music addition is added to their Pictorial art program.

HA₂ : There will be a significant difference in non-representational art work, between the regular and special education students, when a Rock music addition is added to their Pictorial art program.

HO₃ : There will be no significant difference in non-representational art work, between the regular and special education students, when a Classical music addition is added to their Pictorial art program.

HA₃ : There will be a significant difference in non-representational art work, between the regular and special education students, when a Classical music addition is added to their Pictorial art program.

A univariate analysis involving 2 way ANOVA was used with SPSS to investigate the effects of the within-subject factor (Special or Regular students) and the between-subject factors (Pictorial or Pictorial with Rock music, Pictorial with Rock or Pictorial with Classical music, and Pictorial or Pictorial with Classical music) on quality of non-representational art. The results are explained in the following chapter.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

In this chapter the results of the study data are presented and analysed using two-way ANOVA, for interaction and main effects. The chapter includes the teacher interviews, recorded after the Pictorial and Musical Program had been introduced to the students. It concludes with a summary of conclusions that were formed in regard to the analysis of the non-representational art works.

Validity and Reliability of the Creative Art Measures

In this experiment, the special and regular education students were required to paint some non-representational art. The quality of this non-representational art was measured in terms of colour, composition and creativity in equal amounts. These were chosen because in art education, the marking of non-representational painting can be very subjective. Therefore, a set level of competence is necessary to assure fair judgement of the art work.

In this study, the use of colour was defined as an ability to understand the use of complimentary colours, to use the colours cleanly in the art work, to use colours to show spatial concepts taught in the lesson and to use at least more than two colours in the work. A sub-scale from zero (lowest use of colour) to five (best use of colour) was created. To score a five in colour, students had to demonstrate that they were aware of complimentary colours, use more than two colours in the work, have all colours cleanly presented and have their colours defined by brush strokes in such a way as to show the spatial concepts presented in the lesson. To score a mark of four, the above criteria would need to be seen in the painting, but the requirement to allow the colour to be used to define spatial

concepts would not be deemed to be necessary. For the student to gain a mark of three, the art work would require the use of more than one colour, brush marks of each colour to be well defined and the colours to be presented cleanly on the page. To gain the mark of two the student would have to demonstrate a fair attempt to use the brush cleanly with two colours, and to score only one mark would indicate that some attempt to use a colour on the paper with the brush had been made by the student.

The use of composition was defined as an attempt by the student to cover the picture plane with a balanced and strong application of brush strokes and to show some understanding of the spatial concepts that had been taught in the lesson. A sub-scale from zero (lowest use of composition) to five (best use of composition) was created. A mark of five would require all of the above to be in evidence in the work, together with a clean and colourful application of the paint. A mark of four would require most of the above criteria, but may omit complete covering of the picture plane, although the work should be well positioned. A mark of three requires the student to show a strong use of brush strokes to form a well balanced composition on the picture plane, and it must be cleanly presented. A mark of two would require the student to have made an attempt to show that the brush was being used to form some marks by applying paint to the page, and a mark of one is given for an attempt by the student to paint.

In this study, the use of creativity was gauged by the markers as an attempt by the student to fulfil the above criteria in an individual creative way. A sub-scale from zero (lowest use of creativity) to five (best use of creativity). For instance, if the student has shown a good use of colour, a fair understanding of the concepts taught in the lesson, a well balanced composition on the picture plane with an interesting and individual attempt at brush strokes, then it can be assumed by

the marker that the student has applied some creativity to the art work, and it would receive five marks. Four marks would be given if one of these criteria were missing but some originality is shown. Three marks would be awarded if the student showed an interesting use of colour and the work was presented clearly and cleanly , but was not necessarily well balanced or show any originality. Two marks may be awarded for an attempt to show brush strokes in a well defined way, but with no originality. One mark is given to the student for attempting the painting.

The scores used for colour, composition and creativity were then added to form a scale from zero to 15 for the non-representational painting. Typically, paintings by students scoring 12 to 15 showed a good sense of colour, with good use of complimentary colours. They were a well executed composition covering the picture plane and were considered a good attempt by the student to produce an interesting work showing individual originality (see Appendix IV). Students scoring 8 to 12 showed a clean use of colour and a fair attempt at using brush strokes in the composition in order to produce a creative piece of art work. (see Appendix V). Paintings by students scoring 4 to 7 showed a fair use of at least two colours, and, although not covering the picture plane, had attempted to use the brush to form a composition (see Appendix VI). A score of 0 to four would show no understanding of spatial concepts presented in the lesson, colours not very cleanly used and very little colour sense or creativity used in the work.

Each special education student ($n = 12$) had three paintings chosen randomly by the researcher, one using the Pictorial method only, the second using the Pictorial and Rock music method, and the third using the Pictorial and Classical music method. Each regular education student ($n = 12$) had three paintings chosen randomly by the researcher, one using the Pictorial only method, the

second using the Pictorial and Rock music method, and the third using the Pictorial and Classical music method. The 72 paintings were mixed and unidentified so that the markers could not tell whether a student was from a special or regular class. They believed that all the paintings were from the lower primary level.

The results of this marking are set out in four tables. Table 4.1 shows the marks for special education students' paintings by marker (three independent teachers a, b and c), by teaching method (Pictorial, Pictorial and Rock music, and Pictorial and Classical music), by painting content (colour, composition and creativity). Table 4.2 shows a similar set of marks for painting by the regular students.

Table 4.3 shows the percentage agreement of the three independent teacher markers by type of student (Special, Regular), by teaching method (Pictorial, Pictorial and Rock music, and Pictorial and Classical music), by content of painting (colour, composition and creativity). The percentage agreement is calculated according to 1 scale point difference. That is, agreement is deemed to be met if the difference between the three markers is no more than the discrimination (or error) in the scale itself. A mark of say 3 is deemed to have an error of + or - 0.5 so that the mark is between 2.5 and 3.5. The results show that markers had better agreement for:

1. Regular students' paintings than special students' paintings in the Pictorial method;
2. Regular students' paintings in the Classical method;
3. Special students' paintings than regular students' paintings in the Rock method; and that there is

4. reasonable agreement (but by no means perfect) between markers overall.

This less than perfect agreement between markers needs to be taken into account when examining the implications of the results of this study. In order to 'even out' the variation in markers scores across all students in each of the three methods, total scores from all three markers were used in the subsequent analysis.

Table 4. 4 shows the total scores from the three markers by type of student (Special and Regular), by teaching method (Pictorial, Pictorial and Rock music, Pictorial and Classical music), by individual students. These results show that:

1. Regular students scored higher marks for painting in Pictorial method than did special students.
2. There was more variation in the painting scores for regular students than special students under the Pictorial method;
3. There was little significant difference between regular and special students' painting scores under the Pictorial and Rock method.
4. There was slightly more variation in the painting scores for regular students than special students under the Pictorial and Rock method;
5. The regular students' paintings scored higher than the special students' paintings under the Pictorial and Classical method.
6. Variation in painting scores for regular students were about the same as paintings by special students under the Pictorial and Classical method.

From the evidence, the validity of the painting scores seems strong. Colour, composition and creativity are three of the most important aspects of non-representational painting. The three markers were given proper instructions in regard to providing valid marks for the three aspects. The scale from 0 to 15 provides a reasonable amount of variation in measuring the quality of the paintings. There are three aspects of this scale which need further comment - characteristics of the scale scores (internal consistency), discrimination between scores on the scale by the markers, and consistency between markers.

In ratio and interval level scales, equal differences between scores should represent equal amounts of what is being measured. In this case, it means, for example, that the difference between 10 and 12 (2 points on the scale) should represent the same difference in art quality as between 6 and 8. Paintings whose scores were 6, 8, 10 and 12 were examined separately by a marker at a later date and it was judged (albeit subjectively) that the paintings did satisfy this criterion.

In a ratio scale, zero represents no painting quality. No paintings were given a score of zero. The painting with lowest score (student 6, marker (a), under Pictorial and Rock music method) was examined. It clearly did not warrant a zero score. In a ratio scale, a painting score of 12 should show twice as much quality as a painting scoring 6. Paintings whose scores were 6 and 12 were examined by a marker later and it was judged (albeit subjectively) that the paintings did satisfy this criterion.

An important question is how well markers can discriminate between paintings. If the scale is 0 to 15, can they consistently discriminate between adjacent scores, for example, between 6 and 7, and 9 and 10. It was expected that the minimum error was + or - 0.5, but the error seems to be larger. This is related to consistency between markers. The evidence from Table 4.3 shows that marker

consistency and, hence, discrimination and marker consistency was not as good as the researcher would have wished. Clearly, the researcher would have liked to have perfect agreement between markers and all three markers being able to judge a quality difference between say 6 and 7, and 9 and 10. Therefore, in order to 'even out' the errors between markers and discrimination between scores, total scores from the three markers then had to be used in subsequent analysis. If this had not been done, then further random errors would be present in the data and would 'contaminate' the results.

Table 4.1

Art scores for special education students by teacher markers / teaching method /content of painting

		Pictorial			Rock			Classical		
		Col.	Comp.	Creat.	Col.	Comp.	Creat.	Col.	Comp.	Creat.
Student 1	Marker a	3	3	3	3	4	4	3	3	4
	Marker b	3	3	3	5	3	3	4	3	3
	Marker c	3	4	4	4	4	4	4	4	4
Student 2	Marker a	3	3	4	4	4	4	3	2	3
	Marker b	3	3	3	4	2	2	4	2	3
	Marker c	3	2	2	4	2	3	3	4	3
Student 3	Marker a	2	3	3	2	2	2	3	2	3
	Marker b	3	2	2	3	3	2	2	2	3
	Marker c	4	2	2	2	2	2	5	5	3
Student 4	Marker a	4	2	2	2	2	2	4	3	3
	Marker b	4	2	2	1	2	2	5	5	5
	Marker c	2	2	2	1	1	1	5	4	4
Student 5	Marker a	4	2	4	3	2	3	4	5	4
	Marker b	4	2	2	3	2	2	3	2	3
	Marker c	4	4	4	4	2	3	5	5	4
Student 6	Marker a	1	1	3	1	1	1	1	1	2
	Marker b	2	2	3	1	2	1	1	1	2
	Marker c	1	2	1	2	2	1	2	1	1
Student 7	Marker a	3	3	3	4	3	3	4	3	3
	Marker b	2	4	3	3	3	2	4	2	4
	Marker c	2	3	3	4	3	3	2	3	4
Student 8	Marker a	4	2	2	2	3	4	3	5	5
	Marker b	3	2	2	2	2	2	4	2	3
	Marker c	2	2	2	2	2	2	4	3	3
Student 9	Marker a	4	2	2	4	3	3	4	3	3
	Marker b	4	2	2	4	4	4	3	4	4
	Marker c	4	4	4	4	3	5	5	5	5
Student 10	Marker a	3	2	3	3	2	3	3	3	3
	Marker b	3	4	1	3	4	3	3	3	2
	Marker c	2	2	2	3	2	2	4	3	3
Student 11	Marker a	3	4	2	1	2	1	3	3	3
	Marker b	3	4	4	2	2	2	4	3	3
	Marker c	4	3	3	2	3	3	4	5	4
Student 12	Marker a	4	4	3	3	4	3	4	3	3
	Marker b	4	2	4	2	2	3	3	1	2
	Marker c	4	2	2	2	2	2	3	2	1

Note: 1. col. refers to colour scores from 0 to 5
 2. Comp refers to composition scores from 0 to 5
 3. Creat. refers to creativity scores from 0 to 5
 4. Pictorial refers to art scores using the Pictorial method
 5. Rock refers to art scores using the Pictorial and Rock method
 6. Classical refers to art scores using the Pictorial and Classical method

Table 4.2

Art scores for regular education students by teacher markers / teaching method / content of painting

		Pictorial			Rock			Classical		
		Col.	Comp.	Creat.	Col.	Comp.	Creat.	Col.	Comp.	Creat.
Student 1	Marker a	3	4	4	4	3	3	4	3	3
	Marker b	3	4	4	3	4	4	5	4	5
	Marker c	3	4	4	3	1	3	3	2	3
Student 2	Marker a	5	4	5	2	2	2	2	2	3
	Marker b	4	4	4	2	2	1	2	1	2
	Marker c	4	4	4	2	1	2	2	2	2
Student 3	Marker a	3	4	4	1	1	1	3	4	3
	Marker b	3	4	4	2	1	1	2	3	3
	Marker c	4	4	4	3	2	2	3	3	2
Student 4	Marker a	1	1	1	4	4	3	4	4	4
	Marker b	1	3	3	4	4	5	4	4	5
	Marker c	2	1	1	4	3	4	4	3	4
Student 5	Marker a	2	2	3	3	3	5	5	3	5
	Marker b	2	3	3	5	2	2	5	4	5
	Marker c	2	3	4	4	2	2	5	5	5
Student 6	Marker a	3	2	3	3	4	4	3	3	4
	Marker b	2	2	3	2	3	4	4	3	4
	Marker c	4	4	4	4	4	5	3	3	4
Student 7	Marker a	3	3	3	1	1	1	4	3	4
	Marker b	4	2	4	1	1	1	5	3	4
	Marker c	3	4	4	1	2	2	5	4	4
Student 8	Marker a	3	3	4	5	5	5	5	5	5
	Marker b	3	2	4	4	4	4	5	5	5
	Marker c	3	2	4	2	2	2	4	3	4
Student 9	Marker a	3	3	3	4	3	3	4	3	3
	Marker b	3	3	2	3	3	3	5	5	5
	Marker c	2	3	4	4	4	4	4	4	5
Student 10	Marker a	3	3	4	4	3	5	5	3	4
	Marker b	4	3	4	4	2	2	5	5	4
	Marker c	4	5	4	4	4	4	5	5	5
Student 11	Marker a	4	4	5	3	3	2	3	4	4
	Marker b	4	4	4	2	2	2	3	3	4
	Marker c	5	5	5	2	4	2	3	4	5
Student 12	Marker a	3	4	4	3	3	3	4	3	4
	Marker b	3	2	3	4	2	3	3	2	3
	Marker c	4	2	3	2	2	2	3	3	3

Note: 1. col. refers to colour scores from 0 to 5
 2. Comp. refers to composition scores from 0 to 5
 3. Creat. refers to creativity scores from 0 to 5
 4. Pictorial refers to art scores using Pictorial method
 5. Rock refers to scores using Pictorial and Rock method
 6. Classical refers to scores using Pictorial and Rock method

Table 4.3

Percentage agreement of three markers by type of student/ by teaching method/ by content of painting

	PICTORIAL			ROCK			CLASSICAL		
	Col.	Comp.	Creat.	Col.	Comp.	Creat.	Col.	Comp.	Creat.
Special Ed. (n=12)	75%	67%	50%	92%	82%	67%	67%	33%	65%
Regular Ed. (n=12)	92%	58%	83%	67%	67%	58%	92%	58%	83%

Note: 1. Percentage agreement refers to agreement of markers within 1 scale point
 2. Agreement between markers is reasonable
 3. Total scores are used in the analysis of results to 'even out' the variation in marker scores across all students

Table 4.4

Total art scores by type of students by teaching methods

	PICTORIAL		ROCK		CLASSICAL	
	SPECIAL	REGULAR	SPECIAL	REGULAR	SPECIAL	REGULAR
Student 1	29	33	34	28	32	32
2	26	38	29	16	27	18
3	23	34	20	14	26	26
4	22	14	14	35	38	36
5	30	24	24	28	35	42
6	16	27	12	33	12	31
7	27	30	28	11	29	36
8	21	20	21	33	32	41
9	28	26	34	31	36	38
10	22	34	25	32	27	41
11	30	40	18	22	32	33
12	29	28	23	24	22	31
mean (student type)	25.17	29.67	23.50	25.58	29.00	33.75
SD	4.39	6.93	7.04	8.17	7.06	6.93
mean (method)	27.42		24.54		31.37	
SD	6.12		7.54		7.26	

GENERAL LINEAR FACTOR MODEL (2 WAY ANOVA)

The general linear model (2 way ANOVA) in SPSS was used to analyse the data. The dependent variable was scores on non-representational art. The between-subjects factor was special students and regular students. The within-subjects factors were (1) Pictorial and Pictorial with Rock music, (2) Pictorial with Rock music and Pictorial with Classical music, and (3) Pictorial and Pictorial with Classical music. Thus three separate ANOVA's were performed, one for each of the between-subjects factors with the within-subject factor. ANOVA was chosen for three reasons. One, the measure of non-representational art is close to an interval scale. Two, the samples of Special and Regular Students were chosen randomly and independently, and they have close to equal variances. Three, ANOVA's can provide answers to the hypotheses generated for this study.

Pictorial / Pictorial with Rock Music

The descriptive statistics indicate that the Pictorial with Rock music program was associated with a decrease in non-representational art for both Special and Regular students (see Table 4. 5). The interaction between type of student (Special / Regular) and type of instruction (Pictorial / Pictorial with Rock music) was not significant with $F(1, 44) = 0.38$, $p = 0.54$ (see Table 4. 6). This result is reflected in the eta squared effect size (0.01) and the observed power (0.09), $p = 0.05$ which are weak.

While the descriptive statistics show that the Special and Regular students differ in non-representational art in the Pictorial program ($MD = 25.16 - 29.67 = -4.51$), the difference is reduced in the Pictorial with Rock music program ($MD = 23.5 - 25.58 = -2.08$) (see Table 4. 5 and figure 4.1). There is no significant main effect for Special versus Regular students with $F(1, 44) = 2.83$, $p = 0.10$, and for

Pictorial verses Pictorial with Rock music with $F(1, 44) = 2.16, p = 0.15$. These results are reflected in the eta squared effect sizes (0.06 and 0.05 respectively) which were weak for the main effects.

The results of this 2 way ANOVA do not support the hypothesis that the introduction of the Pictorial with Rock music session had a significant adverse effect on the quality of non-representational art that was worse for Regular students than for Special students, compared to the Pictorial only program.

Table 4.5

Mean scores in non-representational art by type of student and method of instruction. (Pictorial to Rock)

STUDENTS	METHOD	X	SD	N
SPECIAL STUDENTS	PICTORIAL	25.16	4.39	12
SPECIAL STUDENTS	PICTORIAL WITH ROCK MUSIC	23.50	7.04	12
TOTAL SPECIAL STUDENTS		24.33	5.80	24
REGULAR STUDENTS	PICTORIAL	29.67	6.93	12
REGULAR STUDENTS	PICTORIAL WITH ROCK MUSIC	25.58	8.17	12
TOTAL REGULAR STUDENTS		27.62	7.70	24

Table 4.6

2 wayANOVA (Type of student x Pictorial/ Pictorial with Rock music)

SOURCE	TYPE III sum squares	df	MS	F	p	Eta squared	Noncent. parameter	observed power
Corrected model	24.73	3	82.24	1.79	0.16	0.109	5.37	0.43
Intercept	32396.02	1	32396.02	705.57	0.001	0.914	705.57	1.00
Special/Regular	130.02	1	130.02	2.83	0.10	0.06	2.8	0.38
Pictorial	99.14	1	99.19	2.16	0.15	0.05	2.16	0.30
Interaction	7.52	1	17.52	0.38	0.54	0.01	0.38	0.09
ERROR	2020.25	44	46.92					
TOTAL	34663.0	48						

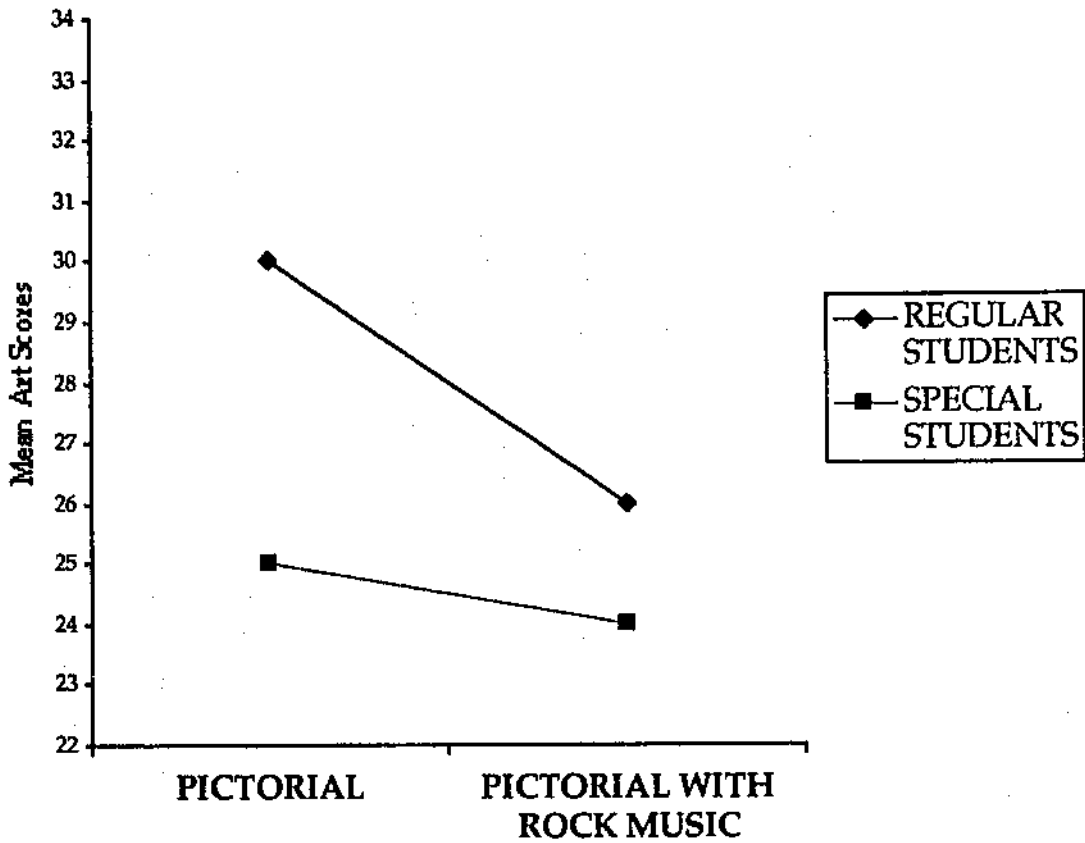


FIGURE 4.1 Graph of mean art scores (Special / Regular students and Pictorial / Pictorial with music programs)

Pictorial with Rock Music / Pictorial with Classical Music

The descriptive statistics indicate that the Pictorial with Classical music program was associated with an increase in non-representational art for both Special and Regular students (see Table 4. 7). There was no significant interaction between type of student (Special / Regular) and type of instruction (Rock music / Classical music) with $F(1, 44) = 0.398, p < 0.531$. These results are also reflected in the eta squared effect size (0.009) and the observed power (0.095 at $p = 0.05$) (see Table 4. 8) which are both weak.

The descriptive statistics show that the Special and Regular students differ on non-representational art in the Pictorial with Rock music program ($MD = 23.5 - 25.58 = -2.08$) (see table 4.7 and figure 4.2), and that this difference is increased with the Pictorial plus Classical music program ($MD = 29.00 - 33.75 = -4.75$). There is a significant main effect in favour of the Classical music program with $F(1, 44) = 10.46, p = 0.002$. This is reflected mildly in the eta squared effect size (0.19) and more strongly in the observed power ($0.886, p = 0.05$). This means that the introduction of the Pictorial and Classical music program was associated with a significantly improved quality of non-representational paintings for both Special and Regular students, compared to the Pictorial with Rock music program.

The result of this 2 way ANOVA supported the hypothesis that the introduction of the Pictorial with Classical music program had a positive effect on the quality of non-representational art for both Special and Regular students, compared to the Pictorial with Rock music program.

The descriptive statistics show that Special students perform worse than Regular students with Pictorial and Rock music ($MD = 2.08$) and with Pictorial and Classical music ($MD = -4.75$) (see table 4.7). However, ANOVA shows no significant main effect for type of student (Special or Regular) with $F(1, 44) = 2.62, p = 0.113$. The weak values for the eta squared effect size (0.06) and the observed power ($0.35, p = 0.05$) reflected this.

Table 4.7

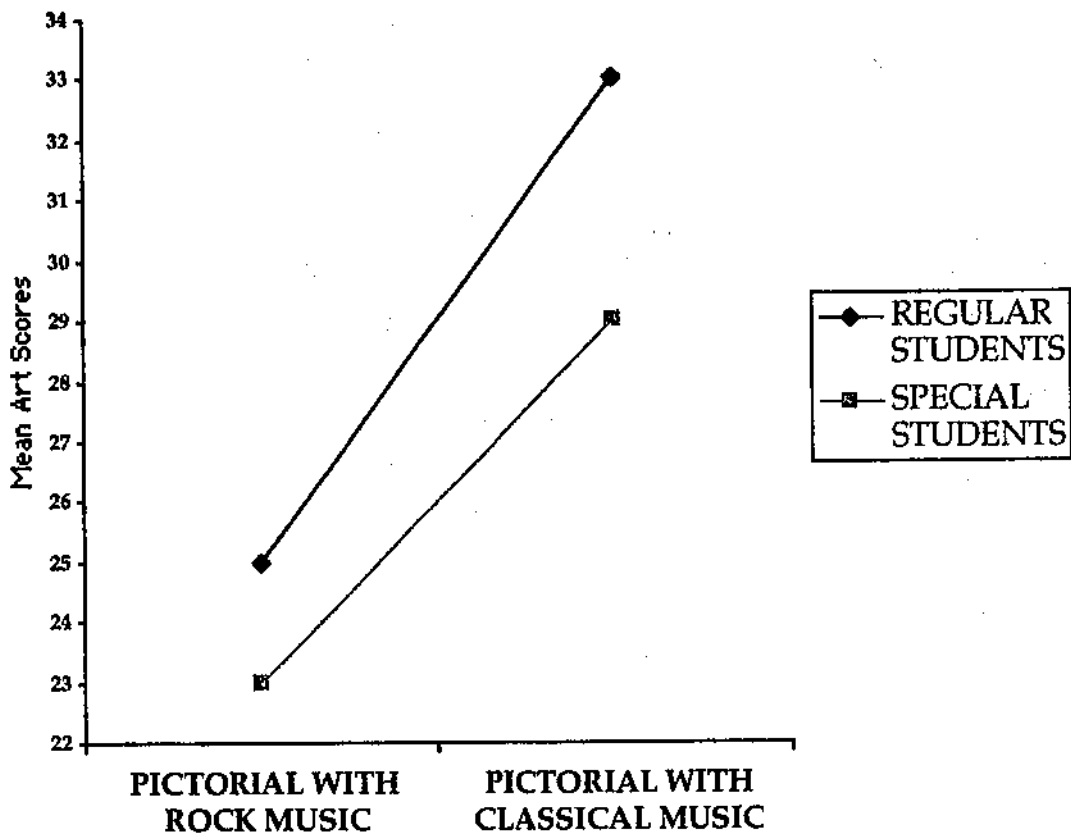
Mean scores in non-representational art by type of student and method of instruction. (Rock to Classical)

STUDENTS	METHOD	X	SD	N
SPECIAL STUDENTS	PICTORIAL WITH ROCK MUSIC	23.5	7.04	12
SPECIAL STUDENTS	PICTORIAL WITH CLASSICAL	29.00	7.06	12
TOTAL SPECIAL STUDENTS		26.25	7.44	24
REGULAR STUDENTS	PICTORIAL WITH ROCK MUSIC	25.58	8.17	12
REGULAR STUDENTS	PICTORIAL WITH CLASSICAL	33.75	6.93	12
TOTAL REGULAR STUDENTS		29.67	8.50	24

Table 4.8

2 way ANOVA (Type of student x Rock/Classical music)

SOURCE	TYPE III sum squares	df	MS	F	p	Eta squared	Noncent. parameter	observed power
Corrected model	721.25	3	240.58	4.49	0.008	0.234	13.38	0.851
Intercept	37520.08	1	37520.83	700.67	0.000	0.941	700.66	1.000
Special/Regular	140.08	1	140.08	2.62	0.113	0.056	2.62	0.353
Rock/Classical	560.33	1	560.33	10.46	0.002	0.192	10.46	0.886
Interaction	21.33	1	21.33	0.40	0.531	0.009	0.40	0.095
ERROR	235.17	44	53.55					
TOTAL	40598.00	48						

**FIGURE 4.2**

Graph of mean art scores Special / Regular students and Pictorial with Rock music Pictorial with Classical music

Pictorial / Pictorial with Classical music

The descriptive statistics indicate that the Pictorial with Classical music was associated with an increase in non-representational art for both Special and Regular students (see Table 4. 9). There was no significant interaction with $F(1, 4) = 0.005, p = 0.95$ (see Table 4. 10).⁴

There was a significant main effect for type of student with $F(1, 44) = 6.22, p = 0.016$. Regular students do better than Special students during both Pictorial ($MD = 29.67 - 25.17 = 4.5$) (see Table 4. 9). These results are reflected in the mild eta squared (0.142) and the strong observed power ($0.68, p = 0.05$). There was a significant main effect for method of instruction with $F(1, 44) = 4.55, p = 0.038$.

The Pictorial with Classical music program was associated with higher non-representational art scores than the Pictorial only method (MD = 3 . 83 for Special students, MD = 4 . 08 for Regular students). These results are reflected in the mild eta squared (0 . 094) and the mild observed power (0 . 55, $p = 0 . 05$).

The results of 2 way ANOVA supported the hypothesis that the introduction of the Pictorial with Classical music program had a positive effect on the quality of the non-representational art for both Special and Regular students, compared to the Pictorial only program. It also supported the hypothesis that the Regular students do better than the Special students under both the Pictorial and the Pictorial with Classical music programs.

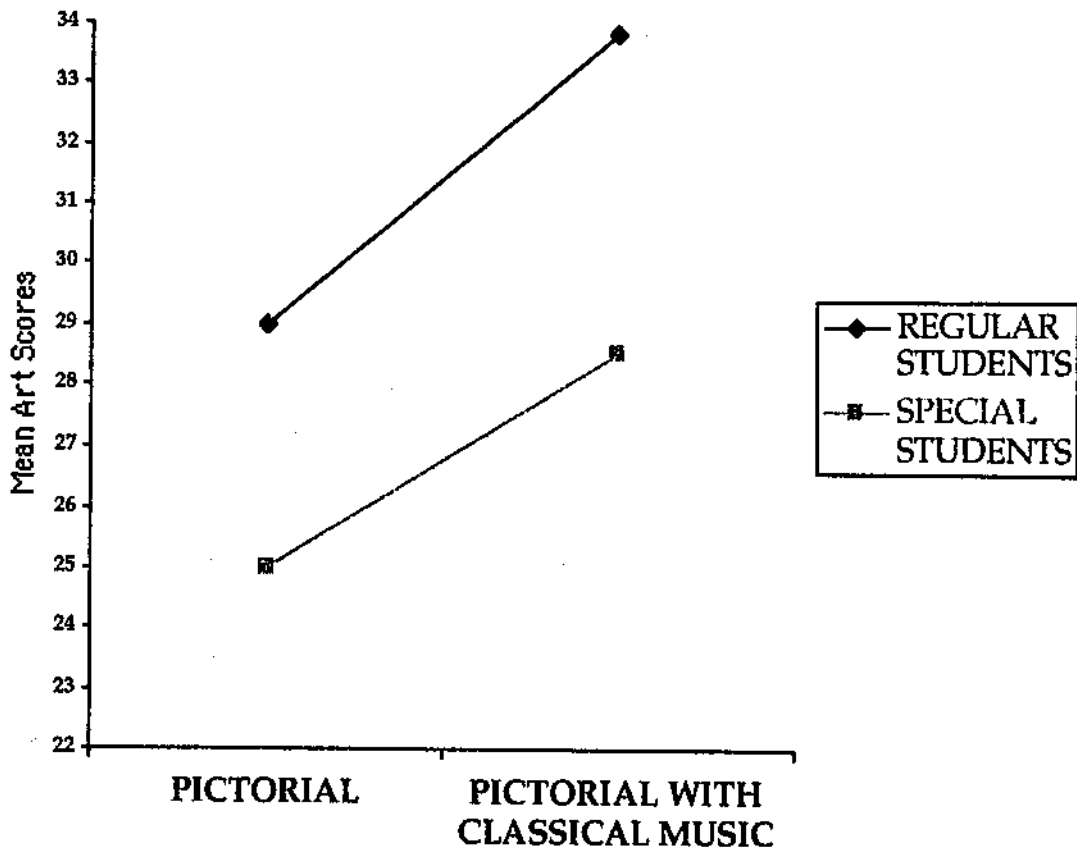


FIGURE 4.3

Graph of mean art scores (Special / Regular students and Pictorial / Pictorial with Classical music)

Table 4.9

Mean scores in non-representational art by type of student and method of instruction. (Pictorial to Classical music)

STUDENTS	METHOD	X	SD	N
SPECIAL STUDENTS	PICTORIAL	25.17	4.39	12
SPECIAL STUDENTS	PICTORIAL WITH CLASSICAL	29.00	7.06	12
TOTAL SPECIAL STUDENTS		27.08	6.07	12
REGULAR STUDENTS	PICTORIAL	29.67	6.98	12
REGULAR STUDENTS	PICTORIAL WITH CLASSICAL	33.75	6.93	12
TOTAL REGULAR STUDENTS		31.71	7.09	24

Table 4.10

2 way ANOVA (Type of student x Pictorial/ Classical music)

SOURCE	TYPE III sum squares	df	MS	F	p	Eta squared	Noncent. parameter	observed power
Corrected model	444.90	3	148.30	3.59	0.02	0.197	10.78	0.54
Intercept	41477.52	1	41477.52	1004.64	0.000	0.953	1004.64	1.000
Special/Regular	256.69	1	256.69	6.22	0.016	0.124	6.22	0.684
Pict./Classical	188.02	1	188.02	4.55	0.04	0.094	4.55	0.551
Interaction	0.188	1	0.188	0.005	0.95	0.000	0.005	0.005
ERROR	1816.58	44	41.29					
TOTAL	43739.48							

Teacher Interviews after the Program

At the beginning of this research study, the special education teacher expressed some reluctance about the relevance of the proposed Pictorial and Musical program for the students with severe disabilities. The main reason for this was that the students may become confused about just what was expected of them, due to the changes of pace required by the program. This occurs because students with severe intellectual disabilities usually like routines and become distressed when their routines are changed.

After the presentation, the special education teachers' opinions pertaining to the outcome of the program were recorded, as follows.

T/S/F " The usual prompting was required for all of the students throughout the art program, that is, gestural, verbal, verbal/gestural and partial physical prompts. The pallets of paint were rotated every 5 - 10 minutes, and brushes kept with the same pallet. Students were encouraged to stay on task and received positive reinforcement, such as, 'good work', 'keep painting' and 'move that brush'. At no time during the program was their art work touched by teachers or other students. It was all entirely their own work. The students all completed the set work in the time allotted, and used the medium and materials supplied.

The disabled students seemed to get the idea of colours as applied by the artist in the print they were shown, and the connection with those found in their pallet. The rock music became a disruptive force in the classroom and had to be turned down and I believe it was unsuccessful. But I was agreeably surprised at the students'

reaction to the classical music part of the program, because the students appeared to settle down quite well, and be prepared to do more work than before."

After the presentation in the regular school, the teacher gave the following opinions.

T/R/F "The students were very energetic during the rock music and enjoyed singing along. But they were not very attentive to their painting. They became quite calm and quiet during the playing of the classical music, and finished their first art piece quickly and then wanted to do more art work. I would like to include the pictorial art history lesson in my own program, because it would encourage the 2/3 students to get an appreciation of great art at an early age. I believe that the classical background music seemed to encourage my students to be quicker in their set task and to produce more art work. I really enjoyed teaching the pictorial and classical program to the students."

Summary of Results

From the results, the following conclusions can be summarised in regard to non-representational art paintings.

1. The measure of non-representational art paintings invoking assessment of colour, composition and creativity produced valid data for Special and Regular students.

2. The reliability of the data for measuring non-representational art paintings and the discrimination between marks on the scale may be improved by defining the criteria better for the markers.
3. There was no significant interaction between type of student (Special or Regular) and type of instruction (Pictorial with Rock music).
4. There was no significant main difference for type of instruction (Pictorial or Pictorial with Rock music).
5. There was no significant main effect for type of student (Special or Regular) with the Pictorial and Pictorial with Rock music program.
6. There was no significant interaction between type of student (Special or Regular) and type of instruction (Pictorial with Rock or Pictorial with Classical music).
7. There was a main instruction effect (favouring Pictorial with Classical music over Pictorial with Rock music).
8. There was no significant main effect for type of student (Special or Regular) for the Pictorial with Rock music and the Pictorial with Classical music programs.
9. There was no significant interaction between type of student (Special or Regular) and type of instruction (Pictorial or Pictorial with Classical music).
10. There was a significant main effect for type of instruction favouring Pictorial with Classical music over Pictorial only for Special and Regular students.

11. There was a significant main effect for type of student favouring Regular over Special students for Pictorial only and Pictorial with Classical music programs.
12. The special education teacher believed (from her viewing of the class at the time) that the Pictorial and Classical music program made a difference to the creativity in paintings of the Special students. This is supported by the measurements only in gains from Pictorial to Pictorial and Classical music.
13. The special education teacher also believed (from viewing of the class at the time) that the Rock music program was unsuccessful. This is supported by the measurements of art quality compared to the Pictorial and Classical Music Program but not with the Pictorial only program.

The next chapter discusses possible explanations and implications of the results.

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS

Summary of the Study

A new Pictorial and Musical art program for primary school students was tested at two schools, one for students with severe intellectual disabilities and the other for regular students. The art program attempted to enhance the students' focus and increase their ability to understand the importance of colour in their non-representational painting. It was hypothesised that, with the addition of a Classical musical background to the Pictorial art program, a calming atmosphere could be created in the classroom, and this would help the students to produce higher quality art work than had previously been produced.

It was also hypothesised that, with the addition of a Rock musical background to the Pictorial art program, an exuberant and excitable atmosphere could be created in the classroom, and this would hinder the students' ability to produce high quality non-representational art work.

The study was designed to include three levels of learning experience for the students - Pictorial, Pictorial with Rock music, and Pictorial with Classical music. The program began by introducing the students to a colourful Kandinsky print. Then a short discussion was given to the students about the artist and his painting. Students were then required to paint a non-representational painting. The Pictorial sequence was introduced at first to give the students a chance to focus on a great artist's colourful print. The students found that some of the main colours in the print were reproduced in their painting palette, and then it was

required of them to do an original non-representational painting. Then Rock music was introduced in the classroom, after the Pictorial addition, and the students had a further chance to view the print. They were then asked to produce another non-representational painting. A third painting was required to be produced by the students when the background music was changed to Classical, but only after the students had a further chance to focus on the colours in the print.

The sample consisted of 12 students who were severely intellectually disabled from a special education school and 12 regular students from a primary school. Each student produced three paintings, one in the Pictorial only program, one in the Pictorial and Rock music program, and one in the Pictorial and Classical music program. The 72 paintings were marked anonymously by three independent teachers and the scores subjected to a 2 way ANOVA analysis.

Conclusions

During the observation in both the special education and the regular classroom, it was apparent to the observer that the non-representational art program being presented to the students was successful, in that it helped the students focus on their paintings. From the students point of view, they appeared to pay attention to the colours that they were seeing in the print and then noting them in their palette, and they soon wanted to get started to apply them in their own painting. But the sound of the Rock music had a most startling effect on the group as a whole. The students in both classes were more inclined to sing-along to the music and wave their hands and brushes about than to get on with their painting task. However, the quality of the students' non-representational paintings for both special and regular students compared to the Pictorial only program was not significantly different. Then, the advent of the Classical music had a much

non-representational paintings increased for both special and regular students, compared to the Pictorial and Rock music, and this was significant. It was noted by both the teachers and the observer that the Pictorial and Classical music program worked very well in both the special and the regular class.

It was decided by the teachers and the observer that, although the Rock music program had not been a success for the research study because it created a most disturbing atmosphere in the classroom, the Pictorial and Classical music program had been beneficial to all of the students. For the regular class, the Classical music was seen to create a calming atmosphere in the classroom, allowing the students to become more creative and interested in getting on with their task and to also be able to produce better quality art work. In the special education class, it was noted that the Classical music addition to the Pictorial program created a calming atmosphere, in which, the students who were severely intellectually disabled appeared to exhibit less inappropriate behaviour, and also to produce a greater number of paintings.

Limitations of study

One of the main limitations of the study was the low number of students (12) provided by the special education school. A large number of students could be provided for the study by the regular school, but this number could not be matched in the special school because of their small classes. It was a main condition of the study, for comparison purposes, to keep the grade level to the lower primary, and this restriction also added to the age limit and the number of students who were severely disabled that could be provided by the school for the study.

Another limiting factor was the allotted 45 minutes for the Pictorial and Musical program to take place in the special school. It is the policy of the school to include a behavioural analysis of each student during the class, and this analysis is an important part of the schools' routine. If there is very little inappropriate behaviour during the presentation of the program, it is not a problem. Unfortunately, this is not always the case, and the teacher needs to be very flexible in order to keep the continuity of the program. This limitation can be overcome by giving the task of behavioural annotation to the teacher aide. Because this study was concerned with only one regular and one special school, it is impossible to generalise the results to all schools. However, it is possible that some of these limitations may be negated by further investigation, overtime.

There were many limitations pertaining to the two groups participating in the study, not the least being the difference in the student IQ's. In consequence, some of the behavioural problems which were sometimes disruptive to the special class, were kept to a minimum by the expertise of the special education teachers, but these limitations were not a problem for the regular teacher. Although content of the program was the same for each class, the regular students were quicker to begin their tasks and did not require as much positive reinforcement as the special students. In spite of the limitations the ultimate outcome of the study, with the exception of the rock/classical comparison showed no significant differences between the quality of the art being produced by the regular students and students who were severely disabled.

Discussion

The calming effect produced by the Classical music effected all of the students in the study in a positive way. The students responded to this music because a good group atmosphere was being established in the classroom. This group

atmosphere generated a calming effect and gave a sense of security to the students. This alteration in mood was noted as a group effect. This group perspective also applied to the Rock music addition to the program, where all of the students reacted in a more aggressive manner and became more excitable. Various other educators have written about the group effect in classrooms. Notable among these is Durkheim (1956), who indicated that the group effect in classrooms affects learning and needs to be utilised in the appropriate way. "There are produced, in class, phenomena of contagion, collective demoralisation, mutual excitement, wholesome effervescence, that one must know how to discern in order to prevent or to combat some and to utilise others" (Durkheim, 1956, p112).

In this study, it had to be decided if the quality of paintings produced when the musical additions were made to the Pictorial program, were the result of the experimental procedures or the result of the novelty of the situation (Woolfolk, 1987). Were the quality of students' paintings due in some degree to the Hawthorne effect, where there is a group reaction to the awareness that they are being studied, or were the students actually reacting to the atmosphere that the different music produced in the classroom?

It has been noted that the Rock music addition to the art program did not change the quality and of the student's art work in both the regular and special class. The Rock music caused a distraction to the work of the students. It was, especially for the regular students, something that they associated with another environment, other than the classroom. Although this effect may not have been as strong for the disabled students, they too, were disturbed by the unusually loud classroom noise and vibration. In both cases, the students stopped work or refused to start straight away. This failure of the students to stay on task caused

the teachers in both classes to rebuke them, and an atmosphere of recrimination was produced. The students were reluctant to return to their painting, and when they did, produced lower quality art work. These reactions from both the students and the teachers seemed to be in direct response to the Rock music, and not to the Hawthorne effect, or any novelty effect.

In comparison, the addition of Classical music had a calming effect on the students in both classrooms. The students did not react in the same way to the Classical music as they had with the Rock music (singing and waving brushes in time to the music). The music was quieter, and had a calming effect, and was less intrusive, so the students in both classes began their painting task quietly. This attention to task, and the production and quality of work by their students was noted in their research by Hallam and Price (1998). In this study the teachers gave positive reinforcement and praise for their students efforts. All of the students produced a greater amount of art work which was of better quality. The classical music addition to the program appeared to increase the students' creativity. This outcome was also noted in the research work done by Kaskell and Lauer 1990. The praise and encouragement, and the repeated practice of painting, together with the Classical music, rather than just the Classical music, may have also helped improved the quality of painting compared to the Pictorial program only.

In this particular study, the change in the students' attitude to the different styles of music was observable in both the regular and special education class, and in both cases it appeared to be due mainly to the different atmosphere produced in the classroom by the introduction of the music. The focus on the abstract print before the Rock music began was not enough to give the students the incentive to begin painting. The introduction of the Classical music was needed and

seemed to be the main stimulus for improving the quality of painting, but it cannot be ruled out that praise and encouragement, together with repeated practice of painting, helped make a contribution to the improvement.

Implications

For Schools and Administrators

In the Regular school, class programs are set out to comply with the required curriculum, and are taught by the teacher so that each student can learn, and understand, in order to pass the required level for the subject being taught. In the art area, teachers can write their own programs provided they can cover certain set requirements. These art programs, depending on the skill of the individual teacher, can vary widely in structure and content, and can include painting, clay, collage, and drawing. In the regular school, the Pictorial and Classical music program has already been well received and incorporated as an Art History/Painting program, using different art prints for each lesson since this study was completed. This is a clear implication that regular schools can implement the Pictorial and Classical music program to improve the art programming for their students.

Programs for special education are generally written by the special education teacher. These programs have to be very carefully thought out, and must be well planned, with special consideration given to the many diverse disabilities that the special teacher may encounter within the class. Programs that work well within the regular school do not necessarily work as well in special education. The Pictorial and Classical music program is one that can be used in the art class for both regular and special students, whether in separate or integrated classes. This could be an advantage for both schools and administrators. However, it is

unwise to make major policy changes on a $n = 24$ study. The results in the study are promising, but they need replication and extension.

For Teachers

Teachers are concerned with their students learning and well being. Any learning aid that will help students to gain a higher quality and standard of work must be considered an advantage for them. To be able to create a secure and calming influence and to foster a serene atmosphere within the classroom, is the aim of most teachers, and one that should be strongly pursued until it has been fulfilled. Art teachers also want to be able to see an improvement in their students work, and to help them to become more creative.

In past research, there is some limited evidence supporting the proposal that music has a calming effect on students and especially on those who are severely intellectually disabled, not only in the art area, but also in general areas of study (Lacine, 1991; Gee, 1997; Davidson & Edwards, 1998). In the past, it has been considered that severely intellectually disabled students were only required to be given some paper, a brush, and some paint. This was mainly done to fill in time, and not very much was expected of them by their art teacher. It is a most enlightened discovery that these students are often more capable of producing quality art work than was previously thought possible. So any program that will be of help to educators, whether they be regular or special education teachers, must be of value to them. If a Pictorial plus Classical music program can help to create a better classroom atmosphere and can aid in their students' learning, then it must be given some consideration. The evidence from the present study supports the use of a Pictorial and Classical music program to help both special and regular students produce non-representational art.

For Students

Students in the regular and the special education school have a right to the best possible education. They have a right to experience a calm learning atmosphere and an interesting learning experience. Students with severe intellectual disabilities will be able to benefit from the Pictorial and Classical music program, just as the regular students have done. It will give them a sense of colour, strengthen their ability to focus and heighten their awareness to art, and their own ability to create.

When students are given the opportunity to constantly view the works of the great artists they gain a sense of familiarity with the works. Students with severe intellectual disabilities are very reliant on routine. They tend to require more time with the one print, whilst regular students can be subjected to different prints for each lesson, but the positive outcome for both groups is the same.

For Future Research

In special education, there is much that can be accomplished for further research in art programs, and especially for students with autism. Observation in this study, where almost all of the students were autistic, has shown that some of these students seem to have been able to produce quality paintings with the Pictorial and Classical music program. Therefore, providing these students with more complex programs to include, for instance, the study of nature is worthy of consideration.

Although this research study gives promising results for improving students art in the painting area, it is believed that a more extensive study of the Pictorial and Musical program, over time, may be able to generate further ideas and possibilities for these students. For instance, the different types of Classical music

that could be trialed in order to study the various effects of the music on the students.

The student grade in this study was confined to the primary level. It is believed that further study at the secondary level could be advantageous to both students and teachers, for both the special and regular art classes. Apart from advancing the program to the secondary level, it would also be possible to trial it in other states, either using the full Pictorial and Musical program or the Pictorial and Classical music program only. This latter research would allow the results to be generalised with more certainty than is now the case.

Future research could be considered which would include students with other levels of disability, not only those who are considered to be intellectually disabled, but those who are considered to be mildly disabled, and also a study to include students in the mainstreams integrated art class. The different types of student disability may also be considered as suitable for participants when trialing the Pictorial and Musical program in the future.

It may be possible for future researchers with the program to secure an easier, and possibly less cumbersome form of measurement. Using the three aspects (colour, composition and creativity) requires quite a lot of time, especially when you are comparing two different groups of students, and three levels of quality. This type of measurement might be too demanding with a larger group of students who are requiring their art work to be marked for analysis. A type of measurement that requires marking of the art work using only two categories, such as for colour and composition would be simple. This reduced measurement could be just as valid and reliable as using three aspects, and give the future researcher a more compact scale with which to work, but it needs to be researched and tested.

Another way to improve the art measurement, using the three aspects, might be to develop separate sets of guttman criteria for each aspect. These could be used as developed or used with a Rasch measurement model to create an interval level scale. This could lead to a major improvement in art measurement (see Pascoe & Waugh, 2001 for a similar development in music measurement).

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APPENDIX I

LESSON PLAN

Date 1 - 5 - 2001

Time 45 minutes

Year Group 2

Project **Art**

Topic **Pictorial and Musical Program**

Teacher's Intention To introduce the students to abstract art forms and colour sequencing by visual contact with a famous artists' works, and to create a calming mood through presenting music in the art classroom.

Learning Objectives On completing this lesson each pupil will be able to understand the meaning of non-representational art. They will have some idea of spatial concepts and colour co-ordination in their own painting, and be able to relate to the sound of music and apply its effects in their art work.

Preparation Paints, art paper (students names on back), water, brushes and aprons for students. Colour print of Kandinsky's 'The Park'. Rock and Classical music tape and recorder.(will be provided by researcher). Also an amount of extra art paper kept close at hand.

Methods of Achieving Objectives

1. Settle students and explain to them what the lesson is about and what will be expected of them.

2. Produce the Kandinsky print and give a short biographical description of the artist, his style of painting, and how the students will be using some of these

colours in their painting. a short description of non-representational painting will also be necessary. After the students have been able to focus on the print, ask them to paint a non-representational painting for you.

3. Give the students another chance to view the print and explain how the artist enjoyed painting to music. Turn on the Rock music and ask them to do another non-representational painting.

4. When the students have completed a painting with the Rock music background, turn off the music and give them another chance to view the print, and then turn on the Classical music. Ask them to produce another non-representational painting for you.

5. Constant attention must be given to the students throughout the painting stage to ensure that all the students receive positive reinforcement, advice, and encouragement to stay on task.

APPENDIX II

Kandinsky Print

Wasily Kandinsky (1886-1944)

Impression V-The Park 1911



APPENDIX III
QUESTIONNAIRE

In order to assist with a comparison study of non-representational art in the lower primary school, would you please read the attached criteria for marking, and give your opinion on the six pieces of student art work by allocating a mark from 1 - 5.

Does the student show an interesting use of complimentary colours?

Does the composition play a part in your response to the work?

Is the painting showing some evidence of creative ability?

<u>PAINTING</u>	<u>USE OF COLOUR</u>				<u>COMPOSITION</u>				<u>CREATIVITY</u>			
	Low		High		Low		High		Low		High	
(a).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5
(b).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5
(c).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5
(d).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5
(e).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5
(f).....	1	2	3	4 5	1	2	3	4 5	1	2	3	4 5

APPENDIX IV

Special education student mark of 12 (Pictorial/Classical program)



APPENDIX V

Special education student mark of 9 (Pictorial/Classical program)



APPENDIX VI

Special education student mark of 7 (Pictorial/Classical program)

