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ABSTRACT

TOWARDS AN APPLICATION OF TEACHING METHODOLOGIES FROM THE NON - SIGHTED ART CLASS WITHIN THE SIGHTED ART CLASS.

Within this dissertation, I have attempted to research teaching methodologies devised specifically for the visually impaired class. I have also tried to investigate the possible benefits of incorporating some of these methodologies within the sighted class, by looking at examples of art programmes that incorporate these methodologies (such as the Junior Certificate art syllabus) and by assimilating some of these procedures into one of my own schemes of work.

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FACULTY OF EDUCATION

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A Thesis submitted to the Faculty of Education
in
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DIPLOMA FOR ART AND DESIGN TEACHERS

by

SANDRA GIBNEY

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INTRODUCTION

When I graduated from the National College of Art & Design, I spent one and a half years working with the A.P.I.C. Centre, a national disability arts organisation. In my position as arts officer, I was responsible for organising and facilitating workshops in many aspects of art, craft and design for people with various physical and / or learning disabilities. I frequently found during the classes that although I was teaching the various skills and techniques associated with whatever activity was taking place, I was learning so much from the actual participants themselves. In some cases it can probably be said that I learned more from the workshops than the participants did! However it was through these experiences that the idea for this dissertation was found.

Within this dissertation, I have attempted to research teaching methodologies devised specifically for the visually impaired class. I have also tried to investigate the possible benefits of incorporating some of these methodologies within the sighted class, by looking at examples of art programmes that incorporate these methodologies (such as the Junior Certificate art syllabus) and by assimilating some of these procedures into one of my own schemes of work.

In Chapter One, I refer specifically to the visually impaired. I briefly examine some of the various types of visual impairment and then look at the benefits of art for those with visual disabilities. Finally, I review some of the literature that outlines teaching methodologies that can be used with blind or partially sighted students.

Chapter Two concentrates on the findings of Viktor Lowenfeld from his studies in art and the visually impaired. I look in particular, at his discovery of the two "creative types", and how this was later proved to have relevance for the fully sighted also.

In Chapter Three, the emphasis is on art in the classroom and how, if at all, the findings of Lowenfeld and fellow academics relate to the teaching of art. Art education in Ireland is examined, in particular in relation to the post-primary junior syllabus, past and present.

Finally in Chapter Four, I attempt to apply some of the methodologies I have researched to a scheme of work that I used with a class of first year students. Details of the project and results to-date are found here.

CHAPTER 1
The Visually Impaired

Types of Visual Impairment

There are many degrees of visual impairment, varying in severity from complete blindness to partial sight. Individuals who are completely blind cannot distinguish between light and dark. There are two basic types of complete blindness, these are congenital blindness and adventitious blindness. Congenital blindness is the term given to those who are born unable to see. Complete adventitious blindness can occur during a person's lifetime. It can be caused by a disease or injury which can damage one or both eyes, the nerves that link the eyes and the brain or the visual centre of the brain.

The category of partial sight is very large, and this includes people who have some degree of vision that can be used for certain purposes. A person who has clarity of vision at 20/200 or worse, while wearing glasses or contact lenses is considered partially sighted. To give some indication of what that means, someone with 20/20 vision is categorised as having perfect eyesight. Therefore, what the person with 20/20 vision can see from 200 feet away, a partially sighted person, with 20/200 vision, can only see from 20 feet. An individual can also be classified as partially sighted if they have a poor field of vision, with limited peripheral sight.

The Benefits of Art for the Visually Impaired:

The problems that are encountered by those with congenital complete blindness are numerous and often incomprehensible to the sighted individual.

> Completely blind children must cope in a world which is profoundly lacking or distorted in stimulation. Beginning with infancy, these children must learn to relate to a mother they cannot see, and an environment that must seem unfathomable. Only through persistent, yet gentle attempts at stimulating the blind child's residual senses can he or she develop a sense of self, of belonging and other forms of orientation that assist in developing firm object relations. [1]

Completely blind children who have been denied this regular sensory stimulation, frequently have been found to display anti-social behaviour, with noticeable withdrawal from reality. They resist interacting in physical activities and if forced to participate, commonly respond by either leaving (physically or emotionally) or becoming aggressive. [2]

The problems for children with partial sight are obviously not as profound as for their completely blind counterparts. With their limited vision they can relate themselves to their environment, without the distress and mistrust that is frequently displayed by the completely blind child. But, regardless of the level of visual ability of the child, what is important is the stimulation and development of their remaining senses, and from as early an age as possible. One of the best places for this stimulation to take place is in the art room:

> Offering any sensory stimulation fills the mind with ideas concerning the relationship between a person and that person's world. Art materials have qualities that excite senses rather than sight. Clay and paint both have a feel, a texture and movement can be sensed when materials are manipulated. A partially sighted or even non-sighted individual can still map an internal 'image' because of the quality of these materials.[3]

One of the primary importances of art, design and craft is as a vehicle for instilling a sense of curiosity, curiosity being the prime motivation for any kind of learning. Through the materials found in the art room, visually impaired students can experiment, create and evaluate, activities which are crucially important for their own personal development. Manipulating materials and experimenting with various media provide a link between the student and his or her environment. Knowledge is gained directly through experience, about the qualities and limitations of a substance and how it can be used to create a desired effect. This leads to a "discovery that certain laws of nature exist which have to be taken into account. Runny clay and dry sand cannot be sculpted, nor will badly designed structures balance; there are some immutable facts that are not subject to manipulation". [4]

In addition to learning about the creative potential of a material, the sheer action of manipulation and handling is ideal for developing and enhancing co-ordination and fine motor skills. Activities such as shaping, tearing, gluing or using utensils, develop the efficiency and sensitivity of touch of the student as well as increasing the methods available to him or her for further projects.

Another valuable aspect of an art education is the opportunity it presents for developing language. From discussing themes, ideas and

art elements, to general conversation and chat with other students, the art class provides a social outlet that just does not exist in the majority of other subjects on a curriculum. This opportunity to increase social skills is of such vital importance to students, especially those with visual disabilities. "In the integrated setting, shared activities in such work can be invaluable in promoting co-operation and friendly interaction when pupils enjoy the satisfaction of producing an artefact that they have made together."[5] This interaction can help to diminish the immense feelings of isolation, segregation and inadequacy that can often be felt by the visually impaired.

By increasing their knowledge, awareness, ability and confidence, the visually impaired person is empowered. As Chapman and Stone (1988) point out in *The Visually Handicapped Child in your Classroom*, frequently young, visually handicapped people may feel limited in what they are able to do. All too often they can become reliant on others, in particular parents and teachers, to make decisions for them on what they can do and how they should do it. "The availability of a variety of media and processes can encourage children to experiment freely with materials and ideas and to decide after experimentation to try to follow through an idea and to express it".[6] This can be an important step towards more decisive thought and action on a broader basis.

These attributes of art are important and impressive, not just for partially sighted or blind students, but for all students. Amidst all this, the chief quality of art should not be forgotten, which is the enjoyment it can bring. "Since it is commonly accepted that art can contribute to the full enjoyment of human experience, and that it is a sensual as well

as an intellectual activity, its value is considerable for all pupils".[7] Art, whether fine art, design or craft, provides a much needed outlet for exploration and creativity. The sense of accomplishment and achievement that greets the end of a successful creative venture is the best incentive to progress further and extend abilities to their greatest potential. "Enjoying...is more that merely feeling happy: it involves experiencing success or the freedom to be oneself .... and a realisation that here one can have a true art episode without any apology". [8]

Teaching Methodologies for the Visually Impaired

> Our surroundings are composed of materials in solid, liquid or gaseous state, whose surfaces are their boundaries. The task of perception is finding out about our surroundings. It is accomplished by discovering the properties of the materials - their layout and their type. The surfaces govern the information available for perception. What happens there is the major factor, enabling perception to complete its task. The surfaces of the environment reflect light, used by vision. They yield vibrations, used by audition. They render particles used by smell. They dissolve into parts, used by taste. They resist pressure, used by touch. Thus, each sensory mode is affected by what is occurring at surfaces.[9]

In teaching the visual impaired, there are many factors to consider. Even though the range of visual ability (or disability) varies widely from one individual to the next, there are certain clearly identifiable requirements.

To begin with, one of the primary aims of the class should be to address and develop the use of the level of sight of the individual, as well as increase the efficiency of the remaining senses. Traditionally, the procedures used in teaching have been predominantly based on

visual methods, so these procedures must be completely revised and rethought in order to reflect the needs of the class. Here, I refer to the theme, content, visual aids, demonstrations, tools, materials and evaluation of each lesson. These should all enhance or provide substitutes for the individual's visual ability. There is also a need to consider the social needs of the person and how everyday practical and social skills can be incorporated into the learning element of the class.

> ... the special educational needs of pupils with visual disabilities imply a substantial imput of resources including special equipment and materials, specialised teaching skills...but it is important to emphasise that young people with visual disabilities have both the capacity and the right to enjoy access to the same range and quality of educational opportunities as their peers.[10]

When choosing the theme of a project it is helpful to choose something that can have quite a broad interpretation. Something that is not purely visual, but that will initiate brain-storming, the discussion of ideas, and the expression of view points. A theme that is relevant to the interests or past experiences of the pupil will naturally enough, provide a greater motivation for work. Grace D. Napier (1974) in a discussion on the use of theme in clay sculpture, illustrates the importance of having a theme that has some foundation in the pupil's life:

> What the child attempts to sculpt must be something with which he is familiar; if he has never examined a cow in detail, his clay "cow" may not evoke happiness and satisfaction in him, because he feels inadequate about cow characteristics. His pet dog whom he fondles and with whom he plays at home, is a much more appropriate subject. The child might capture in clay the dog in one of many characteristic poses so familiar to the child and beloved by him.[11]

Another aspect that can easily be overlooked is the practical demonstration. Much of what is learned in an average classroom is

picked up by casual observation; a student sees what a teacher or other students are doing and then copies the procedure. But when a student is blind or partially sighted, this accidental learning does not take place.

There is often a need for more personal or one-to-one demonstrations, where the use of an instrument or the next step in a process is carefully and methodically explained. This is especially important when dealing with potentially dangerous tools, as sometimes a student may also have poor co-ordination or fine motor skills. However, skills can be developed and improved considerably through the regular use and manipulation of these instruments and materials. It is frequently thought that the partially sighted and blind are endowed with other super-powered senses to make up for their lack of vision, but this is not so. Ordinarily, they have exactly the same sense of touch, taste, smell and hearing as those with average sight, but whereas sighted people often rely predominantly on vision, with the other senses relegated to an almost secondary importance, visually impaired individuals have highly developed their senses, through constant use. This is significant because these senses can add considerably to the art experience. Through the auditory, olfactory and tactual senses, visually impaired people can gain detailed knowledge of spatial, textural and structural aspects of their surroundings which can then be incorporated into their creative thoughts and actions, in a variety of techniques and media.

In *Art in Special Education. Educating the Handicapped through Art*, produced by Art Educators of New Jersey (1976), many suggestions are made about how to practically approach the basic elements of art

with blind or partially sighted students. In the treatment of 'line' for instance, the use of "much tactile stimuli for the development of the sense of touch"[12] is recommended. Instead of drawing with pencil or pen, by using wire, solder, pipe cleaners or any similar long thin bendable material, an image can be shaped, that can later be investigated by feeling. Alternatively, instead of forming an image by construction, subtractive methods can be used. Through this is meant drawing by incising into a slab of plasticine or clay, a block of styrofoam or into a container of moist sand. In this way the image can be felt as it is being 'drawn'. Raised surfaces can also be created by drawing with glue, so that when the glue dries, the image can be examined by hand. With partially sighted students, drawing in the traditional method is often very successful: "Some children with defective vision, especially in the case of myopia excel in fine-line drawings and produce graphic work of a high standard".[13] This can be aided with the use of strongly coloured materials, that provide high contrasts between the paints, paper and background.

The use of strong contrasts is also advocated when explaining colour to the partially sighted, while with blind students, it is often found useful to add fragrances to whatever colour medium is being used. By adding, for example, lemon fragrance to yellow, chocolate fragrance to brown, lime to green, cherry to red, dewberry to blue, etc. the colours become more easily distinguishable.

When discussing the concept of shape or form, the use of large scale two-dimensional and three-dimensional forms are recommended. These can be enhanced and exaggerated through a tactile approach, using materials of different texture and vivid patterns. Again, strong

contrasting colours increase the overall effectiveness. As an extension to the idea of shape or form, the concept of space could also be introduced at this point "by stacking sorting and arranging large forms (boxes, salt containers, blocks etc.) for depth, distance and balance and creating high / low on a large scale".[14]

FOOTNOTES CHAPTER 1

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[1]David Henley, Exceptional Children, Exceptional Art. Teaching Art to Special Needs, (Massachusetts: Davis Publications Inc., 1992.) p. 42.

[2]Ibid.

[3]J. K. Dubowski, "Art Therapy with the Visually Impaired", British Journal of Visual Impairment,IV (3), pp. 109 - 110.

[4]Chapman and Stone, The Visually Handicapped Child in your Classroom, (London: Cassell Education Ltd., 1988.) pp. 125 - 126.

[5]Ibid. p.126.

[6]Ibid. p. 125.

[7]Ibid.

[8]Grace D. Napier, "Special Subject Adjustments & Skills" in B. Lowenfeld The Visually Handicapped Child in School, (London: Constable & Co. Ltd., 1974.) p. 266.

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[9]John M. Kennedy, Drawing & the Blind. Pictures to Touch, (New Haven & London: Yale University Press, 1993.) p. 9.

[10]Terry Moody, "Inertia, resistance and change; educational policy for pupils with visual disabilities." in Tony Booth & Will Swann, eds., Including Pupils with Disabilities. Curricula for All, (Buckinghamshire; Philadelphia: Open University Press, 1987.) p. 235.

[11]Napier, "Special Adjustments and Skills", p. 267.

[12]Art in Special Education. Educating the Handicapped though Art, (New Jersey: Art Educators of New Jersey, 1976.) p. 4 - 7.

[13]Chapman & Stone, The Visually Handicapped Child in your Classroom, p. 127.

[14]Art Educators of New Jersey, Art in Special Education, p. 4 -18.

CHAPTER 2
The Two Creative Types

One of the most notable developments in the exploration of arts and visual disability was the discovery of two creative types. Since the 1930s, these creative types under various titles and terms, have been the subject of much analysis. An inspector of drawing in Vienna, Richard Rothe (1930), highlighted the difference between both kinds of creativity. He described them in the terms of sculpture: whereas the first type create from one piece, carving or moulding it into the desired image, the second type construct an image from various parts, almost like building a wall. These types are referred to respectively as "the seeing type" and "the building type".[1]

The person credited with the discovery and greatest exploration of these two types was Victor Lowenfeld (1959, 1982). He referred to them as the "visual type" and the "haptic type" (from the Greek word "haptikos", meaning "to hold" or "to touch") and originally made his findings while working with the blind and partially sighted.

According to Lowenfeld, the visual type is an observer, "one who acquaints himself with his environment primarily through his eyes and feels like a spectator".[2] One of the main distinctions of this category, is the tendency to see an overall view first and then gradually discover the details that combine to create this greater whole. (Figs. 1(a) & 1(b))

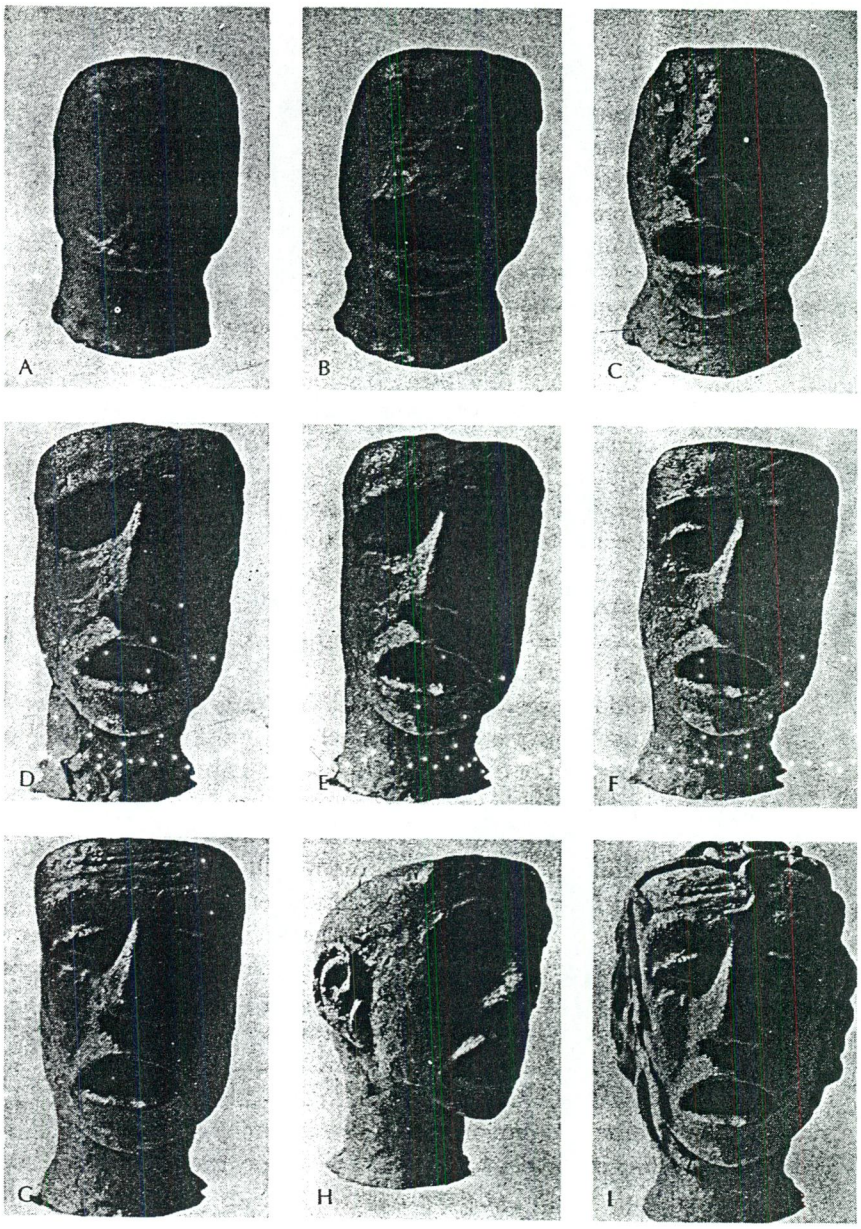

Fig. 1(a): "Pain", sculpture by a sixteen year old blind girl who is visually minded.

(A) The general outline is made.
(B) The cavity of the mouth is formed.
(C) The nose is added.
(D) Eye sockets are hollowed out.
(E) Eyeballs are put in.
(F) Lids are pulled over.
(G) Wrinkles are formed.
(H) Ears are added.
(I) Hair is added.[3]

Fig. 1(b): "Pain", created by a visually minded sixteen year old blind girl.

"In the finished product, all features are incorporated into a unified surface."[4]

> The visual type first sees a general shape of a tree, then the single leaves, the twigs, the branches, the trunk, and finally everything incoroprated into the whole tree. Starting with the general outline, partial visual impressions are integrated into a whole image. The visually minded individual can analyse the characteristics of shape and structure of an object and be concerned with the changing effects of these shapes as they are influenced by light, shadow, color, atmosphere, and distance. How something looks is of prime importance, and even tactile sensations are translated into visual form. For him, the complex and ever-changing appearance of shapes and forms are exciting and pleasurable experiences.[5]

On the other hand, the haptic type is mostly concerned with body sensations, and how they inter-relate with their environment. (Figs. 2(a) & 2(b))

> The haptic type utilizes muscular sensations, kinesthetic experiences, impressions of touch, taste, smells, weights, temperatures, and all the experiences of the self to establish relationships to the outside world. The sizes and shapes are determined by their importance to the individual. Thinking relates to the details that are of emotional significance. The haptic person enjoys textures and feels objects pleasurably with the hands. There is no attempt at trying to translate these textures into a visual image. The art of the haptic is more subjective. The artist becomes a part of the picture, and subjective values determine the color and form of objects.[6]

These examples of the visual and haptic types show the extremes at opposite ends of the scale. It is important to remember that individuals can be found at every level in between, with tendencies towards one or the other type. In further experiments, Lowenfeld attempted to measure these qualities. He found that out of a total of 1,128 people, 47% showed definite visual tendencies, 23% fell into the category of haptic while the remaining 30% showed somewhere in the middle. Therefore approximately half could be classified as visual while one quarter were definitely haptic.[7]

Fig. 2(a): "Pain", created by a haptically minded sixteen year old blind boy.

(A) The chin is constructed.
(B) The teeth and tongue are put in.
(C) The mouth is closed, hiding inside features.
(D) The nose is added, eye sockets are made.
(E) Eyeballs are put in from inside, head is closed.
(F) Ears, muscles and hair are added.
(G) The head is finished.[8]

Fig. 2(b): "Pain", created by a haptically minded sixteen year old blind boy.

"All features remain isolated as partial impressions on final product."[9]

As mentioned earlier, Lowenfeld originated and developed his theory on the two creative types from working with the visually impaired. From numerous tests, he discovered that while some weak sighted people will negotiate everything through tactile exploration, even though they might have considerable visual power, others will visually scrutinize objects that attract their attention, even if their eyesight is severely impaired. The former, the haptics, responded primarily to body sensations and the tactile space around them while the latter type, the visuals, attempted to maintain contact with their environment through sight.

> We can go further and conclude that as these two creative types are so different, the mode of creation has nothing to do with the degree of visual acuity. Extreme cases, which I found to be by no means rare, proved that according to the mode of their creative activity, some people with full sight must be classified with the non-visual blind and conversely, that many blind people have to be regarded as visual types.[10]

Two examples can demonstrate the typical characteristics associated with these types.

A student of Lowenfeld, who had considerable visual powers, never used his sense of sight when he sculpted. He modelled as if he were totally blind, gauging his pieces by touch, and producing work of great quality and expression. However, when exercises for strengthening his eyesight were introduced he became more aware of the possibilities of seeing. Simultaneously, the standard of his work began to drop, losing its power and effectiveness. "He began to repeat certain types of expression which showed that the last form he

developed did not represent the true nature of his creative impulses. The more he used his eyes the less pleasure he took in his work and he finally gave it up altogether".[11]

Another case was that at an 18 year old girl who was blind from birth. A piece she created called "The Longing for Sight" summarises her visual type (Fig. 3). Whereas haptic types would imagine how a piece should feel as they create it, she stated that she created in her head an image of how the finished piece would appear. Despite being totally blind, she had a well developed sense of space. With her awareness of proportion, shape, scale and organisation, she worked in a very visual manner.[12] People like this frequently develop a strong mental picture of their environment by actively investigating their surroundings. To satisfy their need for visual 'knowledge', they often ask for detailed descriptions of people, objects and places - even though they may never have experienced sight in their lives before.

The work initiated by Lowenfeld, although its origins were in the area of visual impairment, was further developed by him and countless others. Subsequently, similar tendencies were found in the fully sighted. In a study by Kennedy and Fox (1977), blind and blindfolded fully sighted students were tested on how they recognized everyday objects that were imprinted in outline.[13] Some of the blindfolded, sighted students did not refer to visual imagery but instead mentioned form and shape, thereby identifying through touch and object function - typical haptic characteristics.

W.G. Walter (1963), studied brain waves that were recorded while the mind was at rest, called alpha rhythms. He discovered that in some

Fig. 3: "Longing for Sight", by an eighteen year old congenitally blind girl, who is a visual type.

people, these alpha rhythms would still be present even if they were busy and alert. Through examining 600 individuals, he discovered that these people tended to be more kinesthetic and tactile in their perceptions. Others, without persistent alpha rhythm activity were often more visual in their thinking.[14]

In *The Senses Considered as Perceptual Systems* by Gibson, (1966), the author studies the haptic process indepth.[15] He argues that individuals can recognise and select objects in their surroundings without the use of sight. The development of the other senses are advocated, with increased perception possible through touch, hearing, smell, etc.

These creative types relate to the sighted and especially to art education for the sighted. If, as was stated earlier, out of every four people in the average population, two are visually minded, one is haptically minded and one somewhere in between these two extremes, then these facts must be taken into account when preparing art classes. "In teaching the adolescent, there is an alternative path to motivation then the traditional 'visual' emphasis on seeing nature, learning perspective and employing conventional representation. The alternative is to encourage students to sense they are actively and personally involved in an experience and to discover ways of expressing that personal relationship".[16]

From about the age of 12 onwards, an individual's creative type begins to emerge. Even if extremes of either haptic or visual type seem to be uncommon, it is vitally important, especially in the art class, to remember that there are many levels between the two extremes of

expression. Therefore, when devising lesson plans it is necessary to consider how to stimulate students at every level of the scale, and how to encourage each student's self expression. In a study of 200 students by Gutteter (1976), it was found that individuals in between the two extreme types of haptic and visual often lacked a sense of direction and were limited in their thoughts and actions.[17] A further study by Weston [18] also highlighted the difficulties for 'in-between students'. These pupils lacked self confidence, often tried to copy (unsuccessfully) the work of class-mates who were visually minded and would not respond to offers of help from teachers.

Studies such as these highlight some of the problems that are experienced in the art class by haptic and in-between students, who frequently feel untalented and inadequate. These feelings of failure are often exacerbated by the fact that traditionally in art education, the emphasis has been on visual representation with visual accuracy being rewarded in terms of praise and high grades.

> There we lag somewhat in our ability to comprehend what goes on in the arts and still concentrate more on what we see, still thinking of our past experiences and academic standards where visual experiences were the basis for any art form of expression. And this, indeed, is a nonsense. We think that an artist has to go through a visual training before he can arrive at a method which expresses his emotional feelings. May I say that the one has little to do with the other. What we see may even be in our way if we want to express what we feel...In the same way that the visual artist does not first need to undergo a training of what it means to express himself emotionally, vice versa: the emotional artist who depends on his emotions - on his ego evaluations - does not have to go through a training which is based on visual factors. Both would be a kind of academism. [19]

It is important not to undervalue the work of the haptic type, or hold it in a lower estimation than the work of a visual type. Just as there are highly advanced forms of visual art, so too are there forms of highly advanced haptic art. A comparison of the work of the Impressionists and the Expressionists can be made here in support of this claim. Whereas, Impressionistic art originated with investigations into the world of appearances, trying to capture visual sensations (Fig. 4), Expressionistic art explores the self in relation to the environment. Expressionism extols the virtues of attitudes, experience and emotion (Fig. 5). Therefore, as it is impossible and arrogant to judge which is the greater of these two forms of art, similarly is it wrong to grant a higher status to either visual or haptic creativity.

The expression of the student is one of the most critical aspects to develop in the art room - whether this expression is visually or haptically based. For example, when teaching elements such as colour, it is possible to stimulate both visuals and haptics. For example, while colour can be discussed in terms of hue, strength or weakness, shades and tints, how it is affected by shape or light, colour can also be thought of in terms of whether it is warm, friendly, inviting or cold, sinister and forbidding - how it would affect the viewer and make them feel. Those who are definite haptic types and those who have tendencies towards haptic creativity often gauge and interpret an element through the direct importance it has for them.

> Some are reached better by stimulating them concerning their own experiences, their own emotions, their own movements (including actions), and their own feelings which they have when they put the paint on, getting much satisfaction out of the relationship between their ego and what they do. Others are very much inspired by what they see. Some are in between, but we have to reach them all. Therefore we have always to ask

Fig. 4: "The Water Lily Pond (Japanese Bridge)", Claude Monet, 1899.
The artist has tried to capture the visual sensations of the moment.

Fig. 5: "Breach in the Dike", Karl Schmidt-Rottluff, 1910.
There is an extreme amount of emotional intensity in this semi-abstract piece.

> ourselves if we are including both when we motivate our students...[20]

One problem that could arise however, when trying to integrate the motivation of haptics and visuals is that sometimes a visually creative type might regard haptic type work as inefficient and unskilled, while haptics could reject a visual style as being shallow and insensitive. An atmosphere of respect and tolerance must be developed towards both types of creativity.

FOOTNOTES SECTION 2

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[1]R. Rothe, "Kunst Und Schule" (1930), quoted by V. Lowenfeld, The Nature of Creative Activity, (London: Routledge & Kegan Paul, 1959.) p. 79.

[2]Viktor Lowenfeld, The Lowenfeld Lectures. Viktor Lowenfeld on Art Education and Therapy, ed. John A Michael. (The Pennsylvania State University Press, 1982.) p. 326.

[3]Viktor Lowenfeld & W. Lambert Brittain, Creative and Mental Growth, 7th Edition (New York: Macmillan Publishing Co. Inc., 1982) p. 359.

[4]Ibid.

[5]Viktor Lowenfeld in The Lowenfeld Lectures, ed. Michael, p. 333.

[6]Ibid.

[7]Viktor Lowenfeld, "Tests for Visual and Haptic Aptitudes", American Journal of Psychology, Vol. 58. No. 1. (1945), pp. 110 - 11.

[8]V. Lowenfeld & W. Lambert Brittain, Creative and Mental Growth, p. 361.

[9]Ibid.

[10]Lowenfeld, The Nature of Creative Activity, p. 90.

[11]Ibid., p. 83.

[12]Ibid., p. 94.

[13]J. M. Kennedy & N. Fox, "Pictures to see and pictures to touch." (1977), quoted by V. Lowenfeld & W. Lambert Brittain in Creative and Mental Growth, p.327.

[14]W. G. Walter, "The Living Brain" (1963) quoted by Lowenfeld & Brittain in Creative and Mental Growth. p. 327.

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[15]J. J. Gibson, The Senses Considered as Perceptual Systems, (Boston: Houghton Mifflin, 1966).

[16]V. Lowenfeld in The Lowenfeld Lectures, ed. Michael, p. xii.

[17]L. J. Gutteter, "The psychological functioning of early adolescents who have failed to develop a precise drawing style", in Studies in Art Education, 18 (1) 1976, pp. 50 - 60.

[18]Weston quoted in Lowenfeld and Brittain, Creative and Mental Growth, 8th Edition. (New York: Macmillan Publishing Co. Inc., 1987), p. 368.

[19]V. Lowenfeld in The Lowenfeld Lectures, ed. Michael, pp. 321 - 322.

[20]Ibid, p. 347.

CHAPTER 3

In the Classroom

The Development of Sensory Awareness

> My own research and that of others convinced me that much of schooling was ineffective in bringing about an important educational goal: The enhancement of human understanding. [1]

The art class is one of the few places within the school where concentration and development of sensory awareness can take place. One of the major problems with our educational system is that too often all that students learn is how to regurgitate predetermined responses - they are seldom required to think, feel, react or involve themselves. In the art class however, through activities like drawing, painting and three - dimensional work, students have the chance to acquire information through each of their senses, combine this with their own thoughts, ideas and feelings, and create something that is truly representative of themselves.

As with the blind and visually impaired, the development of sensory perception is crucial. By 'sensory perception' is understood the use of each of our sense organs, and their development to their greatest potential. Eyes should be used not just for recognising but for attentive observation of detail. Similarly, ears should be developed for careful listening, as should all other senses be intensified for heightened perception to increase the meaning and appreciation of life. This education of the senses is becoming more important as modern

society becomes increasingly 'processed'. It has become so easy to completely lose touch with our surrounding environment.

> .....people seem to be relying less and less on actual sensory contact with their environment. They are becoming passive viewers of their culture rather than active makers of it. Football games are watched, not played. Music has become a soothing background syrup in the shopping centre rather that an opportunity for actual involvement. The television has become a mass means of distraction in which the viewer's only involvement is that of turning the on or off switch. Even groceries come packed in their own sterile plastic containers removed not only from touch but also from smell. [2]

Schools have a responsibility to develop the senses of their students. As the curriculum of most subjects does not include this education, it becomes the priority of the art class to heighten pupils' sensitivities.

> ....if you were deprived of all your senses, there would be no learning. None! Absolutely none! Fortunately, we have our senses. But wouldn't you think that education would draw its conclusions from that important statement? - that it would say, "Well, wouldn't it be logical then to refine our sensory experiences so that we can learn better?" You see? But we don't to it. So, actually, we miss a very important part of education that is especially important on the secondary level. [3]

Art in Ireland

In the past, the post-primary art course was the subject of serious criticism. This was especially true of the junior cycle, then culminating in the Intermediate Certificate examination. A report from the National Council for Educational Awards stressed the worryingly low standards: "The standard of art at second level is so mediocre that the results obtained in the Leaving Certificate examinations are no indication of a student's potential".[4] It also stated that; "foundation courses will continue to be necessary for many students until very

considerable improvements have taken place in art and design education at second level".[5]

What is alarming is the fact that while these criticisms from the N.C.E.A. report are levelled at the senior cycle art course, the results for the Leaving Certificate of that year were considerably better than the results obtained in the Intermediate Certificate art exam. According to the Department of Education's statistical report, fewer students received a grade "C" or higher in the Intermediate Certificate art examination, than in almost any of the other nineteen courses on offer. This result improved in the Leaving Certificate art examination where the chances of a student receiving a grade "C" or higher were greater than for many other subjects. The N.C.E.A. claimed that the Leaving Certificate results were grossly inadequate, yet those results were a vast improvement on those obtained in the junior level.

These poor results at junior level continue right up until the end of the Intermediate Certificate. In 1989, only 14.7% of candidates received higher than a "C" grade in art. This result placed art in the third lowest position out of thirty three courses on offer that year, in terms of the percentage of students receiving higher than a grade "C". 13.7% of students sitting art received higher than a grade "C" in 1990; the fourth lowest result in 36 courses, and in 1991, 13.6% received an "A" or "B" grade in art, placing art yet again as the 3rd lowest scoring course out of a total of 36 courses, in relation to achieving higher than a grade "C". (See Appendix A)

> If we study the intellectual functions or the social sentiments of the child, development appears to be more or less a continuous progression, whereas in the realm of artistic expression, on the

> contrary, the impression gained is frequently one of retrogression...without an appropriate art education which will succeed in cultivating these means of expression and in encouraging these first manifestations of aesthetic creation, the actions of adults and the restraints of school and family life have the effect in most cases of checking or thwarting such tendencies instead of enriching them.[6]

In *Education and the Arts*, published by Trinity College Dublin (1987),six practising visual artists were interviewed in an attempt "to explore the nature and development of artistic creativity, to identify the educational needs of the emerging young artist, and to examine the conditions which are most conducive to the nurturing of artistic personalities".[7] Of those artists interviewed who studied art at second level, the majority were at schools where art was not considered an important subject. In fact the status of art in many of the schools was "lamentably low".[8] According to Robert Ballagh who attended Blackrock College, art was always thought of as a "doss class",[9] while Edward Delaney, considerably more damning in his criticism, believed that art educators could destroy artistic talent. "That this destruction can occur at a faster rate as a consequence of teaching would seem to be based to a large extent on his views of the current system of art education in Ireland and in particular on his opinion of the level of professional competence attained by art teachers".[10] He continued to condemn the "major damage"[11] caused by art teachers: "I think teaching is a real failure in art.... The people who get art teachers' diplomas have been ruined by the people who taught them. They are sticking to a straight-jacketed curriculum like that which they were taught when they went to secondary school."[12]

The Report of the Arts Council's Working Party on the Arts in Education (1979) agreed with many of the findings of the Trinity College report, citing amongst other reasons, lack of properly trained teachers, lack of funding and resources and lack of sufficient status for post-primary art courses:

> Regrettably, there is a particular stereotype of the arts in many Irish schools. The arts are seen as more suitable for girls than for boys, and for the less intelligent rather than for the more intelligent pupils. They are often judged to be more interesting than useful, and their most significant contribution is frequently conceived of as a pleasant means of passing time.[13]

Another possible reason for the unsuccess of the post primary art curriculum was the course content and method of assessment, as then embodied by the Intermediate Certificate and Leaving Certificate examinations. (As both the junior and senior cycle art courses were of similar structure, ie, they both attempted to prepare students for final examinations, reference will be made chiefly to the junior syllabus.)

The Intermediate Certificate

One of the greatest problems with the junior cycle art course was the emphasis placed on the end examination, which consisted of five papers from which three were chosen. These papers were:

Imaginative Composition	2 hours
Still Life	2 hours
Life Sketching	2 hours
Design	2 hours
Craftwork	5 hours

The imaginative composition paper was compulsory and students were also required to choose from either Design or Craftwork and from Still Life or Sketching. Assessment was based solely on the students' performance during the three examinations at two hour duration, (or five hours for the craftwork paper). This in itself was a source of many potential problems. First of all, the stressful nature of the examination situation could easily affect a student's ability and performance on the day, while many unpredictable factors could contribute to impede a student's work, such as bad lighting, an awkward view of a composition or lack of adequate materials. In addition, students of art would normally not be accustomed to working solidly over two hour periods, or five hours in the case of the craftwork paper, and this pressure in terms of physical, mental and visual exertion, could detrimentally affect a student's exam work.

This method of assessment made no reference whatsoever to the process and development of the course work completed by the student. Therefore, no major incentive existed for students to apply themselves as fully as possible to the exploration of art during the school year. This situation was exacerbated by the actual course content. The programme for the junior cycle art course comprised of representational work, imaginative composition, design and craft:

Representational Work:
Making sketches in black and white and colour:
(i) Life: in the classroom, from windows, out of doors.
(ii) Objects and groups of objects pleasing in colour, texture and form.
(iii) Flowers, sprays of leaves, fruit, shells, etc.
(iv) Buildings and landscapes in various seasons and moods of nature.

Imaginative Composition:
Pictorial work: figure, landscape, still-life and abstract studies.

Design:
(i) The free invention of pattern in colour.
(ii) The planning of a design to be carried out in some specific craft.

Craftwork:
The development of a sense of pattern and good design through the practice of a craft.[14]

As the above excerpt from the *Intermediate Certificate Programme* shows, most of the art syllabus comprised of developing visual perception and realistic reproduction of prescribed compositions. Apart from immediately causing complications for haptic students or those with haptic tendencies, this rather limited course meant that the role and breadth of art, was not being explored to its fullest potential. Very little attempt can be seen to encourage the active or personal involvement of the student or stimulate any real development of initiative or innovation.

The Junior Certificate

In 1989, the Junior Certificate was introduced as a replacement for the Intermediate Certificate. This brought widespread changes in the structure and content of junior cycle subjects, in particular the art course. The most noticeable change was in the method of assessment. No longer were results based totally on examinations at the end of third year, but now, three quarters of the total marks in art were going towards project based assessments. These projects could be carried out during class time throughout the year.

Maybe it is this new method of examination that accounts for the improvement in marks in the Junior Certificate examinations. In the latest figures available, from the 1995 examination, 29.1% of students taking the ordinary paper in art received higher that a grade "C"[15] while in the higher level art examination, 45.6% of students received an "A" or "B" grade. That is almost half of the 13,572 students that sat the paper. This result in the higher level art paper places art, craft and design within the top half of the twenty seven courses on offer that year, in terms of the percentage of students gaining higher than a grade "C".[16]

These marks contrast with the Leaving Certificate Examination results obtained in art in the same year, where marks are totally based on the results of the end examinations. In the ordinary paper, 22.8% of students attained an "A" or "B" grade[17], while in the higher paper, only 27.3% reached higher than a grade "C", placing art at the sixth lowest scoring position out of the thirty two higher-level courses examined that year, in terms of receiving above a grade "C" mark.[18] (See Appendix B)

Apart from the completely altered methods of examination, other differences exist between the Intermediate and Junior Certificate art programmes that could account for the improved results. The most profound of these changes is the actual focus of the course content.

The new syllabus is structured into four major interdependent areas. These are drawing, two-dimensional art, design and craft, three-dimensional art, design and craft and support studies. There is a strong emphasis placed on recording, analysing, expressing and

communicating, while the need for flexibility is also stressed: "Flexibility in the syllabus and in teaching methods is required not only because of the variation among learners but also because of the very nature of the subject itself."[19]

From the outset of reading the *Junior Certificate Art, Draft, Design Guidelines for Teachers*, this realisation of the "variation among learners" is evident. Apart, from providing for students with predominantly visual ways of working, methodologies that are appropriate for those who are haptic or with haptic tendencies are also included. For example, drawing, which is one of the most fundamentally important aspects of art, both as a discipline in itself and as a basis for other areas of art, craft and design, is highlighted for "developing and making a personal response to VISUAL and TACTILE PHENOMENA OBERVERVED."[20] This incorporates not only the visual sensations explored by visual types, but also the haptic type's concern with kinaesthetic experience and their subjective relationship with their environment. The inclusion of these methodologies that can be considered to have both visual and haptic relevance, continues throughout the syllabus outline. In describing two dimensional art, craft and design, it is stated that "this section is primarily concerned with exploration and development of ideas, feelings and emotions, based on the students direct experience, real and imagined through two-dimensional and three-dimensional media, in ways which can be expressive, communicative, and functional".[21] This sentiment is echoed again in the description of three dimensional art, craft and design, where the exploration of student expression is advocated as well as the importance of stimulating "spatial and tactile senses"[22] through direct experience.

Another integral element of the art course is the use of support studies, which involve the critical appraisal and study of the history of art, design and craft. Through this, the diverse methods of artistic expression, past and present, are explored and the philosophy and expressive meaning of works are discussed and examined. Apart from opening up new methods of representation, support studies are beneficial for students, in that "the student can recognise, understand and empathise with the artists expression, philosophy of life, inner feelings and his / her aspirations as a human being".[23]

There are many similarities between the methodologies outlined in these preceding paragraphs relating to the Junior Certificate Art Programme, and methodologies used in teaching students with visual disabilities. One of the most important of these is the development of sensory perception, where students are encouraged to explore their surroundings with more than just their eyes. Both methodologies encourage a sense of curiosity, especially in relation to the use of materials. The benefits for visually impaired students of experimenting with materials apply for sighted students also, with greater development of co-ordination and sensitivity and an increased link with the students' environment. Materials and techniques provide a necessary basis for the expression of ideas and feelings:

> ...it must be emphasised that the teacher is not teaching printing with lino, painting with powder colour, or constructing with card, per se, but is introducing the learner to these and other media as possible means for personal expression. In the media used, the student may discover himself / herself and develop a satisfying means of communications which can be further developed. Media and techniques should be regarded as vehicles for expression - not content.[24]

The self expression of the student is one of the most critical elements to develop in the art room, whether this expression is demonstrated in a visual or haptic manner.

FOOTNOTES CHAPTER 3

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[1]H. Gardner, The Arts and Human Development, (Basic Books, A Division of Harper Collins Publishers Inc., 1994), p. xxii.

[2]V. Lowenfeld & W. Lambert Brittain, Creative and Mental Growth, 7th Ed., (New York: Macmillan Publishing Co. Inc., 1982), p. 12.

[3]V. Lowenfeld, The Lowenfeld Lectures. Viktor Lowenfeld on Art Education and Therapy, ed. John A. Michael. (The Pennsylvania State University Press, 1982), p. 337.

[4]National Council for Educational Awards, Report on N.C.E.A. Recognition and Awards for Courses in Art and Design, (Dublin: 1976), p. 2.

[5]Ibid., p. 3.

[6]Piaget on the child as artist, in E. Ziegfeld, ed., Education & Art, (Paris: UNESCO, 1953), p. 22.

[7]Trinity College, University of Dublin, Education and the Arts, (Dublin: Trinity College, 1987), p. 5.

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[8]Ibid., p. 297.

[9]Ibid., p. 245.

[10]Ibid., pp. 266 - 267.

[11]Ibid., p. 267.

[12]Ibid.

[13]C. Benson, The Place of the Arts in Irish Education. Report of the Arts Council's Working Party on the Arts in Education, (Dublin: The Arts Council, 1979), p. 23.

[14]Intermediate Certificate Programme, (Photocopy supplied by the Department of Education.) pp. 161 - 162.

[15]Department of Education, Tuarascail Staitistiuil 1994 / '95, (Dublin: Government Publications, 1996.) p. 82.

[16]Ibid. p. 88.

[17]Ibid. p. 94.

[18]Ibid. p. 100.

[19]The National Council for Curriculum and Assessment, The Junior Certificate Art, Craft , Design Guidelines for Teachers, (Dublin.) p. 15.

[20]Ibid. p. 2.

[21]Ibid. p. 3.

[22]Ibid. p. 4.

[23]Ibid. p. 5.

[24]Ibid. p. 6.

CHAPTER 4

Applying Teaching Methodologies from the Non - Sighted Art Class within the Sighted Art Class

In an attempt to assess the possible effects of applying some of the teaching methodologies devised for visually impaired students to the sighted art class, I decided to try and incorporate some of the information I had gathered about these methodologies to one of the junior classes that I am presently working with during my teaching practice. The class I chose comprised of twenty four fully-sighted first year students with mixed ability, whose previous exposure to art varied widely from student to student.

Under the guidance of Napier's recommendations on the use of theme[1], I attempted to choose a theme and project that could be broadly interpreted and would have relevance to the interests and experiences of the students. What was decided on finally was to work on the idea of a personal identity project. Each student would create a personal motif to be used as decoration for a shield that they would design and construct themselves. We began the project by discussing the knights and warriors of old, talking about how their shields were used, not just for protection, but also as a means of identification, often with a family crest or personal motif adorning the front. With this in mind, the first part of the project was begun - to create an individual motif for each student.

To start with, every pupil had a brain storming session, within which

they wrote down a list of everything they could think of that was associated with themselves. This list could include family members, friends, favourite foods, hobbies, likes and dislikes, in fact anything that could be used to build up an image of who they were (Fig. 6). When this was complete, one object from the list was brought in the following week. For example, if a pupil wrote down that they liked football, they could bring in a ball, a jersey or even a photograph of their favourite football hero (Fig. 7). By allowing the students to choose the objects that they would be drawing, it ensured that their interest was maintained as well as giving them a role of responsibility in the decision making process.

When the line drawings were completed, a small section with interesting details (such as line, shape, pattern) was chosen and enlarged (Fig. 8). Although I supervised the process, the selection of the sections to be enlarged were made by the students themselves, so they could choose elements that were of particular interest, such as texture, pattern or shape. These elements were then experimented with, and within a number of small shield outlines, different combinations of the elements were tried until a desirable motif or pattern was achieved (Fig. 9). As recommended in *Art in Special Education*[2], where working in large scale is advised for visually impaired students, when the shield shapes and personal motifs were decided upon, they were enlarged to between A1 and A2 size and transferred onto card.

The students were now ready to begin building up the personal motifs on their shields in relief papier mache. Different methods of creating texture, height and surface pattern were demonstrated, and then they

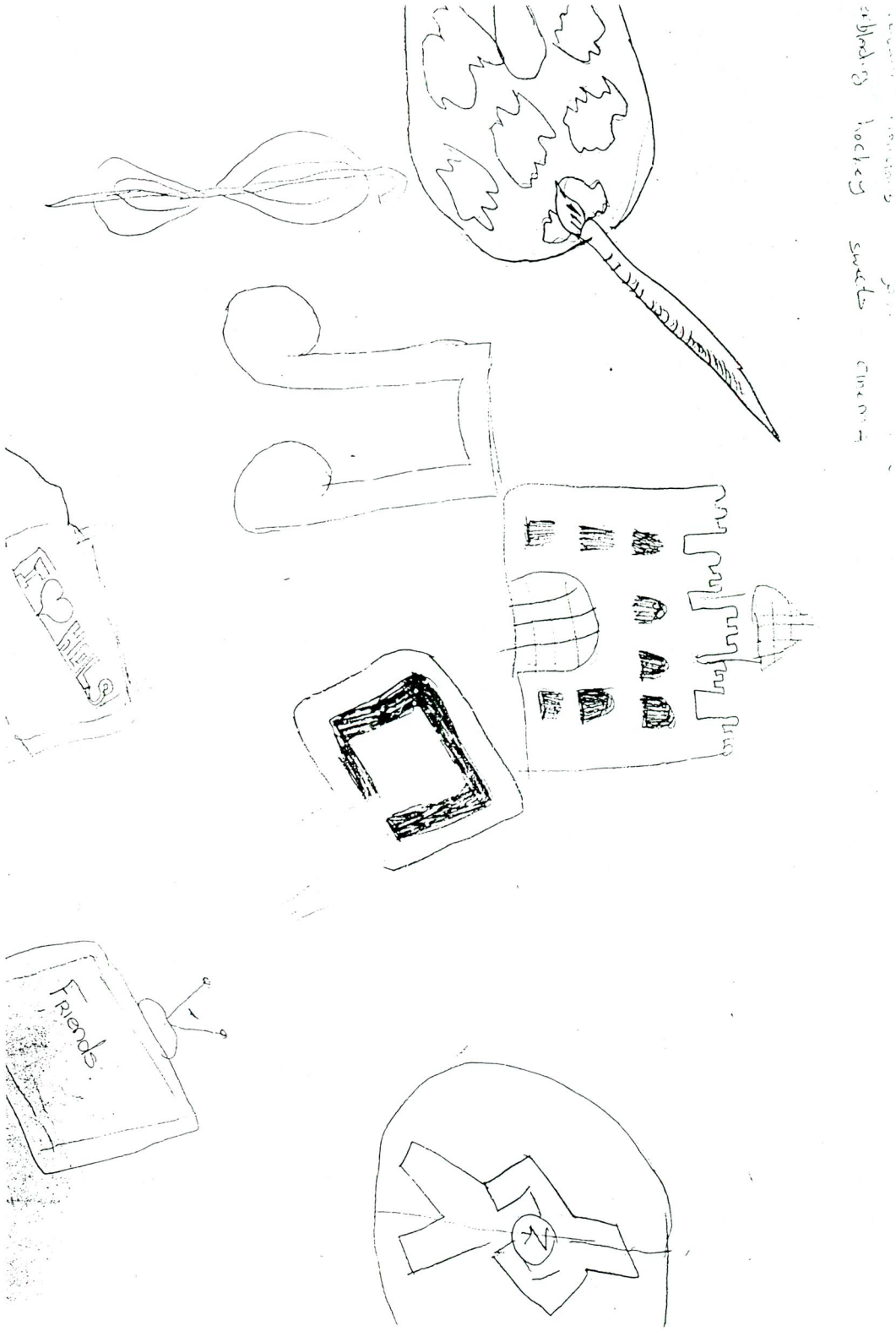


Fig. 6: A pupil's 'brain - storming' session.

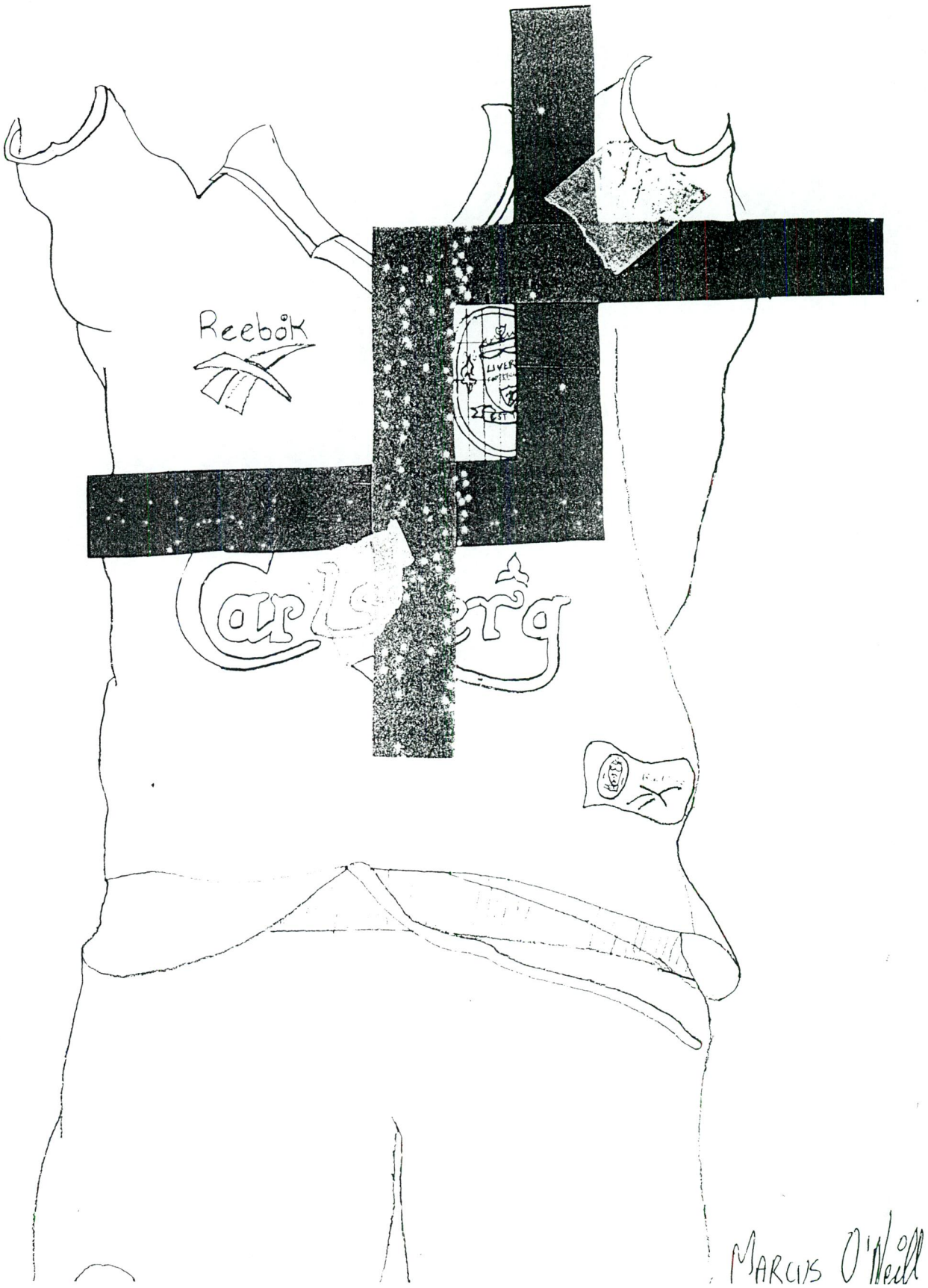


Fig. 7: A student draws an object from their 'brain - storming' list. In this example, a Liverpool football jersey has been chosen.

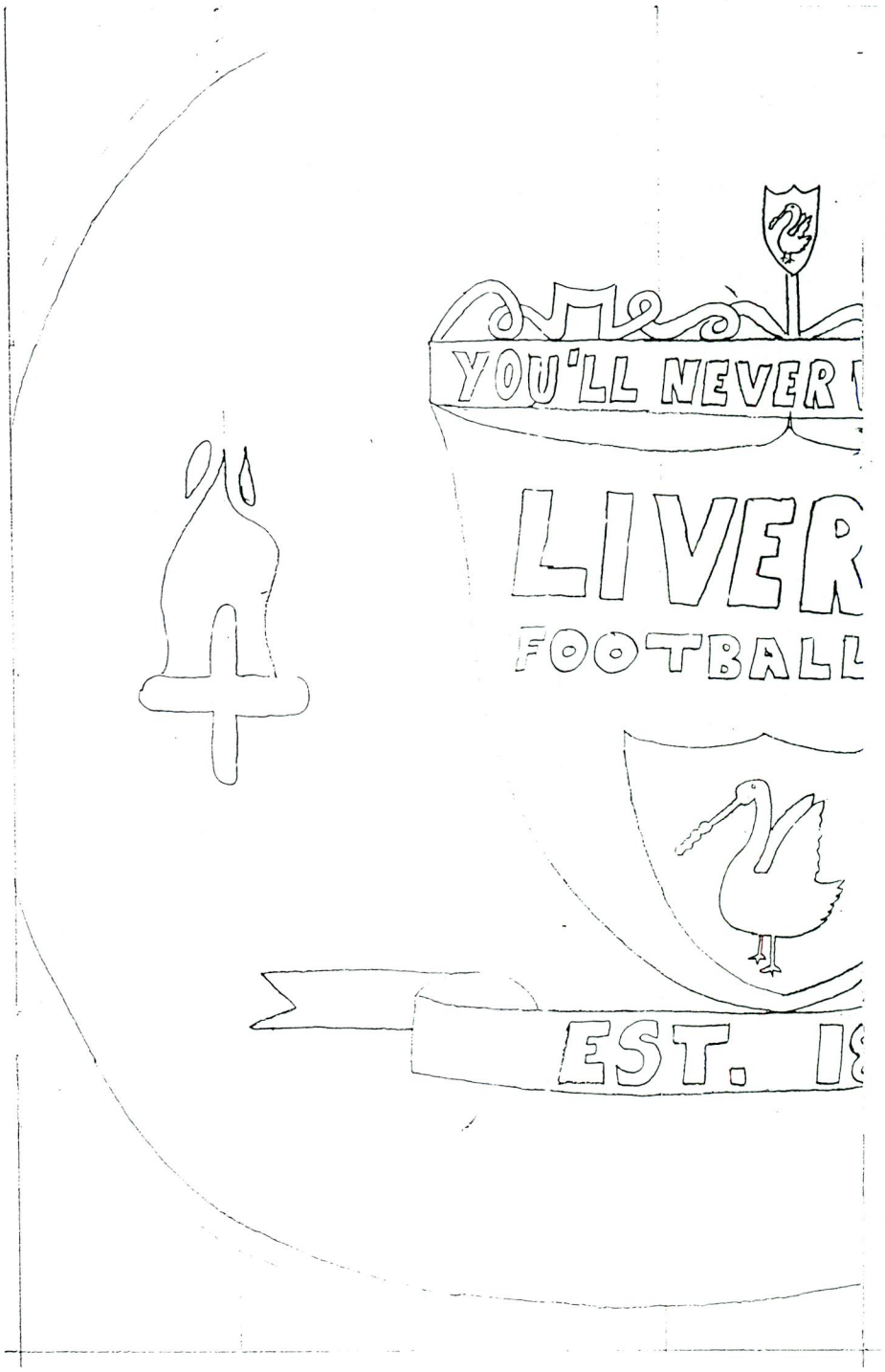


Fig. 8: When the line drawing is complete, a small section with interesting details is chosen and enlarged.

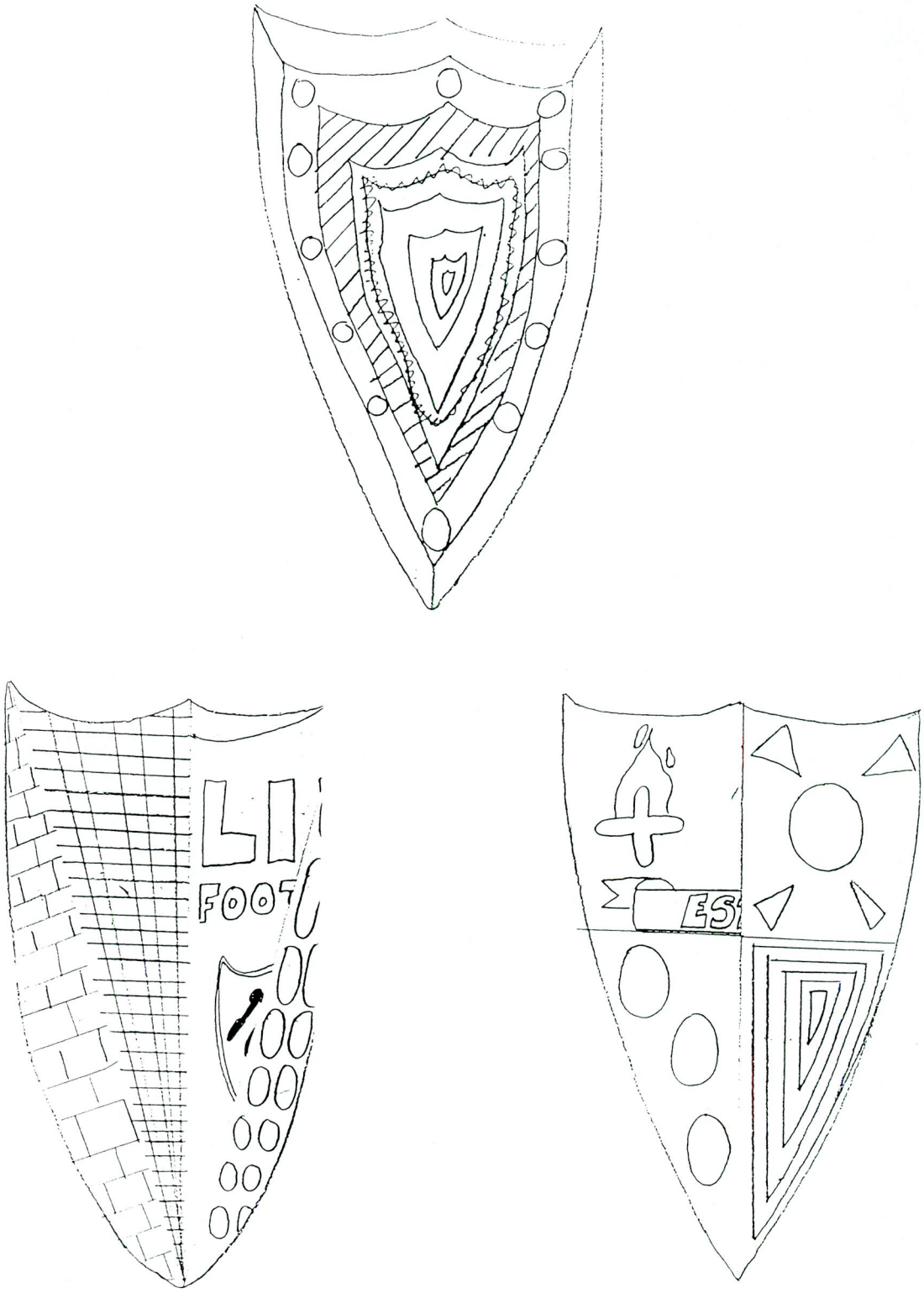


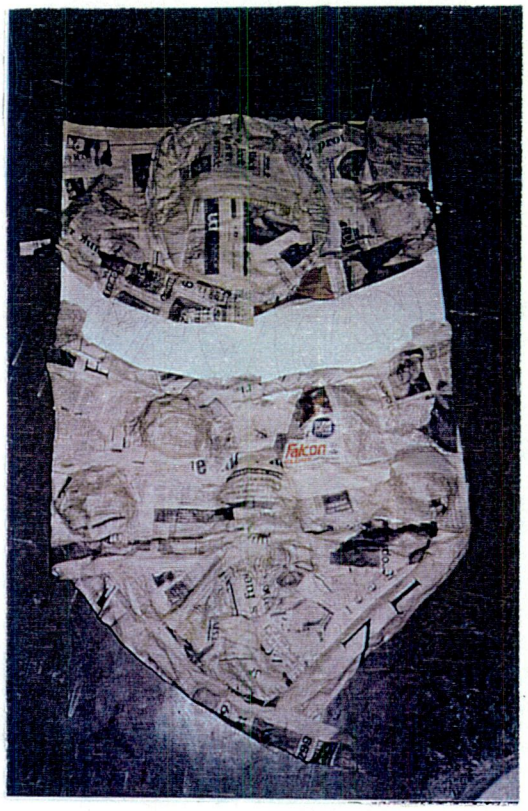
Fig. 9: The students design their shields, using elements from the enlarged sections.

started to work. It was interesting watching the pupils deal with the papier mache. Some of them loved the freedom of the process. Up to their elbows in paste and soggy paper, they lashed on layers and chunks of varying texture, creating wonderful undulating patterns while other students carefully cut the newspaper into the needed size and, daintily applying the paste with one fingertip, slowly and deliberately built up the layers to the required heights (Fig. 10).

This process was ideal for developing the pupils' tactile senses. Papier mache as a material, has wonderful handling qualities and can be moulded and manipulated into almost any required form or texture. This is beneficial not only for expressive purposes, but the movement and manipulation of the material is excellent for developing co-ordination and sensitivity of touch .

The next stage in creating the shields was the surface decoration. Rather than going straight into decorating as soon as the papier mache relief-work was completed, I decided the class should fully explore the media they would be working with first. This is the stage at which the students are at the moment (Fig. 11). For the past two weeks, they have been investigating the possibilities of tissue paper. On the first week, they worked with only coloured tissue and P.V.A. glue, while on the second week, they incorporated other materials such as rice, beads, coloured paper, string and pasta into their tissue experiments.

There are a number of reasons for the weeks spent investigating materials. Apart from the fact that by the end of these sessions, the students will have made sample sheets of possible effects that can be used on their shields, they are also finding out about the qualities and



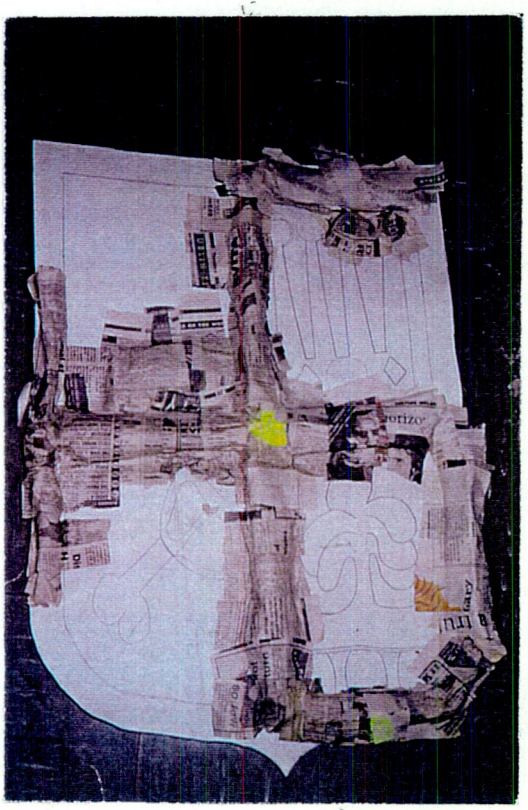


Fig. 10: The shields are built up in relief using papier mache.

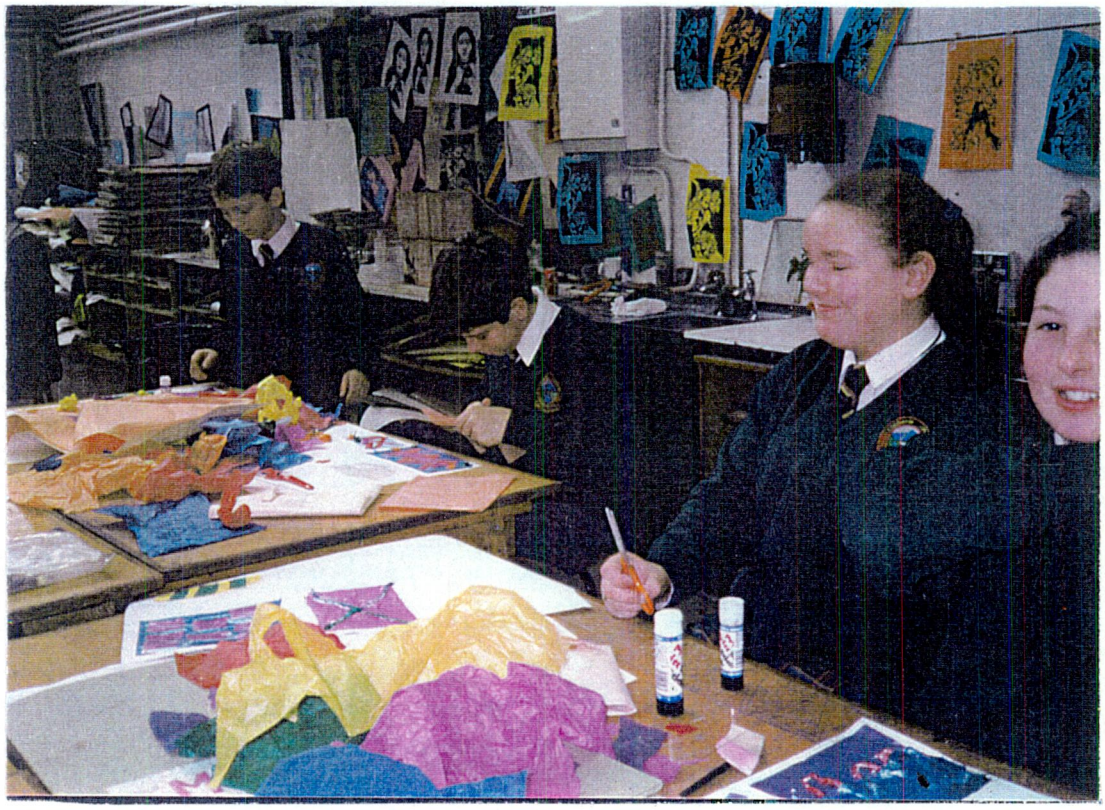


Fig. 11: The students at work.

limitations of materials and substances. These experiments involve the use of problem solving skills and instill a sense of curiosity, as pupils figure out how to create required effects. These considerations are as important for sighted students as they are for visually impaired students. In addition, "the use of utensils for cutting modelling and pasting, and the control of materials being used and shaped are helpful in developing both specific skills and the efficient use of hands. Children should have the chance to experiment and to explore various techniques and processes, in the expression of their ideas."[3]

The students will complete the decoration of their shields within the next two to three weeks. As I had no previous contact with this class before my teaching practice began, I cannot compare or contrast their abilities from before the start of this project. Therefore, it is impossible to state definitely what effects, if any, the incorporation of some of the teaching methodologies specified for the visually impaired, have had on their art education.

I have observed however, a noticeable increase in the confidence they have in their own work. When I first began teaching them, a number of the students were quite hesitant and would wait for approval before continuing with the next step of a task. A few would simply refuse to try new ideas that I suggested. This gradually lessened as the project continued. However, this could also be an effect of their growing familiarity with me, and with my expectations from them. In addition to this, their creative work has become increasingly decisive. This is especially noticeable in the samples they created during their explorations of tissue. From very simple attempts at basic textures and patterns (Figs. 12 & 13), students began creating elaborate

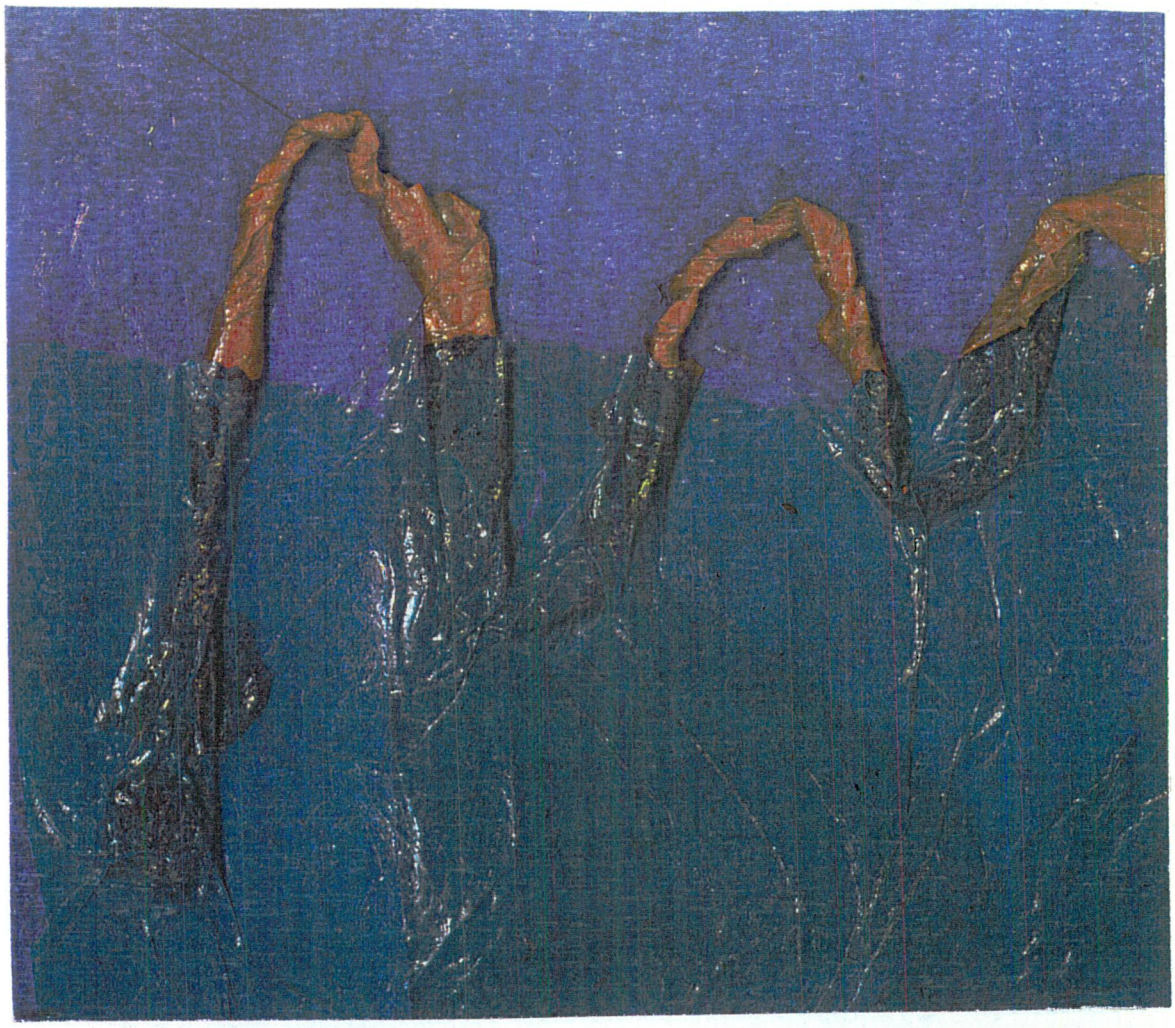
Fig. 12: The students' initial experiments with tissue.

Fig. 13: The students' initial experiments with tissue.

constructions with a variety of mixed media (Figs. 14 & 15). I believe that this is as a direct result of their explorations with various materials, which is something that they had not previously done. I hope that this spirit of experimentation continues with them into other projects.

Another positive outcome of this project is the satisfaction the students have derived from it. Working with papier mache was highly enjoyable for most of the students, mainly because it was a chance for messiness and freedom of expression, something that was quite a change from the normal strict discipline in operation within the school. Freedom of expression was also the key note in the experiments with tissue paper and mixed media. Some of the samples created were of an exceptional standard, and seeing how well they turned out gave students a greater sense of confidence in their own ability.

This project, for which I have taken some of the elements from methodologies devised for teaching the visually impaired, is not yet fully complete (Fig. 16). However, from what the students have so far gained, I would consider it to be quite successful. (See Appendix C)



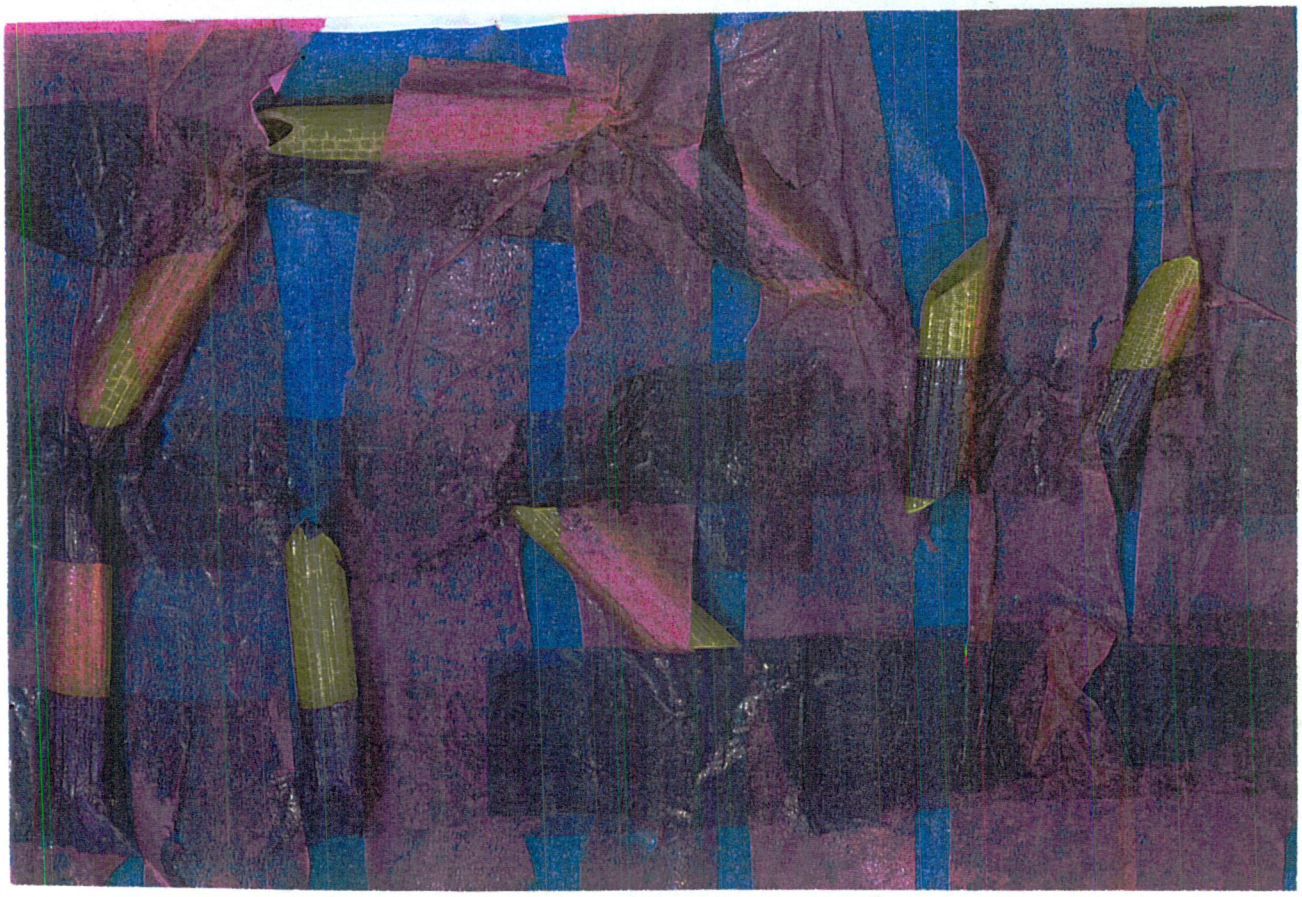
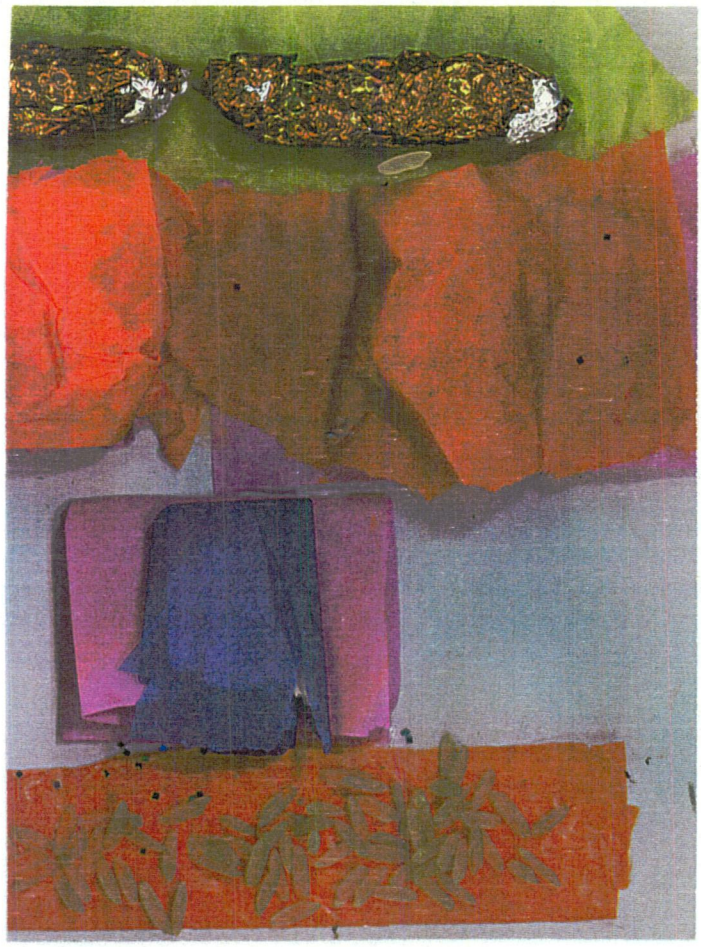


Fig. 14: The students begin to use mixed media with more confidence.



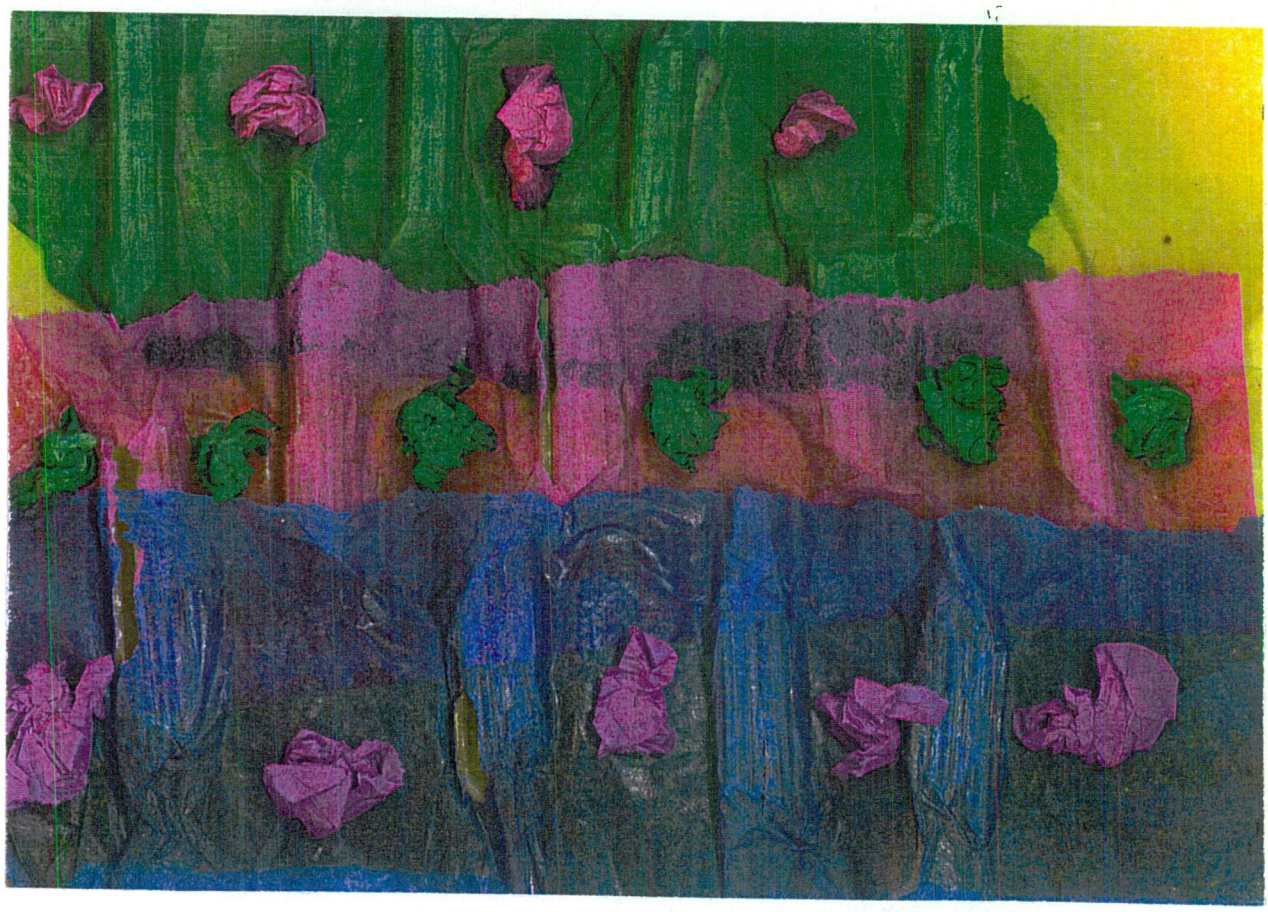


Fig. 15: The students begin to use mixed media with more confidence.

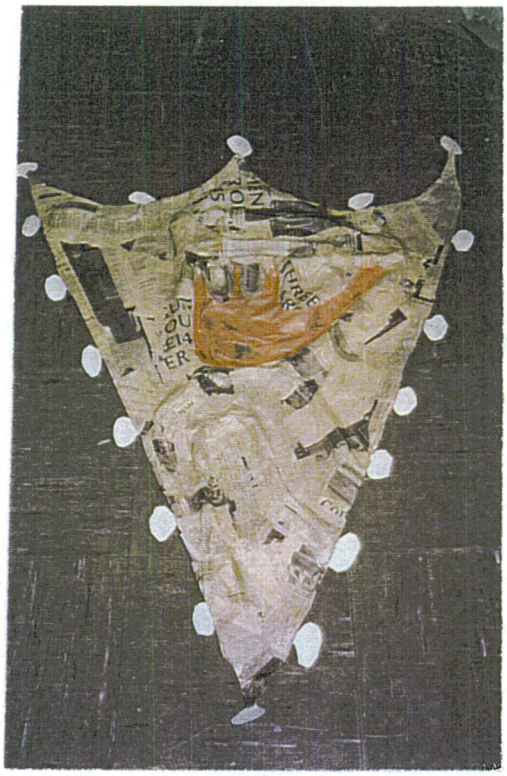


Fig. 16: The work on the shields is still in progress.

FOOTNOTES CHAPTER 4

[1]Grace D. Napier, "Special Subject Adjustments & Skills" in B. Lowenfeld, The Visually Handicapped Child in School, (London: Constable & Co. Ltd., 1974.) p. 267.

[2]Art in Special Education. Educating the Handicapped through Art, (New Jersey: Art Educators of New Jersey, 1976.) p. 4 - 18.

[3]Chapman and Stone, The Visually Handicapped Child in your Classroom, (London: Cassell Education Ltd., 1988.) p. 127.

CONCLUSION

Just as there are numerous types of visual impairment, so too are there different requirements for each person with a visual disability. Art has traditionally been associated with those with disabilities as both a means of therapy and a creative, expressive form of communication. Therefore, there are many publications which offer guidance for overcoming some of the basic practical problems that arise with visually impaired students of art, in areas such as materials, demonstrations and methods of working.

One of the chief contributors to the understanding of art in relation to the visually impaired was Viktor Lowenfeld. Much of his early work was devoted to the study of artistic creativity in the blind and weak sighted, and through extensive investigations determined the existence of two creative types, the "visual type" and the "haptic type" (from the Greek word "haptikos", meaning "to hold" or "to touch"). He discovered that some will visually scrutinize objects that attract their attention, even if their eyesight is severely impaired, while others will negotiate everything through tactile exploration, even though they may have considerable visual powers. Through further tests it was discovered that similar tendencies were found in the fully sighted:

> ....the starting point of artistic experience does not necessarily have to be an experience of the sense of sight but can be haptic in origin. We have further proved that the haptic experience of form is not necessarily determined by the physiological fact that sight is lacking, but that its roots extend deep into psychological attitudes. It is the existence of this psychological attitude that enabled us to compare the haptic creative type expressing itself in the art of the weak sighted with parallel phenomena in art as a whole.[1]

These findings should have an effect on methodologies used in teaching art, with both visual and haptic tendencies taken into account in the preparation of class. But frequently this does not occur, and most art classes remain oriented towards the visual type.

Through this dissertation I have attempted to research teaching methodologies devised specifically for the visually impaired class. I have also tried to investigate the possible benefits of incorporating some of these methodologies within the sighted class, by looking to examples of art programmes that incorporate these methodologies (such as the Junior Certificate art syllabus) and by assimilating some of these procedures into one of my own schemes of work.

Most importantly however, it must be remembered that with or without a visual impairment, every person has the need and the right of access to creative activity. In the words of Padraig Naughton, a practising artist with a visual disability: "In reality, I feel there is no such thing as a disabled artist, as all artists are on a journey of discovery, reflecting how they perceive their environment in the work they create."[2]

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[1]Viktor Lowenfeld, The Nature Of Creative Activity, (London: Routledge & Kegan Paul Ltd., 1959.) p. 146.

[2]Padraig Naughton, speaking at Arts & Disability conference, Friday 18th November, 1994, in the Royal Hospital Kilmainham.

APPENDIX A

INTERMEDIATE EXAMINATION RESULTS
FROM 1989 - 1991.

(Supplied by the Department of Education.)

Intermediate Certificate Examination 1989 - Statistics

Subject	Grade A	Grade B	Grade C	Grade D	Grade E	Grade F	No Grade	Total number of candidates
Irish (Higher Course)	536	3437	7184	5698	750	62	10	17677
Irish (Lower Course)	714	9047	13640	9246	3845	3092	1453	41037
English (Higher Course)	843	4447	13321	11345	1188	57	8	31209
English (Lower Course)	47	2427	13693	11203	1613	236	22	29241
Mathematics (Higher Course)	1630	4520	6926	5729	1050	119	1	19975
Mathematics (Lower Course)	4283	12390	11899	8634	2889	941	48	41084
History	6886	11934	12109	11669	6570	5010	913	55091
Geography	3240	14391	19011	13838	4145	1132	161	55918
Latin	326	409	396	320	169	158	43	1821
Greek	2	5	9	8	6	3	1	34
Classical Studies	116	184	219	180	88	62	27	876
Hebrew Studies	2	0	2	0	1	0	0	5
French	1957	8428	14890	13823	4715	1386	111	45310
German	483	1818	2089	1220	322	139	11	6082
Spanish	174	299	321	348	208	155	21	1526
Italian	8	5	9	9	1	1	0	33
Art	638	3069	10276	9764	1179	188	36	25150
Music & Musicianship A	274	2445	3788	2783	858	146	9	10303
Music & Musicianship B	99	593	201	28	4	1	0	926
Science A	7351	8428	10332	10202	6378	3116	46	45853
Science E	121	591	1137	1399	839	421	106	4614
Home Economics	500	4153	8167	6238	1652	332	20	21062
Woodwork	160	2008	4349	3517	1825	227	7	12093
Metalwork	81	2140	4053	1382	147	85	22	7910
Mechanical Drawing	951	2571	4060	5849	2097	1570	418	17516
Commerce	2376	9269	11856	9524	4242	1792	308	39367
S.E.S.P.	9	180	387	218	63	2	1	860
Science A - ISCIP	119	301	438	492	133	19	0	1502
Humanities 1 - English	7	99	326	239	23	1	0	695
Humanities 2 - Geography	11	152	327	194	21	2	0	707
Humanities 3 - History	35	199	310	144	16	3	0	707
Technology	0	2	12	31	21	8	0	74
Gaeilge Chumarsáideach	40	135	135	53	3	0	0	366

Intermediate Certificate Examination 1990 - Statistics

Subject	Total Number of Candidates	Grade Awarded % of Total Candidates						
		A	B	C	D	E	F	No Grade
Irish (Higher Course)	16626	2.7	18.7	41.4	31.8	4.9	0.4	0.1
Irish (Lower Course)	38968	2.0	19.3	28.3	23.9	11.6	9.7	5.2
English (Higher Course)	29662	3.4	16.8	40.0	35.5	4.1	0.2	0.0
English (Lower Course)	27548	0.2	10.4	45.0	37.6	5.9	0.9	0.1
Mathematics - Syllabus A	18108	5.7	26.3	36.8	25.2	5.1	0.9	0.0
Mathematics - Syllabus B	29421	8.2	26.7	29.6	28.6	4.4	2.2	0.3
Mathematics Syllabus C	10491	2.3	13.6	31.1	35.4	13.3	4.1	0.2
History - Syllabus 1	36925	16.2	22.3	21.7	20.1	11.4	7.2	1.0
History - Syllabus 2	15045	14.6	21.6	21.7	21.6	12.1	7.2	0.7
Geography - (Syllabus 1)	38321	8.7	24.9	27.9	22.8	10.5	4.6	0.6
Geography - (Syllabus 2)	14309	7.2	20.2	25.7	26.0	13.6	6.7	0.7
Latin	1251	32.2	26.6	18.9	11.9	5.6	3.7	1.0
Greek	22	22.7	18.2	13.6	36.4	4.5	4.5	0.0
Classical Studies	636	21.7	27.4	21.2	19.7	5.5	3.3	1.3
Hebrew Studies	5	20.0	0.0	0.0	80.0	0.0	0.0	0.0
French	43085	4.7	17.8	28.8	29.3	13.6	5.4	0.4
German	8365	7.6	30.4	31.9	19.5	7.5	2.8	0.2
Spanish	1430	16.0	21.9	22.4	21.1	13.6	4.8	0.1
Italian	39	17.9	17.9	17.9	25.6	17.9	2.6	0.0
Art	23418	2.6	11.1	41.4	39.7	4.2	0.7	0.2
Music & Musicianship A	9287	4.2	27.1	35.5	23.5	7.7	1.8	0.1
Music & Musicianship B	723	16.5	60.3	20.2	2.8	0.3	0.0	0.0
Science A	43245	14.6	18.5	21.4	20.7	13.5	9.9	1.4
Science E	4790	2.7	11.6	22.3	27.9	18.5	13.4	3.5
Home Economics	19550	5.1	22.1	34.0	28.3	7.6	2.6	0.3
Woodwork	11869	0.8	12.1	33.0	34.5	16.1	3.1	0.4
Metalwork	7449	5.0	48.8	34.3	8.5	1.8	1.3	0.4
Mechanical Drawing	16569	6.3	17.5	23.8	29.6	12.3	8.5	2.1
Commerce	38226	11.0	27.5	28.4	21.2	8.3	3.0	0.5
S.E.S.P.	799	3.4	37.8	35.9	18.4	3.5	1.0	0.0
Science A - ISCIP	1286	6.6	17.0	26.2	34.4	14.3	1.6	0.0
Humanities 1 - English	875	0.3	12.8	39.2	35.0	7.1	1.3	4.3
Humanities 2 - Geography	875	3.3	22.3	41.8	22.9	4.8	2.6	2.3
Humanities 3 - History	875	3.3	25.6	40.6	22.2	3.0	1.0	4.3
Technology	255	6.3	23.5	27.8	28.6	11.4	2.4	0.0
Gaeilge Chumarsáideach	298	8.1	33.6	34.9	18.1	5.0	0.3	0.0

Note: '0.0' means greater than zero but less than 0.05, while '0' means that no candidate got that grade.

Intermediate Certificate Examination 1991 - Statistics

Subject	Total Number of Candidates	Grade Awarded % of Total Candidates						
		A	B	C	D	E	F	No Grade
Irish (Higher Course)	17382	4.0	19.5	38.9	31.7	5.2	0.6	0.1
Irish (Lower Course)	40176	2.8	22.5	30.2	22.7	10.2	8.2	3.5
English (Higher Course)	31401	3.0	15.1	41.2	36.6	4.0	0.1	0.0
English (Lower Course)	27914	0.3	12.2	47.9	33.4	5.4	0.7	0.0
Mathematics - Syllabus A	18491	7.3	26.7	37.2	24.4	4.0	0.5	0.0
Mathematics - Syllabus B	29989	11.4	31.6	30.3	18.5	5.9	2.0	0.3
Mathematics - Syllabus C	11716	5.1	27.4	39.7	23.7	3.6	0.4	0.0
History - Syllabus 1	37747	18.1	22.7	21.8	18.8	10.5	7.1	1.1
History - Syllabus 2	15546	16.4	22.3	20.2	20.3	12.2	7.6	1.0
Geography - (Syllabus 1)	39097	10.6	27.4	28.1	20.9	8.5	3.7	0.8
Geography - (Syllabus 2)	15097	5.2	18.5	26.9	26.1	13.7	7.6	1.9
Latin	1075	25.9	28.4	22.3	14.1	5.7	2.6	1.0
Greek	12	0.0	0.0	16.7	50.0	25.0	8.3	0.0
Classical Studies	657	17.8	24.2	23.4	21.6	8.4	3.8	0.8
Hebrew Studies	8	12.5	25.0	25.0	0.0	0.0	25.0	12.5
French	44039	6.7	20.7	26.4	25.8	13.7	6.1	0.5
German	13581	8.4	29.5	31.8	20.8	6.9	2.3	0.3
Spanish	1541	11.6	18.5	19.9	22.3	15.1	11.0	1.7
Italian	103	20.4	21.4	10.7	32.0	7.8	7.8	0.0
Art	24381	2.5	11.1	38.8	41.7	5.1	0.7	0.1
Music & Musicianship A	8878	9.3	30.2	33.1	21.2	5.5	0.7	0.0
Music & Musicianship B	663	38.2	47.7	12.5	1.1	0.0	0.6	0.0
Science A	45394	16.9	17.8	19.7	21.6	13.8	9.5	0.7
Science E	5074	3.8	13.0	20.1	27.5	19.8	12.9	2.9
Home Economics	19771	8.3	25.0	31.7	24.8	7.1	2.8	0.3
Woodwork	12631	2.2	25.5	30.1	30.0	9.5	2.4	0.3
Metalwork	8042	4.7	31.2	46.9	13.0	2.8	1.1	0.4
Mechanical Drawing	17760	7.8	20.3	25.2	27.4	10.5	6.7	2.1
Commerce	39103	5.6	25.0	32.3	24.3	9.1	3.3	0.5
S.E.S.P.	747	3.3	29.3	39.0	25.2	2.9	0.3	0.0
Science A - ISCIP	1353	10.3	16.7	26.6	31.1	13.5	1.6	0.1
Humanities 1 - English	929	1.0	19.5	43.5	30.2	4.6	1.2	0.0
Humanities 2 - Geography	929	1.8	21.7	41.1	30.8	4.1	0.4	0.0
Humanities 3 - History	929	5.7	30.5	38.0	20.7	4.4	0.8	0.0
Technology	271	4.1	22.1	26.6	35.4	11.8	0.0	0.0
Gaeilge Chumarsáideach	319	4.7	25.4	35.4	26.3	7.8	0.3	0.0

Note: '0.0' means greater than zero but less than 0.05, while '0' means that no candidate got that grade.

APPENDIX B

JUNIOR AND LEAVING CERTIFICATE
EXAMINATION RESULTS
(HIGHER AND ORDINARY LEVEL)
1995

(Department of Education, Tuarascail Staitistiuil 1994 / 95.)

TABLE 5.8 — JUNIOR CERTIFICATE RESULTS 1995
PERCENTAGE BREAKDOWN OF CANDIDATES
BY GRADE AWARDED IN EACH SUBJECT
ORDINARY LEVEL PAPERS — MALE & FEMALE

Subject	Total Number of Candidates	Grade A	Grade B	Grade C	Grade D	Grade E	Grade F	No Grade
Irish	32,229	5.5	33.4	35.3	19.7	4.7	1.2	0.1
Irish (Foundation)	6,877	7.1	30.9	35.0	21.0	4.9	1.1	0.1
English	24,171	6.2	26.5	44.0	21.2	1.9	0.2	—
English (Foundation)	3,266	5.0	31.6	40.9	18.1	2.8	1.3	0.3
Mathematics	34,205	8.5	28.7	28.9	23.2	7.7	2.7	0.3
Mathematics (Foundation)	9,561	8.1	32.9	35.6	18.1	3.9	1.3	0.1
History	16,234	7.3	25.3	33.2	24.8	6.4	2.5	0.5
Geography	13,557	8.2	31.4	34.1	21.1	4.0	1.3	—
Latin	55	5.5	9.1	32.7	30.9	7.3	12.7	1.8
Greek	—	—	—	—	—	—	—	—
Classical Studies	88	—	4.5	11.4	27.3	29.5	20.5	6.8
Hebrew Studies	—	—	—	—	—	—	—	—
French	14,951	1.1	12.9	33.9	37.4	12.9	1.7	—
German	3,329	2.4	21.2	37.9	27.7	8.7	2.0	0.2
Spanish	599	2.3	13.4	27.7	32.1	17.7	6.3	0.5
Italian	70	5.7	25.7	47.1	17.1	4.3	—	—
Art, Craft & Design	10,449	9.0	20.1	33.4	27.5	6.7	2.8	0.4
Music	1,967	2.2	26.2	44.6	22.7	3.8	0.5	0.1
Science	18,559	2.5	17.0	36.8	30.5	10.1	3.0	0.2
Home Economics	4,593	0.8	27.6	53.0	16.6	1.8	0.2	—
Materials Technology	5,376	1.5	19.2	40.4	29.9	6.5	2.0	0.4
Metalwork	3,092	6.1	39.5	32.5	14.2	5.7	1.8	0.1
Technical Graphics	9,843	8.5	31.7	27.2	19.8	6.9	4.9	1.0
Technology	651	1.2	12.6	39.3	36.1	10.0	0.8	—
Business Studies	13,653	8.2	40.0	33.9	12.8	3.4	1.4	0.2
Typewriting	622	14.1	34.9	25.1	15.6	7.7	2.6	—
Environmental & Social Studies	552	1.4	19.6	34.4	32.4	9.2	2.5	0.4
ESP - History	53	1.9	11.3	49.1	28.3	9.4	—	—
ESP - Geography	10	—	60.0	20.0	20.0	—	—	—

TABLE 5.14 — JUNIOR CERTIFICATE RESULTS 1995
PERCENTAGE BREAKDOWN OF CANDIDATES
BY GRADE AWARDED IN EACH SUBJECT
HIGHER LEVEL PAPERS — MALE & FEMALE

Subject	Total Number of Candidates	Grade A	Grade B	Grade C	Grade D	Grade E	Grade F	No Grade
Irish	25,561	9.7	27.1	35.4	23.7	3.7	0.4	—
English	40,078	6.1	18.7	39.8	32.0	3.1	0.2	—
Mathematics	23,360	14.0	29.4	30.4	21.1	4.2	0.7	—
History	45,050	18.8	31.8	29.2	16.5	3.3	0.4	—
Geography	48,244	8.3	29.9	34.7	22.9	3.8	0.4	—
Latin	754	32.4	30.4	20.7	11.3	3.8	0.8	0.7
Greek	40	22.5	20.0	25.0	25.0	5.0	2.5	—
Classical Studies	557	18.5	31.8	27.3	14.5	5.2	2.3	0.4
Hebrew Studies	5	—	20.0	40.0	40.0	—	—	—
French	33,621	7.7	25.1	37.8	24.5	4.2	0.6	—
German	14,853	9.7	29.1	30.9	23.1	6.2	1.0	—
Spanish	1,504	7.0	23.2	35.2	25.3	8.2	1.1	—
Italian	118	17.8	34.7	28.0	16.1	3.4	—	—
Art, Craft & Design	13,572	20.2	25.4	33.4	16.6	3.6	0.7	0.1
Music	6,841	8.9	37.8	40.0	12.7	0.6	0.1	—
Science	40,475	12.3	23.0	28.1	25.0	9.4	2.1	0.2
Home Economics	16,757	6.2	42.6	42.4	8.5	0.3	—	—
Materials Technology	9,291	5.1	30.5	41.1	20.2	2.6	0.5	0.1
Metalwork	6,177	7.7	44.0	34.3	11.6	1.8	0.6	—
Technical Graphics	9,327	10.2	25.4	28.7	25.5	7.9	2.2	0.1
Technology	2,661	5.4	25.0	40.2	24.1	4.2	1.1	—
Business Studies	31,416	6.5	35.2	40.5	16.2	1.5	0.1	—
Typewriting	289	21.5	46.4	26.3	4.8	0.7	0.3	—
Environmental & Social Studies	158	12.0	38.0	32.3	13.9	3.8	—	—
ESP - History	334	15.6	34.1	30.5	18.0	1.5	0.3	—
ESP - Geography	121	9.9	51.2	28.1	9.9	0.8	—	—

TABLE 5.20 — LEAVING CERTIFICATE RESULTS 1995
PERCENTAGE BREAKDOWN OF CANDIDATES BY GRADE AWARDED IN EACH SUBJECT
ORDINARY LEVEL PAPERS — MALE & FEMALE

	Subject	Total Number of Candidates	Grade A1	Grade A2	Grade B1	Grade B2	Grade B3	Grade C1	Grade C2	Grade C3	Grade D1	Grade D2	Grade D3	Grade E	Grade F	No Grade
1.	Irish	37,710	—	0.1	0.6	1.8	4.3	7.4	9.9	11.9	11.7	12.5	15.8	16.2	7.1	0.5
2.	English	28,369	0.4	1.9	1.0	3.3	9.8	6.6	13.8	19.2	10.1	12.4	14.4	6.0	1.1	—
3.	Latin	16	—	6.3	—	—	6.3	6.3	—	12.5	12.5	—	12.5	37.5	6.3	—
4.	Greek	1	—	—	—	100.0	—	—	—	—	—	—	—	—	—	—
5.	French	18,509	—	0.2	1.1	3.0	6.2	9.0	12.0	13.3	13.4	12.7	14.2	12.1	2.9	0.1
6.	German	3,794	0.2	0.7	2.2	5.8	9.2	12.3	12.8	14.4	12.3	9.7	10.5	7.6	2.0	0.2
7.	Italian	41	—	2.4	—	2.4	4.9	4.9	4.9	4.9	9.8	9.8	29.3	24.4	2.4	—
8.	Spanish	614	2.6	1.1	1.0	1.3	4.1	5.2	8.1	11.6	13.2	14.7	16.0	15.5	5.7	—
9.	History	6,364	11.0	7.8	5.8	6.7	9.9	5.4	7.1	8.3	4.2	6.0	10.7	8.3	6.8	2.0
10.	Geography	7,144	2.5	5.0	7.6	10.1	12.0	12.0	12.3	10.6	8.6	6.4	6.8	4.6	1.2	0.3
11.	Mathematics	44,759	7.0	8.0	8.5	8.5	8.2	7.9	7.5	7.5	7.1	6.6	9.0	9.0	4.6	0.6
12.	Mathematics (Alt. Ordinary)	5,805	3.1	6.0	8.8	10.7	11.6	11.3	10.6	9.0	7.3	5.4	6.3	6.3	3.4	0.3
13.	Applied Mathematics	172	16.3	8.7	7.6	7.6	11.0	5.8	7.0	9.3	3.5	8.1	7.6	2.3	2.9	2.3
14.	Physics	3,396	2.8	3.4	2.8	5.6	9.5	6.4	9.3	11.2	6.7	9.9	11.2	14.9	6.1	0.2
15.	Chemistry	1,724	0.9	2.3	1.8	5.6	8.7	6.6	9.7	13.4	8.8	10.9	11.9	12.5	5.5	1.3
16.	Physics & Chemistry	520	2.5	4.2	3.8	6.7	8.3	7.5	6.5	13.5	7.3	6.9	8.1	15.2	7.9	1.5
17.	Biology	12,210	1.1	2.4	3.4	5.5	8.0	8.4	9.9	10.4	9.5	8.8	11.0	14.2	6.7	0.6
18.	Agricultural Science	779	—	—	0.3	1.3	1.9	2.8	6.3	9.4	11.9	12.6	20.8	19.1	13.2	0.4
19.	Agricultural Economics	65	—	—	—	4.6	3.1	1.5	10.8	4.6	9.2	10.8	26.2	20.0	9.2	—
20.	Home Economics(S & S)	5,433	0.6	1.9	2.4	6.5	10.4	9.4	13.3	15.2	9.6	9.9	10.4	8.0	1.9	0.5
21.	Home Economics (General)	151	—	3.3	1.3	6.0	10.6	13.2	15.9	17.9	7.3	7.9	6.0	6.0	3.3	1.3
22.	Accounting	4,265	5.1	5.4	6.6	9.4	10.8	8.0	8.5	8.8	6.7	6.5	10.2	6.2	5.5	2.4
23.	Business Organisation	9,421	0.9	3.3	2.4	5.3	11.4	5.8	11.0	17.9	6.0	9.9	14.9	8.0	2.8	0.5
24.	Economics	1,725	2.0	4.1	3.3	6.8	11.1	9.6	10.1	14.2	7.1	10.4	13.5	3.2	3.2	1.4
25.	Economic History	57	—	—	—	—	3.5	1.8	3.5	14.0	3.5	14.0	22.8	14.0	19.3	3.5
26.	Art	3,317	1.4	4.1	2.8	4.6	9.9	8.1	11.6	16.2	11.0	11.0	13.5	4.6	0.8	0.3
27.	Music & Musicianship — A	161	—	0.6	1.9	3.1	3.7	7.5	13.7	18.0	18.0	15.5	11.8	6.2	—	—
28.	Music & Musicianship — B	17	—	—	—	5.9	23.5	11.8	17.6	17.6	17.6	—	—	5.9	—	—
29.	Engineering	1,961	0.2	0.7	1.6	4.3	7.6	13.6	16.0	14.7	14.5	9.8	9.2	6.0	1.8	0.1
30.	Technical Drawing	4,698	4.1	4.9	7.1	8.3	8.7	9.4	9.2	9.9	8.7	6.8	8.8	10.0	3.8	0.4
31.	Construction Studies	2,395	—	0.2	0.5	2.7	6.5	13.1	16.8	17.0	14.8	12.5	9.0	5.8	0.9	0.2
32.	Hebrew	3	—	—	—	33.3	—	—	33.3	33.3	—	—	—	—	—	—
33.	Classical Studies	90	—	—	—	—	2.2	1.1	1.1	4.4	7.8	6.7	25.6	18.9	26.7	5.6

TABLE 5.26 — LEAVING CERTIFICATE RESULTS 1995
PERCENTAGE BREAKDOWN OF CANDIDATES BY GRADE AWARDED IN EACH SUBJECT
HIGHER LEVEL PAPERS — MALE & FEMALE

Subject	Total Number of Candidates	Grade A1	Grade A2	Grade B1	Grade B2	Grade B3	Grade C1	Grade C2	Grade C3	Grade D1	Grade D2	Grade D3	Grade E	Grade F	No Grade
1. Irish	15,561	1.3	2.9	5.5	9.3	12.3	14.7	16.3	13.7	10.7	7.6	4.2	1.3	—	—
2. English	31,953	2.0	4.0	2.9	5.5	10.4	8.1	12.9	16.6	12.7	10.5	9.9	4.3	0.2	—
3. Latin	192	7.8	5.2	9.9	12.0	15.6	9.9	12.0	9.4	7.3	5.2	4.2	1.6	—	—
4. Greek	6	16.7	33.3	—	33.3	—	—	16.7	—	—	—	—	—	—	—
5. French	17,766	2.3	3.9	5.3	7.4	8.9	10.5	12.5	13.4	11.7	9.9	8.9	5.1	0.2	—
6. German	7,636	2.6	5.0	6.5	8.7	10.4	12.1	12.5	12.2	10.6	8.3	7.1	3.7	0.3	—
7. Italian	84	4.8	11.9	4.8	8.3	8.3	11.9	7.1	14.3	8.3	3.6	8.3	8.3	—	—
8. Spanish	963	9.2	7.1	6.2	9.1	10.5	10.0	11.3	9.6	8.9	6.2	6.9	4.4	0.6	—
9. History	9,838	4.2	5.5	5.6	7.9	10.6	8.5	10.0	12.6	6.3	8.1	10.4	6.8	2.8	0.8
10. Geography	18,372	2.9	3.8	3.6	4.1	10.7	8.1	14.7	15.9	11.0	9.7	9.1	5.4	0.7	0.1
11. Mathematics	10,036	5.3	7.1	10.8	12.9	13.1	12.2	11.2	9.0	6.2	4.9	4.0	2.5	0.4	0.2
12. Applied Mathematics	1,184	15.2	10.2	7.3	9.8	11.0	8.3	6.7	7.6	5.2	5.0	6.5	5.0	1.7	0.5
13. Physics	7,695	3.9	6.2	7.0	9.2	10.3	8.6	9.7	10.2	7.4	8.0	8.4	8.3	2.5	0.3
14. Chemistry	6,738	3.4	6.0	10.1	8.6	9.1	7.5	8.7	9.3	6.5	7.1	12.2	6.8	4.2	0.6
15. Physics & Chemistry	1,011	2.9	5.9	9.9	8.7	9.5	8.6	8.8	10.8	6.6	6.3	7.4	9.5	4.1	1.0
16. Biology	19,249	2.9	4.2	5.0	7.3	9.8	9.1	10.5	12.4	9.1	9.0	9.9	8.6	2.0	0.2
17. Agricultural Science	1,673	0.8	3.2	5.2	9.1	13.6	14.6	15.0	12.6	10.2	7.6	4.9	2.9	0.4	—
18. Agricultural Economics	215	13.5	7.9	6.5	7.9	8.4	11.6	7.4	5.1	5.6	6.0	7.4	9.8	2.8	—
19. Home Economics (S & S)	16,265	1.6	4.1	3.9	7.5	11.3	9.5	12.5	14.4	8.7	8.7	9.2	7.2	1.4	0.1
20. Home Economics (General)	133	4.5	5.3	6.8	3.8	12.0	16.5	10.5	13.5	10.5	6.8	7.5	2.3	—	—
21. Accounting	7,398	2.6	5.4	9.5	9.5	11.5	10.2	9.5	8.8	7.4	6.1	9.3	6.4	3.5	0.5
22. Business Organisation	13,080	1.4	4.4	3.5	7.2	12.3	8.9	12.4	15.6	8.2	9.1	9.9	6.0	1.1	0.1
23. Economics	4,103	1.5	5.2	6.4	8.6	10.6	9.7	9.9	11.7	6.2	8.0	12.5	6.0	3.3	0.4
24. Economic History	561	0.9	1.8	3.6	7.3	7.5	11.6	10.0	12.1	9.1	8.6	11.8	8.2	6.1	1.6
25. Art	6,873	1.7	3.5	3.9	7.0	11.2	11.5	12.6	15.2	12.5	9.4	7.4	3.8	0.2	—
26. Music & Musicianship — A	371	—	1.1	1.1	2.4	7.0	11.1	22.4	18.1	16.2	11.1	8.1	1.6	—	—
27. Music & Musicianship — B	620	2.3	5.6	12.1	14.0	16.5	13.9	16.0	7.4	7.3	3.2	1.1	0.6	—	—
28. Engineering	3,582	1.0	3.5	5.9	8.4	11.6	12.9	14.1	13.5	10.9	7.9	6.8	3.2	0.3	—
29. Technical Drawing	3,567	6.7	5.9	7.7	9.6	9.1	9.6	9.6	8.8	7.6	7.7	7.8	7.7	2.0	0.2
30. Construction Studies	4,983	1.0	4.7	6.9	12.7	16.4	16.8	15.0	11.5	7.5	3.9	2.5	1.0	—	—
31. Hebrew	6	—	—	—	33.3	16.7	—	—	16.7	—	—	16.7	16.7	—	—
32. Classical Studies	821	0.7	2.3	1.7	5.5	7.4	7.9	10.5	13.3	6.9	12.4	12.5	13.3	4.5	1.0

APPENDIX C

SCHEME OF WORK
INCORPORATING TEACHING METHODOLOGIES FROM THE NON - SIGHTED ART CLASS WITHIN THE SIGHTED ART CLASS

COLAISTE NAISIUNTA EALAINE IS DEARTHA - NATIONAL COLLEGE OF ART AND DESIGN - FACULTY OF EDUCATION
LAYOUT FOR SCHEME OF WORK

STUDENT NAME: SANDRA GRANEY

THEME: KNIGHTS IN SHINING ARMOUR

AIM OF SEQUENCE: TO PRODUCE A DECORATIVE PAPIER MÂCHÉ SHIELD

Week & Date	Class Group & Time	Introduction Motivation	Demo./ Visual Aids	Source	Art Element	Task	Skill	Materials	Support Studies	Home/ Activity	Cross - Disp. Connection
	1ST YEARS 9.00 - 10.20 AM	DISCUSS KING ARTHUR ETC. PRETEND THEY'RE KNIGHTS MUST PROTECT THEIR PARENT	SHIELD SHAPES - MEDIEVAL MOTIFS - MY OWN MOTIFS - PATTERNS IN SHIELDS	KNIGHTS & STUDENTS	LINE DRAWING	DRAW STORY (1 OF THINGS YOU SEE - SENSES, DRAW MOTIFS ETC)	DRAW STORIES	PAPER, PENCILS	KNIGHTS IN ARMOUR. HERALDRY SHIELDS	BRING IN OBJECTS ASSOCIATED WITH THEMSELVES	
	"	RECAP. ASK ABOUT OBJECTS BROUGHT IN	OBJECT (PAINT BRUSH), DRAWINGS OF PAINTBRUSHES	BROUGHT-IN OBJECTS	LINE SHAPE	DRAW OBJECT - CONCENTRE SHAPES - SURFACE PATTERN	LINE DRAWING, OBSERVATION TEXTURE	+ OBJECTS	SCENES FROM MIDDLE AGES		
	"	RECAP + BRIEF EVALUATION	DRAWING OF BOTTLE - VIEWFINDER DRAWING OF ENLARGED AREA OF BOTTLE	DRAWING OF OBJECT		+ MAKE ACTUAL MOTIF CHOOSE + ENLARGE	RECITATION, CLOSING ENLARGING THE DRAWING	PAPER, PENCILS, SCISSORS, RULERS, SCRAP PAPER	SCENES OF KNIGHTS		
	"	RECAP + INTRODUCE SHIELD IDEA	DRAWING OF PAINTBRUSH & ENLARGED SECTIONS			COMPLETE ENLARGED DRAWING - MAKE ONE SHIELD DESIGN USING DRAWING AS SOURCE	ENLARGING SELECTING, POSITIONING DRAWING	PAPER PENCILS RULERS	PATTERNS FROM MIDDLE AGES - SHIELDS		
	"	DISCUSS LAST WEEKS DESIGNS				COMPLETE SHIELD DESIGNS - CHOOSE ONE TO ENLARGE			PATTERN IN TRIBAL SOCIETY		

Week & Date	Class Group & Time	Introduction Motivation	Demo./ Visual Aids	Source	Art Element	Task	Skill	Materials	Support Studies	Home/ Activity	Cross - Disp. Connection
	"	DISCUSS CHOSEN DESIGNS	CARDBOARD SHIELD WITH PAPIER MACHE RELIEF	CHOSEN ENLARGED DRAWING		DRAW DESIGN ONTO CARD - CUT OUT	TRACING, CUTTING	+ CARD SCISSORS	CARNIVAL COSTUMES	BRING IN STUFF FOR DECORATING SHIELD	
x4	"	HOW TO DECORATE SHIELD	+ HOW TO CREATE 3-D & RELIEF SHAPE IN CARD		LINE SHAPE TEXTURE	USING PAPIER MACHE + CARD DECORATE SHIELD	SELECTIVITY, MANIPULATION CONSTRUCTIONS	NEWSPAPER, BASINS, PASTE			
x 2	"	DISCUSS DECORATION	SAMPLES OF PATTERNS & TEXTURES CREATED WITH TISSUE + DRAWINGS	IMAGINATION + SUPPORT STUDIES +	+ COLOUR PATTERN	EXPLORE MATERIALS (STARTING WITH TISSUE)	SELECTION MANIPULATION CONSTRUCTION	TISSUE PVA GLUE (STRING, RICE PASTA + OTHER OBJECTS)	TEXTURES FOUND IN NATURE		
		EFFECTS OF COLOUR ON MOOD ETC	COLOUR CHARTS	SHIELD DESIGNS	LINE SHAPE PATTERN, COLOUR	TRY OUT A FEW OF DIFFERENT COLOUR WAYS FOR SHIELD DESIGN	LINE DRAWING COLOUR SELECTION,	PAPER, PENCILS, DRY COLOUR MEDIUM	ANDY WARHOLS SCREEN PRINT SELF PORTRAITS		
x 2/3 WEEKS		BRIEF EVALUATION OF TEXTURE SAMPLE SHEET + COLOUR WAYS	EXAMPLE OF FINISHED SHIELD	SAMPLES + COLOUR WAYS		APPLY IDEAS FROM MATERIALS SAMPLES + COLOUR WAYS TO DECORATE SHIELD	SELECTION MANIPULATION COLOUR CONSTRUCTION	TISSUE + MIXED MEDIA GLUE ETC			

POTENTIAL LESSON DEVELOPMENT:

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