

T 22 98

M0054018NC

NC 0016607 3



COLAISTE NAISUNTA EALAINÉ IS DEARTHÁ  
NATIONAL COLLEGE OF ART AND DESIGN

LATERAL THINKING - THE POSSIBILITIES WITHIN THE CURRENT  
JUNIOR CERT PROGRAMME.

A DISSERTATION SUBMITTED TO THE FACULTY OF EDUCATION

IN

CANDIDACY FOR THE

**DIPLOMA FOR ART AND DESIGN TEACHERS**

BY

MICHELLE SMYTH

JUNE 1999

# **Lateral Thinking and its possibilities within the current Junior Cert programme.**

**Michelle Smyth**

## **Abstract**

In my dissertation I discuss Lateral Thinking, The theories behind it, Its pros and cons with my focus on its role in education.

I also look at the Irish education system with emphasis on the Junior Cert programme. I have analysed the Junior Cert in theory and in practice, focusing on the question: "Are the aims and objectives of the Junior Cert programme being achieved in the class room?" I discuss my belief that an ability to think laterally can help to achieve these aims and objectives.

I undertook a 3D scheme of work for a Junior Cert class. We used found objects and packaging supplied by the "Travellers resource centre". I observed the pupils and their ability to think creatively and individually as they studied an object relating to their theme, We then proceeded to design a container based on this object model. The nature of the scheme demanded that the pupils think laterally in order to meet the brief. They had an inherent ability to think laterally when encouraged. Some pupils managed more successfully to think laterally than others in their choice of design and materials. the pupils did gain motivation and confidence in themselves when they expressed their previously considered "mad ideas" to the class without repercussions.

However the ability to think laterally came in spurts throughout the project as the pressure and workload of the Junior Cert programme was inhibiting the pupils to believe in their own opinion. Therefore if the Dept of Education does want the aims and objectives of this programme to be fulfilled in the classroom they will have to review the current programme completely including teacher in service training.

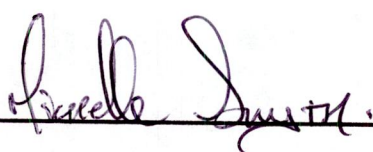
Michelle Smyth

## Abstract

In my dissertation I discuss Lateral Thinking. The theories behind it, its pros and cons with my focus on its role in education. I also look at the Irish education system with emphasis on the Junior Cert programme. I have analysed the Junior Cert in theory and in practice focusing on the question "what are the aims and objectives of the Junior Cert programme being achieved in the class room?" I discuss my belief that the ability to think laterally can help to achieve these aims and objectives. I discuss a scheme of work for a Junior Cert class. We used four objects and packaging supplied by the "Travelers resource centre". I observed the pupils and their ability to work creatively and individually as they studied an object relating to their theme. I then proceeded to design a container based on this object model. The nature of the scheme demanded that the pupils think laterally in order to meet the brief. They had an inherent ability to think laterally when encouraged. Some pupils managed more successfully to think laterally than others. In their work of design and materials the pupils did gain motivation and confidence in themselves when they expressed their previously considered "mad ideas" to the class. We did report outcomes. However, the ability to think laterally came in spurts throughout the project. As the pressure and workload of the Junior Cert programme was inhibiting the pupils to believe in their own opinion. Therefore the Dept. of Education does want the aims and objectives of this programme to be fulfilled in the classroom they will have to review the current programme completely including teacher in service training.



I hereby declare that this dissertation is entirely  
my own work and that it has not been submitted as  
an exercise for a diploma or degree in any other  
college or university.

Signed 

I hereby declare that this dissertation is entirely  
my own work and that it has not been submitted as  
an exercise for a diploma or degree in any other  
college or university.

Signed \_\_\_\_\_

## TABLE OF CONTENTS

LIST OF ILLUSTRATIONS .....	<i>ii</i>
ACKNOWLEDGEMENTS .....	<i>iii</i>
INTRODUCTION .....	1
CONCLUSION .....	32
Chapter	
<i>i.</i> LATERAL THINKING .....	3
The creative process.	
What is Lateral Thinking?	
Lateral v Vertical thinking.	
<i>ii.</i> THE IRISH EDUCATION SYSTEM AND THE JUNIOR CERT .....	11
Aspects of curriculum development.	
The design process in education.	
Outlining elements of the Junior Cert programme.	
<i>iii.</i> THE MODULE .....	18
Introduction to the module.	
The process of the module.	
SELECTED BIBLIOGRAPHY .....	35

# TABLE OF CONTENTS

LIST OF ILLUSTRATIONS	11
ACKNOWLEDGEMENTS	11
INTRODUCTION	1
CONCLUSION	32
Chapter	
I. LATERAL THINKING	3
The creative process	
What is lateral thinking?	
Lateral v. Vertical thinking	
II. THE IRISH EDUCATION SYSTEM AND THE JUNIOR CERT	11
Aspects of curriculum development	
The design process in education	
Outlining elements of the Junior Cert programme	
III. THE MODULE	18
Introduction to the module	
The process of the module	
SELECTED BIBLIOGRAPHY	35

## LIST OF ILLUSTRATIONS

1. Selection of artist work using recycled materials.....	24
2. Calder,Alexander - studies and models for "Le Cirque" .....	25
3. Selection of containers designed from models of objects.....	26
4. Pupils work from lesson 1 - line and shape study of chosen object .....	27
5. Pupils work from lesson 2 - form with colour study of chosen object .....	28
6. Pupils work from lesson 3 - Plan drawings of container using chosen object .....	30



## LIST OF ILLUSTRATIONS

1. Selection of artist work using recycled materials.....	24
2. Calder, Alexander - studies and models for "Le Cirque".....	25
3. Selection of containers designed from models of objects.....	26
4. Pupils work from lesson 1 - form and shade study of chosen object.....	27
5. Pupils work from lesson 2 - form with colour study of chosen object.....	28
6. Pupils work from lesson 3 - form drawings of containers using chosen object.....	30

## **ACKNOWLEDGEMENTS**

TO MY TUTOR PROFESSOR GARY GRANVILLE FOR ALL HIS HELP AND  
ENCOURAGEMENT

TO GARRETT FOR HIS LOVE , SUPPORT AND PATIENCE

TO MY FAMILY FOR THEIR LOVE AND SUPPORT ESPECIALLY MY MOTHER .

ACKNOWLEDGEMENTS

TO MY TUTOR PROFESSOR GARY GRANVILLE FOR ALL HIS HELP AND  
ENCOURAGEMENT

TO GARRETT FOR HIS LOVE, SUPPORT AND PATIENCE

TO MY FAMILY FOR THEIR LOVE AND SUPPORT ESPECIALLY MY MOTHER

## INTRODUCTION

I first heard the term lateral thinking from my first year tutor at the Limerick school of art and design. In the process of a project Ursula Brick told me that I had an innate ability to think laterally in my approach to the project. I asked her what she meant and she described my approach to the design process of the project we were pursuing, how I could see the use and choice of materials did not have to be as they were first dictated to us. Also my ability to see the subject of the project in many different ways. That I could look and question my subject and represent it in another form bringing new light to the subject.

I thought there was nothing special in my approach to the project and it wasn't until I went into a work environment three years later that I really understood what she meant. I left college in 1993 and took up a position in the buying office of a fashion retail chain. It was here that I realised that not everyone had the ability to look and question situations and things and find an approach that would be more successful.

A lot of our work in a buying office is taking existing products and redeveloping them to suit our market. I was amazed at how narrow the thinking was among my colleagues. I don't mean this in a negative way or to cast any light on other people it's just that I thought everyone thought the way I did. I thought that every one could look at a bag used for one function today, see the our market demanded elements of the bag's design but the appearance of another bag, usually for the sake of fashion and see how the two demands could be merged into a new design. I found that the people from the creative backgrounds could also see that looking at something from a different perspective often gave better results.

We would hold range meetings where the members of each department would come together with the coming seasons fashion colour and trend predictions, the best selling items from the previous season and some samples purchased with intent of inclusion in the coming season. The combination of peoples backgrounds in these meetings was diverse and this is where I learned that some people did approach a problem vertically even though the aim was to be creative.

## INTRODUCTION

I first heard the term lateral thinking from my first year tutor at the Linnean school of art and design in the process of a project Ursula Black told me that I had an innate ability to think laterally in my approach to the project. She asked her what she meant and she described my approach to the design process of the project we were pursuing. Now I could see the use and choice of materials did not have to be as they were first dictated to us. Also my ability to see the subject of the project in many different ways that I could look and question my subject and represent it in another form bringing new light to the subject.

I thought there was nothing special in my approach to the project and it wasn't until I went into a work environment three years later that I really understood what she meant. I left college in 1969 and took up a position in the buying office of a fashion retail chain. It was here that I realised that not everyone had the ability to look and question situations and things and find an approach that would be more successful.

A lot of our work in a buying office is taking existing products and redeveloping them to suit our market. I was amazed at how narrow the thinking was among my colleagues. I don't mean this in a negative way or to cast any light on other people. The fact that I thought everyone thought the way I did I thought that every one could look at a bag used for one function today see the our market demanded elements of the bag's design but the appearance of another bag, usually for the sake of fashion and see how the two demands could be merged into a new design. I found that the people from the creative backgrounds could also see that looking at something from a different perspective often gave better results.

We would hold range meetings where the members of each department would come together with the coming seasons fashion colour and trend predictions. I first set up items from the previous season and some samples purchased with intent of inclusion in the coming season. The combination of people's backgrounds in those meetings was diverse and this is where I learned that some people did approach a problem vertically even though the aim was to be creative.



I realised that the bulk of my colleagues did not come from a creative background, many came from long years in the retail business, some came directly from school and there were some commerce graduates also. The aim of these meetings was to assess the trends of the coming season, the successful products of the past and work out how to combine both to create a commercial range that would be fashionable and trendy within our budget to sell next season. We would have to design some products from scratch and redevelop other products to suit customer demands in order to have a profitable season in the fashion industry.

Solving production and distribution problems also required an ability to think laterally. As the production took place thousands of miles away we could not monitor it closely and the product once complete had to travel many miles to reach our stores. This posed problems when the production lines didn't operate correctly and we had to solve problems over the telephone and fax communicating with people of basic English. We had to stretch the number of possible solutions as far as possible at times to come up with an answer that suited all persons involved. The ability to think laterally served me well in the creative yet commercial industry.

It is for this reason that I think that promotion and encouragement to think laterally is a vital tool to give to young students not just for use in their art work but as a valuable means of solving problems in all areas of their lives.

**In chapter 1** of this dissertation - I will look a little closer at the creative process and lateral thinking and hope it will give you an understanding of what lateral thinking is.

**In chapter 2** - I will look at education in Ireland and more specifically at the current Junior Cert syllabus.

**In chapter 3** - I will outline the scheme of work that I have devised for a small Junior Cert class that I am currently teaching and evaluate how this class approached a 3D project in which they had to take a given object and rework this object into another object with a new function related to their Junior Cert theme.

I realised that the bulk of my colleagues did not come from a creative background, many came from long years in the retail business, some came directly from school and there were some commerce graduates also. The aim of these meetings was to assess the needs of the coming season, the successful products of the past and work out how to combine both to create a commercial range that would be fashionable and ready within our budget to sell next season. We would have to design some products from scratch and redevelop other products to suit customer demands in order to have a profitable season in the fashion industry.

Being producer and distribution problems also required an ability to think laterally. As the production took place thousands of miles away we could not monitor it closely and the product once complete had to travel many miles to reach our stores. This posed problems when the production lines didn't operate correctly and we had to solve problems over the telephone and fax communicating with people of basic English. We had to stretch the number of possible solutions as far as possible at times to come up with an answer that suited all persons involved. The ability to think laterally served me well in the creative yet commercial industry.

It is for this reason that I think that promotion and encouragement to think laterally is a vital tool to give to young students not just for use in their art work but as a valuable means of solving problems in all areas of their lives.

In chapter 1 of this dissertation - I will look a little closer at the creative process and lateral thinking and how it will give you an understanding of what lateral thinking is.

In chapter 2 - I will look at education in Ireland and more specifically at the current Junior Cert syllabus.

In chapter 3 - I will outline the scheme of work that I have devised for a small Junior Cert class that I am currently teaching and evaluate how this class approached a 3D project in which they had to take a given object and rework the object into another object with a new function related to their Junior Cert theme.

## CHAPTER 1

### LATERAL THINKING

#### *The Creative Process*

The general aim of education as pointed out in the Junior Cert syllabus is to contribute towards the development of all aspects of the individual including:

Aesthetic, creative, critical, cultural, emotional, intellectual, moral, physical, political, social and spiritual development for personal and family life, for working life, for living in the community and for leisure.(1)

One understands this to mean giving pupils a strong sense of themselves in order for them to actively take part and direct their own lives. One sees the most valuable tool one was given to establish oneself and one's identity is the ability to question one's self and surroundings, thus forming one's own opinions and convictions.

Lateral thinking has its very foundations in questioning - looking at how something or situation is perceived, how we are conditioned to perceive it and then to question it and learn how to look at something or situation from a new perspective - a perception of our own. This is not only a valuable tool in establishing one's identity but also a valuable asset to problem solving, a skill that everyone needs in all areas of our lives.

The creative process has been debated and discussed for centuries and there are many different perspectives on this issue. Graham Wallas wrote in the 1920's "that creativity is a thinking process with definable stages:

Preparation - problem is investigated in all directions.

Incubation - referred to as the dreaming state. Where the ideas are internalised and worked through in the artist's head whilst walking in the park or just dreaming.

Illumination - the happy idea as the title suggests the artist sees the light to completing the project.

Verification - when the idea is tested and reduced to an exact form."(2)



## CHAPTER 1 LATERAL THINKING

### The Creative Process

The general aim of education as pointed out in the Junior Cert syllabus is to contribute towards the development of all aspects of the individual including:

Aesthetic, creative, physical, cultural, emotional, intellectual, moral, physical, political, social and spiritual development for personal and family life and working life for living in the community and for leisure. (1)

One understands this to mean giving pupils a strong sense of themselves in order for them to actively take part and direct their own lives. One sees the most valuable tool one was given to establish oneself and one's identity is the ability to question ones self and surroundings thus forming ones own opinions and convictions.

Lateral thinking has its very foundations in questioning - looking at how something or situation is perceived, how we are conditioned to perceive it and then to question it and learn how to look at something or situation from a new perspective - a perception of our own. This is not only a valuable tool in establishing ones identity but also a valuable asset to problem solving a skill that everyone needs in all areas of our lives.

The creative process has been debated and discussed for centuries and there are many different perceptions on this issue. Graham Wallas wrote in the 1920's that

creativity is a thinking process with definite stages.

Preparation - problem is investigated in all directions.

Incubation - related to the clearing stage. Where the ideas are internalised and worked through in the mind whilst walking in the park or just dreaming.

Illumination - the happy idea as the wife suggests the artist sees the light to completing the project.

Verification - when the idea is tested and reduced to an exact form. (2)

Another way of looking at the process comes from Joan Michaels Pague (3). Pague believes that improvisation plays a vital role in the imagination and is a catalyst for creativity. Pague sees the process as a fusion of:

Memory - (past)

Intuition - (present)

Intention - (future)

This process is based on our ability to flow with time, develop a playful attitude, improve our technical skills and overcome societal and internal obstacles. Pague's ideas in this process have links to lateral thinking as the lateral thinking theories are also concerned with overcoming societal and internal obstacles.

In the book "Ways of Seeing" (4). John Berger states "The way we see things is affected by what we know and what we believe " - what we have been conditioned to know and believe. Society and our surroundings influence us as we are growing up, conditioning us to hold certain beliefs we internalise these beliefs and can later in some cases become internal obstacles.

Lateral thinking and the Pague's theory make us question this conditioning and thus overcoming societal and internal obstacles giving freedom to our own expression and creativity. As John Gant (5) states in an interview about nurturing creativity in architectural education "Creativity is born from the ability to question" Gant also makes an interesting comment on the role of education in creativity - (6)

Education when it is confrontational simply stifles creativity, if education is questioning and sharing it nurtures creativity.

It seems looking at the above mentioned theories on the creative process, that an ability to think laterally is necessary in all creative processes, not only that but one can learn the skills of lateral thinking within the creative process.

Although each of the above artists have described the creative process with different terminology they all seem to go through similar steps:



Another way of looking at the process comes from Joan Mitchell's Figure 13. Pagan believes that improvisation plays a vital role in the imagination and is a catalyst for creativity. Pagan sees the process as a fusion of:

Memory - (past)

Intuition - (present)

Intention - (future)

This process is based on our ability to flow with time, develop a playful attitude, improve our technical skills and overcome societal and internal obstacles. Pagan's ideas in this process have links to lateral thinking as the lateral thinking process is also concerned with overcoming societal and internal obstacles.

In the book "Ways of Seeing" (4), John Berger states "The way we see things is affected by what we know and what we believe" - what we have been conditioned to know and believe. Society and our surroundings influence us as we are growing up conditioning us to hold certain beliefs we internalise these beliefs and can later in life become internal obstacles.

Lateral thinking and the Pagan theory make us question this conditioning and thus overcoming societal and internal obstacles giving freedom to our own expression and creativity. As John Galt (5) states in an interview about nurturing creativity in educational education "Creativity is born from the ability to question". Galt also makes an interesting comment on the role of education in creativity - (6)

Education when it is conventional simply stifles creativity. Education is questioning and sharing it nurtures creativity.

It seems looking at the above mentioned theories on the creative process, that an ability to think laterally is necessary in all creative processes, not only that but one can learn the skills of lateral thinking within the creative process.

Although each of the above artists have described the creative process with different terminology they all seem to go through similar steps.

# **Lateral Thinking and its possibilities within the current Junior Cert programme.**

**Michelle Smyth**

## **Abstract**

In my dissertation I discuss Lateral Thinking, The theories behind it, Its pros and cons with my focus on its role in education.

I also look at the Irish education system with emphasis on the Junior Cert programme. I have analysed the Junior Cert in theory and in practice, focusing on the question: "Are the aims and objectives of the Junior Cert programme being achieved in the class room?" I discuss my belief that an ability to think laterally can help to achieve these aims and objectives.

I undertook a 3D scheme of work for a Junior Cert class. We used found objects and packaging supplied by the "Travellers resource centre". I observed the pupils and their ability to think creatively and individually as they studied an object relating to their theme. We then proceeded to design a container based on this object model. The nature of the scheme demanded that the pupils think laterally in order to meet the brief. They had an inherent ability to think laterally when encouraged. Some pupils managed more successfully to think laterally than others in their choice of design and materials. The pupils did gain motivation and confidence in themselves when they expressed their previously considered "mad ideas" to the class without repercussions.

However the ability to think laterally came in spurts throughout the project as the pressure and workload of the Junior Cert programme was inhibiting the pupils to believe in their own opinion. Therefore if the Dept of Education does want the aims and objectives of this programme to be fulfilled in the classroom they will have to review the current programme completely including teacher in service training.

**Name: Michelle Smyth**

**Class: Dip. ADT**

**Date: 23/4/99**

Looking /seeing - exploring all areas of the subject.

Thinking/questioning - exploring all the possibilities within the subject.

Techniques - exploring and learning the skills required to express the idea.

Execution - of final piece of work.

Evaluation - of the complete work in its context.



### *What is Lateral Thinking?*


Vertical thinkers take the most reasonable view of a situation and then proceed logically and carefully to work it out much as a computer does. Lateral thinkers tend to explore all the different ways of looking at something considering their preconditioned concepts and memory and often overriding them to come to a new idea or solution, rather than accepting the most promising and proceeding from that. Lateral thinking in the creative process is the ability to observe and question. As De Bono puts it in a profile article (7). "To cut across established patterns to find better ones - creating a provocation". De Bonos process theory is as follows:

He sees the situation/problem to be solved, he then provokes the problem with questions, questioning on a spiritual level, questioning the established thinking around the problem - creating a provocation. From here we can create movement by experimenting with ways of solving the problem, explore the techniques/skills required to produce the solution and finally work up the solution.

Vertical thinking in the creative process is to approach an idea with all of one's preconditioned knowledge and beliefs therefore not giving at all of oneself to the idea or indeed learning anything about oneself, just tunnel vision.

New ideas depend on ones ability to look at a situation and add to it a part of one self whether that be new beliefs and knowledge or ones old conditioned beliefs and sights reworked after questioning oneself. As De Bono (8). states in his book "The use of Lateral Thinking"

New ideas depend on lateral thinking for vertical thinking has in built limitations which make it much less effective for this purpose.





Looking seeing - exploring all areas of the subject.  
 Think questioning - exploring all the possibilities within the subject.  
 Techniques - exploring and learning the skills required to express the idea.  
 Execution - of final piece of work.  
 Evaluation - of a complete work in its context.

## What is Lateral Thinking?

Vertical thinkers take the most reasonable view of a situation and then proceed logically and carefully to work it out much as a computer does. Lateral thinkers tend to explore all the different ways of looking at something considering their preconceived concepts and memory and often overruling them to come to a new idea or solution rather than accepting the most promising and proceeding from that. Lateral thinking in the creative process is the ability to observe and question. As De Bono puts it in a profile article (7) "To cut across established patterns to find better ways - creating a provocation." De Bono's process theory is as follows:

He sees the situation/problem to be solved, he then provokes the problem with questions/questioning on a spiritual level/questioning the established thinking around the problem - creating a provocation. From here we can create movement by experimenting with ways of solving the problem, explore the techniques required to produce the solution and finally work up the solution.

Vertical thinking in the creative process is to approach an idea with all of one's preconceived knowledge and beliefs therefore not giving at all of oneself to the idea or indeed testing anything about oneself, just tunnel vision.

New ideas depend on one's ability to look at a situation and add to it a part of one self whether that be new beliefs and knowledge or ones old conditioned beliefs and sights reworked after questioning oneself. As De Bono (8) states in his book

## The use of Lateral Thinking

New ideas depend on lateral thinking for vertical thinking has in built limitations which make it much less effective for this purpose.

Lateral thinking applies to the first stage of one's process in how one looks at the subject. Take an object for example - if one observed the object from a vertical point of view one would firstly look at the object for what it is, record what it is and make drawings that look like the object and that would complete one's observation. Approaching the object laterally one would look at the object from all angles - worm's eye view, bird's eye view, look inside it, under it, focus on detail, turn it upside down, sideways then one would look at the properties of the object - What is its function? Focus on the areas most significant to its function, What can one record about the object's materials, colour - all aspects and properties of the object.

In the thinking process lateral thinking plays a major role in the questioning - First considering the criteria of the brief and how these criteria could be achieved. Consider the object and the criteria laterally - What is the object's current function? How could the criteria fit with this, Then through rough sketch put down each and every proceeding idea for a new function for the object and how the criteria fits with this. Design relies on laying out of all possibilities it therefore relies on lateral thinking. It is only when one has exhausted all possibilities that one can find the best solution. It is a fundamental part of lateral thinking - not to be afraid but also a lesson to be learnt in lateral thinking as you are given space not to be afraid to make mistakes. "Necessity is the mother of invention" This phrase may be an old saying but one does think it is relevant today. One can think laterally when under pressure to create something out of necessity perhaps because one's fears are so focused on the urgency of the need and therefore there is no time for fear around how to create it.

### *Lateral v Vertical thinking*

One does believe that Vertical Thinking has its place:

- Vertical thinking allows for a logical view of something:
- Is applicable in computer programming when logical sequence is required.
- Is applicable for rote learning.
- Is applicable when a rational approach is required.
- Is applicable when the end product is paramount above the process.



...later, thinking applies to the first stage of ones process in how one looks at the object. Take an object for example - if one observed the object from a vertical point of view one would firstly look at the object for what it is, record what it is and make drawings that look like the object and that would complete one's observation. Approaching the object later, one would look at the object from all angles - from a eye view, look inside it, under it, focus on detail, but it inside down, sideways, then one would look at the properties of the object - What is its function? Focus on the areas most significant to its function. What can one record about the object materials, colour - all aspects and properties of the object.

In the thinking process lateral thinking plays a major role in the questioning - First considering the criteria of the brief and how these criteria - could be achieved. Consider the object and the criteria laterally - What is the objects current function? How could the criteria fit with this. Then through rough sketch put down each and every proceeding idea for a new function for the object and how the criteria fits with this. Design relies on trying out all possibilities it therefore relies on lateral thinking it is only when one has exhausted all possibilities that one can find the best solution. It is a fundamental part of lateral thinking - not to be afraid but also a lesson to be learnt in lateral thinking as you are given space not to be afraid to make mistakes. "Necessity is the mother of invention" This phrase may be an old saying but one does think it is relevant today. One can think laterally when under pressure to create something out of necessity perhaps because ones fears are so focused on the urgency of the need and therefore there is no time for fear around how to create it.

## Lateral v Vertical thinking

- One does believe that Vertical Thinking has its place:
- Vertical thinking allows for a logical view of something;
  - Is applicable in computer programming when logical sequence is required.
  - Is applicable for rote learning
  - Is applicable when a rational approach is required.
  - Is applicable when the end product is paramount above the process

- Vertical thinking does not allow for individuality:
- Does not allow for questioning in any great depth.
- Does not allow for the needs of others or other situations around the problem.
- Does not allow for creativity and some would say for any real learning either, ie Guildford and De Bono.

- Lateral thinking is applicable for creative expression: As John Gant has said "Creativity is born from the ability to question" (9)
- For learning in depth particularly for learning about oneself. As one has discovered from taking a lateral approach to life, questioning oneself, environment and situations has given one the tools establish one's identity.
- Applicable when the process is paramount to the finished product. As stated in the White Paper of 1995 "Imaginative failure can be more educationally worthwhile than a correct but poorly understood response" (10)
- For problem solving especially when it seems that there is no solution. As Edward DeBono has proven through his studies.
- When dealing with difficult people especially in groups. As one has observed from working with various groups in the creative commercial world of the retail trade.

- Lateral thinking is not applicable when a rational view is required.
- Not applicable when questioning is not required.
- Not required when one wants a solution without individuality.
- Not applicable when creativity is not required.
- Not applicable when real learning is not required. ie rote learning.

The political situations in the north have been described as a vertical situation and that the people involved in the peace process are using laterally thinking in an attempt to break a deadlock that seems indestructible.

- Vertical thinking does not allow for individuality.
  - Does not allow for questioning in any great depth.
  - Does not allow for the needs of others or other situations around the problem.
  - Does not allow for creativity and some would say for any real learning either.
- Guildford and De Bono

- Lateral thinking is applicable for creative expression. As John Galt has said "Creativity is born from the ability to question" (9).
- For learning in depth particularly for learning about oneself. As one has discovered from taking a lateral approach to the questioning oneself, environment and situations has given one the tools establish one's identity.
- Applicable when the process is paramount to the finished product. As stated in the White Paper of 1995 "imaginative failure can be more educationally worthwhile than a correct but poorly understood response" (10).
- For problem solving especially when it seems that there is no solution. As Edward DeBono has proven through his studies.
- When dealing with difficult people especially in groups. As one has observed from working with various groups in the creative commercial world of the retail trade.

- Lateral thinking is not applicable when a rational view is required.
- Not applicable when questioning is not required.
- Not required when one wants a solution without individuality.
- Not applicable when creativity is not required.
- Not applicable when real learning is not required. ie rote learning.

The political situation in the north have been described as a vicious situation and that the people involved in the peace process are using laterally thinking in an attempt to break a deadlock that seems insurmountable.



The universal problem of traffic congestion could be seen as a vertical situation. A situation without a solution as the no of cars keeps growing and the amount of space decreases, Yet Amsterdam seem to have found a solution through lateral thinking in looking at all forms of transport to come up with a solution that does work.

It is more difficult to think laterally in the class environment as DeBono says (11).

Orthodox education usually does nothing to encourage lateral thinking habits and positively inhibits them with the need to conform ones way through the examination hoops.

One believes the Junior Cert art syllabus has come along way in addressing these problems in orthodox education by creating a project based self directing syllabus. However there is still work to be done to get this new unorthodox method into wider practice not just in theory.

A lot of the other Junior Cert subjects are still in the old orthodox methods with continued emphasis on a terminal exam. The English course has been promised a reduction of the terminal exam and an introduction to oral and aural assessment into the exam an area the Junior Cycle English project found successful. The introduction of a portfolio assessment of work without any terminal exam in the same Junior Cycle project was also proven to be very effective in creating a creative atmosphere in the classroom (one that is nonexistent in the exam hall) and yet was never introduced for the Junior Cert?

It is widely accepted that questioning individuality and creativity are essential to learning, essential to the aims of education as laid out in the White Paper (1995) and based on what one understands from above one can clearly see that lateral thinking needs to take precedence over vertical thinking in schools to achieve this learning.

Lateral thinking itself is however still difficult in the class room situation as pupils are influenced by their conditioning and also by their peers. Pupils can be jeered at by their peers when they express their ideas. It is important for the educator to see the difficulties of lateral thinking habits in the classroom as the very basis of why they

The universal problem of traffic congestion could be seen as a vertical situation. A solution without a solution as the no of cars keeps growing and the amount of space decreases. Yet Amsterdam seem to have found a solution through lateral thinking - looking at all forms of transport to come up with a solution that does work.

It is more difficult to think laterally in the class environment as LeBono says (1995).

Classical education usually does nothing to encourage lateral thinking and positively inhibits them with the need to conform one way through the examination hoops.

One believes the Junior Cycle art syllabus has come along way in addressing these problems. An orthodox education by creating a project based self directing syllabus. However there is still work to be done to get this new non orthodox method into wider practice not just in theory.

A lot of the other Junior Cycle subjects are still in the old orthodox methods with content emphasis on a terminal exam. The English course has been divided into sections of the terminal exam and an introduction to oral and aural assessment. The exam in area the Junior Cycle English project found successful. The introduction of a portfolio assessment of work without any terminal exam in the same Junior Cycle project was also proven to be very effective in creating a positive atmosphere in the classroom (one that is nonexistent in the exam hall) and yet was never introduced for the Junior Cycle?

It is widely accepted that questioning individually and creatively are essential to learning essential to the aims of education as laid out in the White Paper (1995) and based on what one understands from above one can clearly see that lateral thinking needs to take precedence over vertical thinking in schools to achieve this learning.

Lateral thinking itself is however still difficult in the class room situation as pupils are influenced by their conditioning and also by their peers. Pupils can be jeered at by their peers when they express their ideas. It is important for the educator to see the difficulties of lateral thinking habits in the classroom as the very basis of why they

should be encouraged there. It is the educators role to instil an atmosphere of mutual respect that will allow freedom to create in the classroom - helping to eliminate some of the pupils fears through encouraging them and validating their ideas.



should be encouraged there. It is the educator's role to instill an atmosphere of mutual respect that will allow freedom to create in the classroom - helping to eliminate some of the pupils' fears through encouraging them and validating their ideas.



## Footnotes chapter 1

1. *"Junior Cert syllabus for art craft and design"*. (Dublin 1989 An Roinn Oideachais)
2. Graham Wallas *"Theories on creative process"* by Elly Danica in "Ceramic Review" June, July and August 1986 pg 25.
3. Joan Micheals -Pague *"Improvisation and the creative process"* in "Fibre Arts" Vol 21 September 1994 pg 18.
4. John Berger *"Ways of seeing"* (London B.B.C and Penguin 1972) pg 8  
701.8/ber
5. John Gant *"Nurturing creativity in architectural education and practice"*. "The Structurist" no 33/34 1993/1994 pg 22 .
6. ibid pg 23
7. Edward De Bono *"A profile article on Edward De Bono"* by Chee Pearlman in "Industrial Design" vol 33. Mar/Apr 1986 pg 33.
8. Edward De Bono *"The use of Lateral Thinking"* (London Pelican 1971 ) pg 13  
153.42/deb
9. John Gant *"Nurturing creativity in architectural education and practice"*. "The Structurist " no 33/34 1993/1994 pg 22.
10. *"White Paper on education"* (Dublin An Roinn Oideacheas 1995 ) chapter 2  
page 2
12. De Bono *"The use of Lateral Thinking"* London, Pelican 1971 pg 15

# Footnotes chapter 1

1. Junior Cat syllabus for art craft and design (Dublin 1989 An Roinn Oideachais)
2. Graham Wallis "Theories on creative process" by Eily Dancer in "Creative Review" June/July and August 1986 pg 22.
3. John Mitchell "Fugue: improvisation and the creative process" in "Photo Arts" Vol 21 September 1994 pg 18.
4. John Berger "Ways of seeing" (London B.B.C and Penguin 1972) pg 8.
5. John Gant "Nurturing creativity in architectural education and practice" "The Structuralist" no 33 34 1993/1994 pg 22.
6. Ibid pg 23.
7. Edward De Bono "A profile article on Edward De Bono by Gene Pashman in "Industrial Design" vol 33, March/Apr 1986 pg 33.
8. Edward De Bono "The use of Lateral Thinking" (London Pelican 1971) pg 13.
9. John Gant "Nurturing creativity in architectural education and practice" "The Structuralist" no 33 34 1993/1994 pg 22.
10. "White Paper on education" (Dublin An Roinn Oideachais 1995) chapter 2 page 2.
11. De Bono "The use of Lateral Thinking" (London Pelican 1971) pg 15.

## CHAPTER 2

### THE IRISH EDUCATION SYSTEM AND THE JUNIOR CERT

#### *Aspects of curriculum development*

Since the early 1970's primary school education has been a child centred holistic approach to education. However the pupils went from this child centred education into a secondary school system which had a more traditional didactic methods of teaching. Both bodies of education worked completely separate from each other.

This closeted approach to the whole education system was also evident in the way the curriculum was assessed and redesigned. The old curriculum was designed behind closed doors with no consultation with the people at the centre of education in this country - the pupils, teachers and parents.

One of the major issues that highlighted the need for communication between both bodies was the realisation that there were problems with the numeracy and literacy skills of some pupils coming from primary school into secondary school and these problems took time to be spotted by the secondary schools.

This approach has been changed in the past 15 years when the National Council for Curriculum Assessment first began to come out and discuss issues with relevant bodies and in recent years encourage more communication between primary and secondary schools. This new communication has led to a revision of all curriculum. One can see how the barriers have been broken down when you see firstly that now curriculum design is open to consultation openly from all bodies involved in education including teachers associations and unions. The views brought forward from the consultations are heard by the design committees, discussed and acted on where the committee deems applicable.

This more open policy has also led to better communication between primary and secondary schools. This is evident when looks at the work of the new position

## CHAPTER 2 THE IRISH EDUCATION SYSTEM AND THE JUNIOR CURRICULUM

### Aspects of curriculum development

Since the early 1970's primary school education has been a child-centred holistic approach to education. However, the pupils went from this child-centred education into a secondary school system which had a more traditional didactic method of teaching. Both aspects of education worked completely separately from each other.

This closed approach to the whole education system was also evident in the way the curriculum was assessed and redesigned. The old curriculum was designed behind closed doors with no consultation with the people at the centre of education in this country - the pupils, teachers and parents.

One of the major issues that highlighted the need for communication between both bodies was the realisation that there were problems with the nursery and primary skills of some pupils coming from primary school into secondary school and these problems took time to be spotted by the secondary schools.

This approach has been changed in the past 15 years when the National Council for Curriculum Assessment first began to come out and discuss issues with relevant bodies and in recent years encourage more communication between primary and secondary schools. This new communication has led to a revision of all curriculum. One can see how the barriers have been broken down when you see firstly that now curriculum design is open to consultation openly from all bodies involved in education including teachers' associations and unions. The views brought forward from the consultations are heard by the design committees discussed and acted on where the committee deems applicable.

The more open policy has also led to better communication between primary and secondary schools. This is evident when looking at the work of the new position



created in schools - the Home School Liaison officer. The Home School Liaison officer not only works to improve communication between home and school but also between primary and secondary schools in their locality. One of the many problems this helps to solve is to provide the secondary schools with the relevant information on the pupils that are coming into the school and especially of any special needs of the pupil. It also serves to inform the primary schools of the skills required by the secondary schools. The White Paper of 1995 did outline the governments concern about the levels of numeracy and literacy abilities of pupils coming from primary to secondary schools. The White Paper proposed that there be a formal assessment within the primary schools the results being available to the board the parents and the secondary schools. This assessment is in danger of falling into the trap of the 11 plus exam currently held in the UK which only serves to pigeon hole pupils based on the results of the test. The author is of the opinion that the increasing development of schemes such as the Home School Liaison officer would deal with these problems without need for a formal assessment.

Another development yet to be realised to aid a closer relationship between primary and secondary level education is the basis for the requirements laid out in the White Paper for a new primary school curriculum. The White Paper sees the "creative and performing arts are distinctive and intrinsically valuable educational disciplines" (1) and are therefore necessary at primary as well as secondary level education. The creative and performing arts are seen in the white paper as a means of introducing culture and social equality in education and that "cultural poverty is a significant part of disadvantage" (2). Where the author does agree with these points one also notices the importance of the creative arts at all levels of education for its primary link to all other subjects - the design process.

#### *The Design Process in education.*

The importance of the design process available in the creative arts to the general education system has been widely discussed and even today at a seminar on the new Leaving Cert syllabus (3) its possible applications to all subjects was discussed and agreed by many to be true particularly on the vocational side of subjects. The increasing demand for vocational based syllabi serves to reaffirm the

created in schools - the Home School Liaison Officer. The Home School Liaison Officer does not work as a bridge between home and school but also between primary and secondary schools in their locality. One of the many problems this helps to solve is to provide the secondary schools with the relevant information on the pupils that are coming into the school and especially on any special needs of the pupil. It also serves to inform the primary schools of the requirements of the secondary schools. The White Paper of 1992 did outline the requirements concerning the levels of numeracy and literacy skills of pupils coming from primary to secondary schools. The White Paper proposed that there be a formal assessment within the primary schools the results being available to the local education authority. The secondary schools this assessment is in danger of falling into the trap of the 11 plus exam currently held in the UK which only serves to pigeon hole pupils based on the results of the test. The author is of the opinion that the increased development of schemes such as the Home School Liaison Officer would do much to help schemes without need for a formal assessment.

Another development yet to be realised is to build a closer relationship between primary and secondary level education as the basis for the requirements laid out in the White Paper for a new primary school curriculum. The White Paper sees the creative and performing arts as distinctive and intrinsically valuable educational disciplines (1) and as a discipline necessary at primary as well as secondary level education. The creative and performing arts are seen in the White Paper as a means of introducing culture and social equality in education and that cultural poverty is a significant part of disadvantage (2). The author does agree with these points and also notices the importance of the creative arts at all levels of education for its primary link to its other subjects - the design process.

### The Design Process in education

The importance of the design process available in the creative arts to the general education system has been widely discussed and even today at a seminar on the new Learning and Curriculum (3) as possible applications to all subjects was discussed and agreed by many to be true particularly on the vocational side of subjects. The increasing demand for vocational based syllabi serves to reaffirm the



need for all pupils to have an understanding and confidence in the design process. It is the problem solving skills available within the design process that make the creative arts applicable to all other subjects and particularly to the vocational aspect to other subjects. Lateral thinking is a vital part of the problem solving skills found in the design process. A process that allows pupils the freedom to work through their ideas without fear of making mistakes. They can make mistakes and learn from them. The ability to make mistakes and learn from it is a trait that we as Irish people are not renowned for and yet in our increasing cosmopolitan industry base this ability is demanded in the workplace every day. All areas of the workplace now demand individual initiative whereby workers are required to think for themselves without fear and take risks if they want to progress.

This point takes us to the Junior Cert where the principles of the syllabus are founded in giving the pupil the ability to go into the workplace with confidence. This is why the design process is so important and emphasised in the theory of the syllabus. However some factors related to syllabus still hold the pupil back from the primary objectives at Junior Cert level.

*A. The current lack of support at either end of the Junior Cert.* ie the lack of subject areas at primary level to create a grounding on which the Junior Cert can be built.

The lack of connection between the Junior Cert and the current Leaving Cert makes it very difficult for pupils to go through the processes demanded of them in the art, craft and design when they are so new to them and they know will all go out the window when they meet the senior cycle as the course reverts straight back to almost the opposite of what they have learned at Junior Cert.

*B. The assessment system* - the method of assessing the art craft and design course is much more conducive to the learning objectives laid out in the Junior Cert syllabus as this course is assessed based on project work. A lot of the other subjects are still being assessed on a terminal exam which is denying some of the objectives of the Junior Cert as one cannot be creative or often even show ones learning to an acceptable level within a three hour terminal exam. However the system still has flaws for the art class. The process of learning is more important than the product in the ethos of the Junior Cert and the education to be found in the design process and yet the assessment does place more weight on the finished

need for all pupils to have an understanding and confidence in the design process is the primary activity available within the design process that makes the creative and applicable to all other subjects and particularly to the vocational aspect of the subject. Learning is a vital part of the problem solving skills that in the design process allows pupils the freedom to work through their ideas without fear of making mistakes. They can make mistakes and learn from them. It is a skill to make mistakes and learn from it. A skill that we as teachers are not renowned for and yet in our increasing competition for resources the ability is demanded in the workplace every day. All areas of the workplace now demand individual initiative whereby workers are required to think for themselves without test and take risks if they want to progress.

This point takes us to the Junior Cert where the principles of the syllabus are founded in giving the pupil the ability to go into the workplace with confidence. This is why the design process is so important and emphasised in the theory of the syllabus. However some factors related to syllabus still hold the pupil back from the primary objectives of Junior Cert level.

A. The current lack of support at either end of the Junior Cert is the lack of subject areas at primary level to create a grounding on which the Junior Cert can be built. The lack of connection between the Junior Cert and the current leaving Cert makes a very difficult task for pupils to go through the processes demanded of them in the design and design when they are so new to them and they know will all go out the window when they meet the senior cycle as the current trend swings back to almost the opposite of what they have learned at Junior Cert.

B. The assessment system - the method of assessing the art craft and design course is much more difficult to the learning objectives laid out in the Junior Cert syllabus as the course is assessed based on project work. A lot of the other subjects are still being assessed on a terminal exam which is denying some of the objectives of the Junior Cert as one cannot be creative or often even show ones learning to an acceptable level within a three hour terminal exam. However the system still has flaws for the art class. The process of learning is more important than the product in the Junior Cert and the education to be found in the design process and yet the assessment does place more weight on the finished



product rather than the processes the pupils went through in the course of the project.

This is not evident in the marking system as the preparatory and development stages of the process hold 40 marks per project and the realisation of the final product only holds 20 marks.

However the author was informed by examiners at the Junior Cert seminar held in the Teachers centre in Drumcondra (NOV 1998) (4) that the examiners are informed by the Dept of Education to give an overall grade on impact of the project and to work back from there. The fact that there is only one A2 sheet to show the process and development limits what the pupil can show of his/her process so much that it is virtually impossible to show the pupils true process. This means the examiner cannot truly access the process and if the final piece did not work and pupil loses out on a great deal when he/she may have learnt a great deal from the process itself. The report on the National Education Convention which is referred to in the White paper of 1995 states "that the present system of assessment is inadequate and unless reforms are introduced the objectives of the Junior Cert programme will not be achieved" (5). One would have to agree with this report that unless the Dept of Education deals with the national assessment system ie The way in which the current Junior Cert is assessed under the limits outlined above, the points system at Leaving Cert level along with the lack of training and support given to teachers one believes that the aims and objectives of this exciting programme will never come to fruition.

*C. Time limits* - the lack of time in class to complete all areas of this course means that the pupils do not get sufficient time to fully explore the possibilities of their project at the preparatory and developmental stage as they have to move quickly and complete what they perceive to be the most important part the finished piece. There is a perception in schools that the finished piece is the most important element and that the process is something to be tagged on later - "how many of you can actually get them to complete the preparatory work before their finished piece?" a question raised at the Junior Cert seminar (NOV 1998) - asked by a current art teacher of her peers. One does not know where this myth comes from or indeed how to dispel it - perhaps there is a need for more in service so that all

product rather than the process the pupils went through in the course of the

project.

This is not evident in the marking system as the preparatory and development

stages of the process (not 40 marks for project and the realisation of the final

product only adds 20 marks).

However, the author was informed by examiners at the Junior Cert seminar held in

the Teachers Centre in Dunmurry (NOV 1998) (4) that the examiners are

informed by the Dept of Education to give an overall grade on impact of the

project and to work back from there. The fact that there is only one A2 sheet to

show the process and development limits what the pupil can show of his/her

process so much that it is virtually impossible to show the pupils' true

process. This means the examiner cannot truly assess the process and if the final

grade did not work and pupil looks out on a great deal when he/she may have

learned a great deal from the process itself. The report on the National Education

Convention which is referred to in the White Paper of 1995 states "that the

present system of assessment is inadequate and unless reforms are introduced

the objectives of the Junior Cert programme will not be achieved." (5) One would

like to agree with this report that unless the Dept of Education deals with the

national assessment system in the way in which the current Junior Cert is

assessed under the mark is outlined above, the points system at Leaving Cert level

along with the lack of training and support given to teachers one believes that the

aims and objectives of this exciting programme will never come to fruition.

Q. Time limits - the lack of time in order to complete all areas of this course means

that the pupils do not get sufficient time to fully explore the possibilities of their

project at the preparatory and developmental stage as they have to move quickly

and complete what they perceive to be the most important part the finished

piece. There is a perception in schools that the finished piece is the most important

element and that the process is something to be tagged on later - how many of

you can actually get them to complete the preparatory work before their finished

piece? A question raised at the Junior Cert seminar (NOV 1998) - asked by a

current art teacher of her peers. One does not know where this myth comes from or

indeed how to dispel it - perhaps there is a need for more in service so that all



teachers can be reminded of the importance of the process and how that emphasis must be registered with the pupils. Perhaps new exemplars need to be published, perhaps the marking scheme needs to be made public?

#### *D. The support studies -*

"There was a increasing acceptance that practical activity alone does not necessarily lead to critical awareness and understanding" "These statements echo a keenly held view in the syllabus aims and objectives that students should not only produce works but that they should also cultivate a sense of value, be able to make sound judgments as opposed to mere preferences and exercise self direction in and through the art, craft and design. Students in this case would not have passive encounters with or make passive responses to works of art craft or design or indeed their environment." (5)

However for some reason the level of work produced as support studies is nothing like the aims and objectives. Some pupils submit copies of images of artists work or just magazine images with no text at all, A lot of pupils submit copies of artists work with a short paragraph about the artist but not connection between the artist work and the pupils own work, or any personal evaluation of the artist work. In fact the author discovered in the government published exemplars for the Junior Cert published in 1993 that there were 3 pupils examples in this booklet (7,8,10) where they had used the same artist but the problem is they also wrote exactly the same thing about the artist on their support studies. It is as though they all read the same book but have no opinions of their own. How does this develop an ability "to make sound judgments and exercise self direction"?

#### *Elements of the Junior Cert programme.*

The underpinning elements of the aims and objectives of the Junior Cert and new Leaving Cert are seen by the author as follows:

To develop pupils personal and social confidence and initiative.

To contribute to pupils moral and spiritual development.

To prepare pupil for the responsibilities of citizenship - much as Rousseau wanted for "Emile" to be able to gain a strong education that would allow him to relate in society as a free thinking free feeling individual.

teachers can be trained of the importance of the process and how that importance must be registered with the pupils. Perhaps new exemplars need to be published perhaps the marking scheme needs to be made public.

#### D. The support studies

There was a increasing acceptance that practical activity alone does not necessarily lead to critical awareness and understanding. These statements also a keenly held view in the syllabus aims and objectives that students should not only produce works but that they should also cultivate a sense of values, be able to make sound judgments as opposed to mere preferences and exercise self-direction in and through the selection and design. Students in this case would not have passive encounters with or make passive responses to works of art, craft or design or indeed their environment. (5)

However for some reason the level of work produced as support studies is nothing like the aims and objectives. Some pupils submit copies of images of artists work or just magazine images with no text at all. A lot of pupils submit copies of artists work with a short paragraph about the artist but not connection between the artist work and the pupils own work, or any personal evaluation of the artist work. In fact the author discovered in the government published exemplars for the Junior Cert published in 1993 that there were 3 pupils examples in this booklet (7:8-10) where they had used the same artist but the problem is they also wrote exactly the same thing about the artist on their support studies. It is as if they had all read the same book but have no opinions of their own. How does this develop an ability to make sound judgments and exercise self-direction?

#### Elements of the Junior Cert programme

The underpinning elements of the aims and objectives of the Junior Cert and new Leaving Cert are seen by the author as follows:

To develop pupils' personal and social confidence and initiative

To contribute to pupils' mental and spiritual development


To prepare pupils for the responsibilities of citizenship - much as Proust wanted for "Emile" to be able to gain a strong education that would allow him to relate to

society as a free thinking and feeling individual.



Art,craft and design education is seen in the new syllabus as an important factor in the development of full intelligence were the practice and understanding of the subject are fundamental ways of organising and understanding the world and call upon profound qualities of discipline and insight. (6)


It has been identified that these aims can be achieved with the promotion of lateral thinking with in the school system, however the the lack of time, lack of in service for teachers, lack of room to show the process of the work mean that the Junior Cert falls short of what most consider its most important aims and objectives.



Art, craft and design education is seen in the new syllabus as an important factor in the development of full intelligence where the practice and understanding of the subject are fundamental ways of organising and understanding the world and call upon profound qualities of discipline and insight. (2)

It has been identified that these aims can be achieved with the promotion of lateral thinking within the school system, however the lack of time, lack of in service for teachers, lack of room to show the process of the work mean that the Junior Ceph tells about what most consider its most important aims and objectives.

## Footnotes chapter 2

1. *"The White Paper on Education"* - (Dublin 1995 An Roinn Oideacheas) pg 48
  2. *ibid* pg 48
  3. NCAD seminar on draft Leaving Cert syllabus held in Jan 1999.
  4. ATA seminar on Junior Cert examinations held in the Teachers Centre in Drumcondra - Nov 1998
  5. *The White Paper on Education* - (Dublin 1995 An Roinn Oideacheas) pg 60
  5. Kieran Meagher - Art,Craft and Design syllabus - *"The Changing Curriculum"*  
(Dublin O'Brien educational in association with Irish Association for Curriculum development ) pg 24 - 25
  6. *ibid* pg 23
- 

## Footnotes chapter 2

1. 'The White Paper on Education' - (Dublin 1992 An Roinn Oideachas) pg 43
2. ibid pg 48
3. NCAD seminar on Craft Leaving Cert syllabus held in Jan 1999.
4. ATA seminar on Junior Cert examinations held in the Teachers Centre in Drumcondra - Nov 1998
5. 'The White Paper on Education' - (Dublin 1992 An Roinn Oideachas) pg 60
6. Kieran Moynihan - Art, Craft and Design syllabus - 'The Changing Curriculum' (Dun Laoghaire Educational Association with Irish Association for Curriculum Development) pg 24 - 25
6. ibid pg 26



### CHAPTER 3

#### THE MODULE.

##### *Introduction of the module.*

Before we look at the proposed module we need to describe the group we will work with and the questions posed by this group to the author.

The class that will fulfil this module are a group of seven Junior Cert remedial boys. Their ability is very mixed from good to very weak. They all have chosen "Good times" from the following list of Junior Cert themes:

Patterns in nature

Good times

The door (a poem)

The aftermath

My granny's attic

The pupils have created sub themes for themselves within the theme of "Good times" that identify good times for them:

3 boys are working with sports cars as their theme,

3 are working with field sports

1 is working with film/cinema.

The author experienced some concerns around introducing this module to this class. Perhaps the concept behind this module is too difficult for this group to grasp. However one must recognise that although the theory behind lateral thinking can be complex the practice is not when in the right environment and encouragement.

The author noticed that from her limited view of past Junior Cert 3D projects the emphasis seemed to be on making little models of heads or monsters and felt that this project may in some way put the pupils exams at risk. After the Junior Cert seminar in Drumcondra no 1998 these preconceptions were diminished and the author felt this module was workable within the Junior Cert programme.

## CHAPTER 3 THE MODULE

introduction of the module

Before we look at the proposed module we need to describe the group we will

work with and the questions posed by this group to the author

The class that will fulfil this module are a group of seven Junior Cent remedial boys

Their ability is very mixed from good to very weak. They all have chosen 'Good

times' from the following list of Junior Cent themes:

Good times

Good times

The door (a poem)

The end of the world

My grandpa's attic

The cups have created sub themes for themselves within the theme of 'Good

times' that identify good times for them:

3 boys are working with sports cars as their theme

3 are working with field sports

1 is working with film-making

The author experienced some concerns around introducing this module to this

class. Perhaps the concept behind this module is too difficult for this group to

grasp. However one must recognise that although the theory behind lateral thinking

can be complex the practice is not when in the right environment and

encouragement

The author noticed that from her limited view of past Junior Cent 3D projects the

emphasis seemed to be on making little models of heads or monsters and felt that

this project may in some way put the pupils' exams at risk. After the Junior Cent

seminar in Drumcondra in 1998 these preconceptions were diminished and the

author felt this module was workable within the Junior Cent programme.

However when the author discussed the proposed module with a teaching practice supervisor of more experience than herself she realised her fears. That the skill level of these weak pupils was not to the standard required to manipulate complex materials. The module source needed to be simplified.

This throws up another problem that the author and her peers who teach Junior Cert notice that one needs to work with a group for Junior Cert much earlier than in the 3RD year alone. There are skills that need to be developed and often are not developed prior to the Junior Cert year and it is not just practical skills that are lacking, the self directing, decision making skills are also lacking not only in this group but it seems in other groups that the authors peers teach.

All of the skills that one would think need to be developed over time as one is finding it very difficult to instil even the cognitive skills this group need to gain the learning that is possible within the programme that they are working on.

The module had to be modelled around the limitations offered by this particular group.

The author continues to look at using everyday objects recycled to create new objects. However the every day objects to be used as media need to be simple materials such as cardboard boxes and packaging. The author did want to work with more complex media such as car parts football gear etc but as stated above this media is not possible with this group, due to limited skills and the fact that they must complete a finished piece for their Junior Cert project. Already there are problems with teaching and encouraging lateral thinking within the Junior Cert programme. We can however still work with existing objects and create new objects with a new function just using simpler starting point objects.

The range of packaging will be supplied by the "Travellers Resource Centre" Mountjoy Square Dublin (Known as Pavee Point) which is run by local settled travellers. One can become a member for a minimal fee and avail of the wide range of materials that the workers collect from various suppliers. The products tend to be mostly factory waste - card paper plastic fabric off cuts etc. The centre provides employment and a valuable means of recycling the huge amounts of factory packaging waste that exists in Dublin city. The packaging is donated free to the



However when the author discussed the proposed module with a teaching practice supervisor of more experience that herself she realised her fears. That the skill level of these work pupils was not to the standard required to manipulate complex materials. The module therefore needed to be simplified.

They threw up another problem that the author and not peers who teach Junior Cert. who that one needs to work with a group for Junior Cert. much earlier than in the 3-40 year zone. There are skills that need to be developed and often are not developed prior to the Junior Cert. year and it is not just practical skills that are lacking the self directing decision making skills are also lacking not only in this group but in other groups that the author's peers teach.

All of the skills that one would think need to be developed over time as one is doing it very difficult to instill even the cognitive skills this group need to gain the learning that is possible within the programme that they are working on. The module was modelled around the limitations offered by the particular group.

The author continued to look at using everyday objects recycled to create new objects, however the every day objects to be used as media need to be simple materials such as cardboard boxes and packaging. The author did want to work with more complex media such as car parts football gear etc but as stated above this idea is not possible with this group due to limited skills and the fact that they may not have a finished piece for their Junior Cert. project. Already there are problems with teaching and encouraging lateral thinking within the Junior Cert. programme. We can however still work with existing objects and create new objects with a new function just using simple standard point objects.

The range in recycling will be supplied by the Travellers Resource Centre, Mountjoy Square Dublin (known as Pavee Point) which is run by local settled travellers. One can become a member for a minimal fee and avail of the wide range of materials that the workers collect from various suppliers. The products tend to be mostly factory waste - card paper plastic fabric etc. The centre provides employment and a valuable means of recycling the huge amounts of factory packaging waste that exists in Dublin city. The packaging is donated free to the



centre and is collected from the factories by the centres's workers. It is a wonderful resource for working with children and in keeping with the recycling ethos of today.

The author proposes to offer the class a further sub theme to their theme. The class need to be given direct simple steps to aid their learning and the introduction of another sub theme helps to focus pupils but will at the same time challenge them to broaden their concept of the new theme. The new theme - "Transportation" will be introduced in the first class of the scheme. The author then proposes to spend some time brainstorming with the group on the possible 3D objects that could be created within the theme transportation. The author will provide a simple worksheet for recording individual ideas brought up during the brainstorm session.

The class would then move on to a line drawing of the object to be constructed, learning to understand the shape of the object. A form study using colour of the object to be created will follow allowing the pupil to understand the form of the new object. The first two tasks deal with preparation or initial investigation of the process. Where the pupils learn about the object that they will make in a new material. They will require the skills of lateral thinking firstly in coming up with the object to be made under the new sub theme and secondly in the way they approach the investigation, The views they take of the object and the questions that this draws up about the object to be created. The incubation part of the process is running throughout this investigation period as the pupils internalise the theme and the object that they will work with. They will think about this throughout the investigation and hopefully outside of the classroom as well as within.

The author proposes to introduce the idea of turning this model of an object into a container. The class will in another brainstorming session looking at the criteria for a container and how their model could be adapted into a container. Question the container from all angles, its use, the criteria required for its use etc. Question and look at how their model could become a container. Look at what they want their container to hold. The investigation and incubation period continue at this stage but are raised to a new level as the pupils question what it is that they are actually creating and how this object functions in their world. They will question who uses it

center will be covered from the features of the center's work as a workshop resource for working with children and in keeping with the working ethos of the day.

The author proposes to offer the class a further challenge to their theme. The class is asked to be given direct simple steps to aid their learning and the introduction of another sub-theme helps to focus pupils but will at the same time challenge them to consider their concept of the new theme. The new theme - "Transportation" will be introduced in the first class of the scheme. The author then proposes to spend some time brainstorming with the group on the possible 2D objects that could be created within the theme "Transportation". The author will provide a simple worksheet for recording the ideas brought up during the brainstorm session.

The class would then move on to a line drawing of the object to be constructed. Learning to understand the shape of the object. A form study using colour of the object to be created will follow allowing the pupils to understand the form of the new object. The first two tasks deal with preparation or initial investigation of the process. These two tasks lead the pupils to learn about the object that they will make in a new material. They will reduce the skills of lateral thinking firstly in connection with the object to be made under the new sub-theme and secondly in the way they approach the investigation. The views they take of the object and the questions that this throws up about the object to be created. The incubation part of the process is during the investigation period as the pupils internalise the theme and the object that they will work with. They will think about this throughout the investigation and hopefully outside of the classroom as well as within.

The author proposes to introduce the idea of turning the model of an object into a container. The class will in another brainstorming session looking at the object for a container and how their model could be changed into a container. Question the container from all angles, its use, the criteria required for its use etc. Question and look at how their model could become a container. Look at what they want their container to hold. The investigation and incubation period continues at this stage and moves to a new level as the pupils question what it is that they are actually creating and how their object functions in their world. They will question who uses it.



and what they will need to consider for whom it will be used ie the practicalities for this person - Is it for adults or children?, What specifics will have to be incorporated into the design to cater for adults and children?, The size, Proportions and Colour are three of the main design features that have to be considered when relating specifically to adults or children. The gender for which this container is being created will have to be considered - colour is one of the main design features that separates an object in terms of gender and if it is to be unisex the colour will have to appeal to both genders. Is the container being designed for specific use perhaps by people with specific requirements ie in sport the weight will have to be considered. The pupils will draw heavily on their ability to think laterally as they consider each of the design specifications for the container and draw it from all angles.

The class can then begin to break down their model into its basic components and understanding the criteria shape and form of the container and begin to create the basic structure of the container. The pupils will have to use their thinking skills here also as they figure out the most effective way to use their material to create the basic structure of their container. What construction techniques are best used here to get the most from their given material, They will need to consider the materials and techniques that best suit their container.

The class can then begin to build the form of their container move on to colour it work up the detail and present the new object. How the pupils approach building the form and working up their final piece will depend on how they have questioned so far in addition to their ability to push the media to its limits in terms of what it can do to best serve their needs.

Kieran Meagher in his discussion on the Junior Cert looks at the 3D project in a way that the author tries to work within this project:

The intention is that there should be a balance between expression and functionalism in pupils work, in this respect students should be able to differentiate between two purposes. Similarly the pupils may be encouraged to categorise objects in respect of their function, their context and their stylistic type. (1)

and what they will need to consider for whom it will be used is the practicalities for the person - is it for adults or children? What specific will have to be incorporated into the design to cater for adults and children? The size, Proportions and Colour are three of the main design features that have to be considered when relating specificity to adults or children. The gender for which this container is being created will have to be considered - colour is one of the main design features that separates an object in terms of gender and it is to be understood the colour will have to appeal to both genders. Is the container being designed for specific use perhaps by people with specific requirements is in sport the weight will have to be considered. The pupils will draw heavily on their ability to think laterally as they consider each of the design specifications for the container and draw it from all angles.

The class can then begin to break down their model into its basic components and understanding the criteria shape and form of the container and begin to create the basic structure of the container. The pupils will have to use their thinking skills here also as they figure out the most effective way to use their material to create the basic structure of their container. What construction techniques are best used here to get the most from their given material. They will need to consider the materials and techniques that best suit their container.

The class can then begin to build the form of their container move on to colour if you like the detail and present the new object. How the pupils approach building the form and working up their final piece will depend on how they have questioned so far in relation to their ability to push the media to its limits in terms of what it can do to best serve their needs.

Kieran McGeer in his discussion on the Junior Cert looks at the 3D project in a way that the author tries to work within this project.

The intention is that there should be a balance between expression and functionalism in pupils work. In this respect students should be able to differentiate between two purposes. Similarly, the pupils may be encouraged to categorise objects in respect of their function, their context and their stylistic type ( )



As the Junior Cert requires a finished piece the criteria for assessment for the project will require a finished piece. The process must be clearly documented and one must encourage note taking along with the sketch work as the area to present the preparatory work is so small that one cannot get a true grasp of the learning of the pupils within the process from 1 A2 board therefore notes to backup may aid the understanding of the pupils learning.

*The process of the module.*

The biggest problem in this project to date has been the absenteeism. There are 7 pupils in this group and since their mock exams in early March, One is lucky to have 4 pupils in any lesson. One has been working with the class tutor calling the pupils homes to combat this problem and yet the problem continues. It seems to be a fact of life in this school as one is experiencing the same problems with other groups also. As a teacher one is doing all one can and that is the most that can be expected.

In the first lesson there was a discussion on the work of different artists who have used found objects to create a new object with a new function. (fig. 1) The class enjoyed looking at this work and there was an animated discussion about how the work was done and the materials used. These support studies did serve to inspire and motivate the group for the project. The class then looked at transportation within their sub themes. The brainstorm took on the typical pattern that one has observed with groups in this school, The pupils are slow to voice ideas initially. Then they offer the obvious ideas, When one makes a suggestion and encourage all ideas they then warm up and begin to give more varied and lateral responses. The pupils rely a lot on the teacher initially but can give of themselves when they get going. One did introduce a simple spider chart type worksheet for the brainstorm to help the pupils to focus their ideas and it also reinforced the importance of their ideas and how important it is to keep a record of their ideas. When the class began the first task of drawing the lines and shapes of their first object that they will make a model of, some pupils argued the need for drawing. "Can't we just make it", "We know how to make it" They felt they could do the preparatory studies for the examiner

As the Junior One requires a finished piece the criteria for assessment for the project will require a finished piece. The process must be clearly documented and one must encourage note taking along with the sketch work as the aim is present the preparatory work as well as the final one cannot get a true grasp of the learning of the pupils within the process from the A2 board therefore notes to back it may aid the understanding of the pupils learning.

#### The process of the module

The biggest problem in this project to date has been the observation. There are 7 pupils in the group and since their first exams in early March One is lucky to have a pupil in any lesson One has been working with the class later calling the pupils to come to discuss the problem and yet the problem continues. It seems to be a fact of life in any school as one is experiencing the same problem with other groups and as a teacher one is doing all one can and that is the worst that can be expected.

In the first lesson there was a discussion on the work of different artists who have used found objects to create a new object with a new function. The pupils enjoyed looking at the work and there was an animated discussion about how the work was done and the materials used. I used support studies and cards to inspire and motivate the group for the project. The class then looked at transportation within their own area. The brainstorm look on the project pattern that one has observed with groups in the school. The pupils are slow to voice ideas initially. Then they offer the obvious ideas. When one makes a suggestion and encourage of ideas they then want to give more varied and lateral responses. The pupils rely a lot on the teacher initially but can give of themselves when they get going. One did introduce a simple spider chart type work sheet for the discussion to help the pupils to voice their ideas and it also reinforced the importance of their ideas and how important it is to keep a record of their ideas. When the class began the task of drawing the lines and shapes of their first object that they will make a model of, some pupils signed the need for drawing. One we just make it. We know how to make it. They felt they could do the preparatory studies for the examiner.



after the piece is actually made. It was difficult to explain the need to study and understand the shape and form of their chosen object before beginning to look at how they could make it and the dimensions of the model. They found it hard to believe that the process is the most important part to show their ideas and how they work out their ideas. One does think this difficulty is due to a lack of confidence and their previous education because once one did explain and listen to their argument and recap on the process that we had looked at by Calder they did agree that maybe they did have to do the process first. ( fig 2)

As the pupils are weak and have a very low concentration threshold the introduction of colour in the second lesson was essential to maintaining their interest. They used colour to show the form of their chosen object. (Fig 3) One reinforced the process again in this lesson with Calder's process for his model figures for "Le Cirque". (Fig . 4 ) The class could see how Calder used to colour to show the form of figures in motion as part of his preparation and then we looked at the actual figure models. The pupils did question the quality of Calder's actual figures which was a valid point, However the class could still see that the movement, The form and proportion of the figures was correct. The class discussed the possibility of the rough finish of the models being intentional adding to the childlike feel of the circus model.

The introduction of turning these objects into containers in the third lesson really got the pupils going. the class were full of ideas. The support studies for this lesson were containers made from models of other objects just as one proposes the class will do and the pupils loved discussing this work, deciphering what the model is and what it will contain. (Fig 5) The pupils loved the idea of turning their object into a container. One had some containers in the room for the pupils to work with and yet they did not rely completely on the teacher they had their own ideas. The class were really beginning to get into this project, It was a really good lesson. Before the drawing the class discussed what a container was, The criteria for a container and how the containers around the room actually fitted the criteria. They discussed the type of containers they wanted to make, how they could adapt their model to make a container meeting all the criteria of a container.

After the pupils had actually made it was difficult to explain the need to study and understand the shape and form of their chosen object before beginning to look at how they could make it and the dimensions of the model. They found it hard to believe that the process is the most important part to show their ideas and how they work out their ideas. One does think this difficulty is due to a lack of confidence and their previous education because once one can explain and later to their argument and focus on the process that we had looked at by Calder they did agree that maybe they did have to do the process first (fig 2).

As the pupils were weak and have a very low concentration the school the first lesson to colour in the second lesson was essential to maintaining their interest. They used colour to show the form of their chosen object (fig 3). One reminded the process again in this lesson with Calder's process for his model figure, for the figure (fig 4). The class could see how Calder used to colour to show the form of figures in motion as part of his preparation and then we looked at the actual figure models. The pupils did question the quality of Calder's actual figures which was a good point. However the class could still see that the movement, the form and proportion of the figures was correct. The class discussed the possibility of the form of the models being intentional adding to the childlike feel of the circus model.

The introduction of turning these objects into containers in the third lesson really got the pupils going. The class were full of ideas. The support studies for this lesson were containers made from models of other objects just as one chooses the class will do and we began to discuss this work, describing what the models are and what it will contain (fig 5). The pupils loved the idea of turning their object into a container. One had some containers in the room for the pupils to work with and yet they did not rely completely on the teacher they had their own ideas. The class were really beginning to get into this project it was a really good lesson. Before this viewing the class discussed what a container was. The criteria for a container and how the containers around the room actually fitted the criteria. They discussed the type of containers they wanted to make, how they could adapt their model to make a container meeting all the criteria of a container.



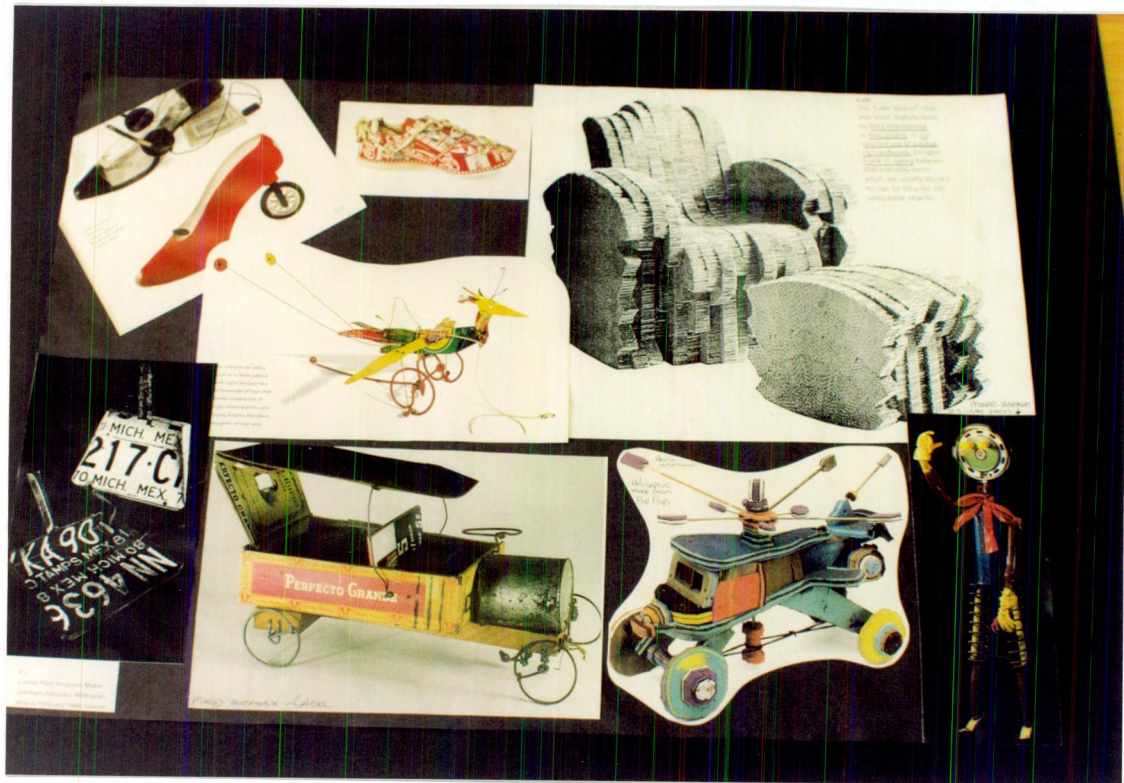


Fig 1 from right to left :

Savintransport : wood and rubber,firenze 1993 maker unknown.

Bird on a leash : tin cans and cigar boxes,Sandy Calder

Little Beaver chair: packaging cardboard.Frank O.Gehry.

Tin man : car parts , u.s maker unknown.

Helicopter : FLip Flops : maker unknown.

Antique car : tin cans and cigar boxes,Sandy Calder

Licence plate dustpans : Mexico 1970's / 1980's, maker unknown



Licence plate dustpans : Mexico 1970's \ 1980's, maker unknown  
 Andue car : tin cans and cigar boxes, Sandy Calder  
 Helicopter : Flip Flops : maker unknown  
 Tin man : car parts , U.S. maker unknown  
 Little Beaver chair: packaging cardboard, Frank O. Gehry  
 Bird on a leash : tin cans and cigar boxes, Sandy Calder  
 Savintransport : wood and rubber tire size 1993 maker unknown  
 Fig 1 from right to left :



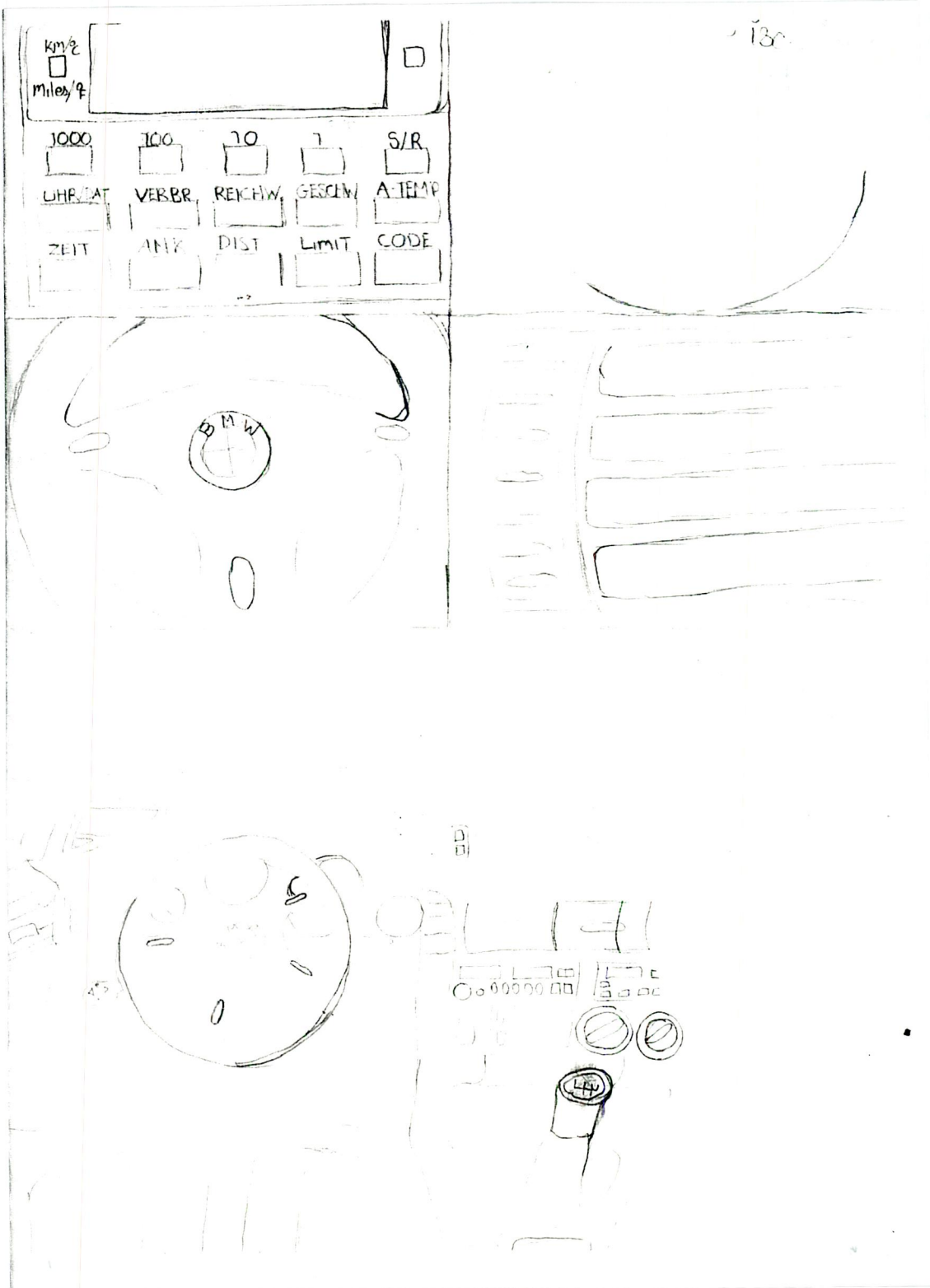


Fig . 2 : Pupils work form lesson 1 - Line and Shape study of chosen object.



Fig. 2 : Pupils work form lesson 1 - Line and Shape study of chosen object.



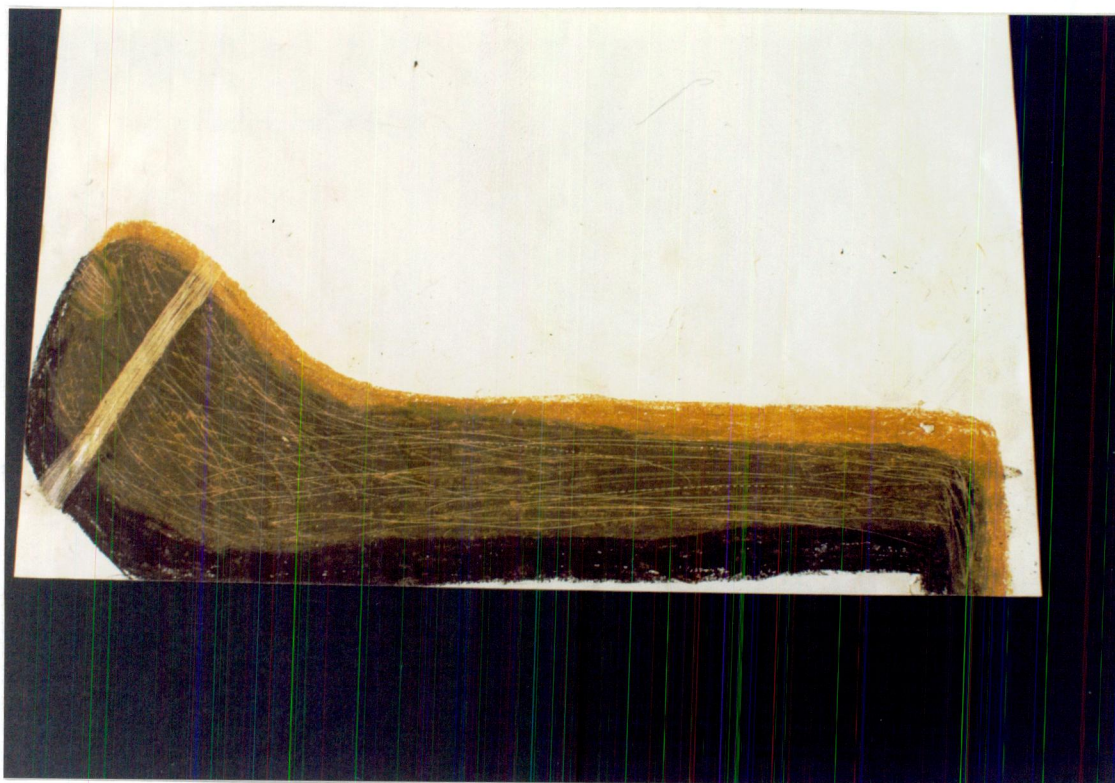


Fig 3 : Pupils work form lesson 2 - Form study with colour of chosen object.



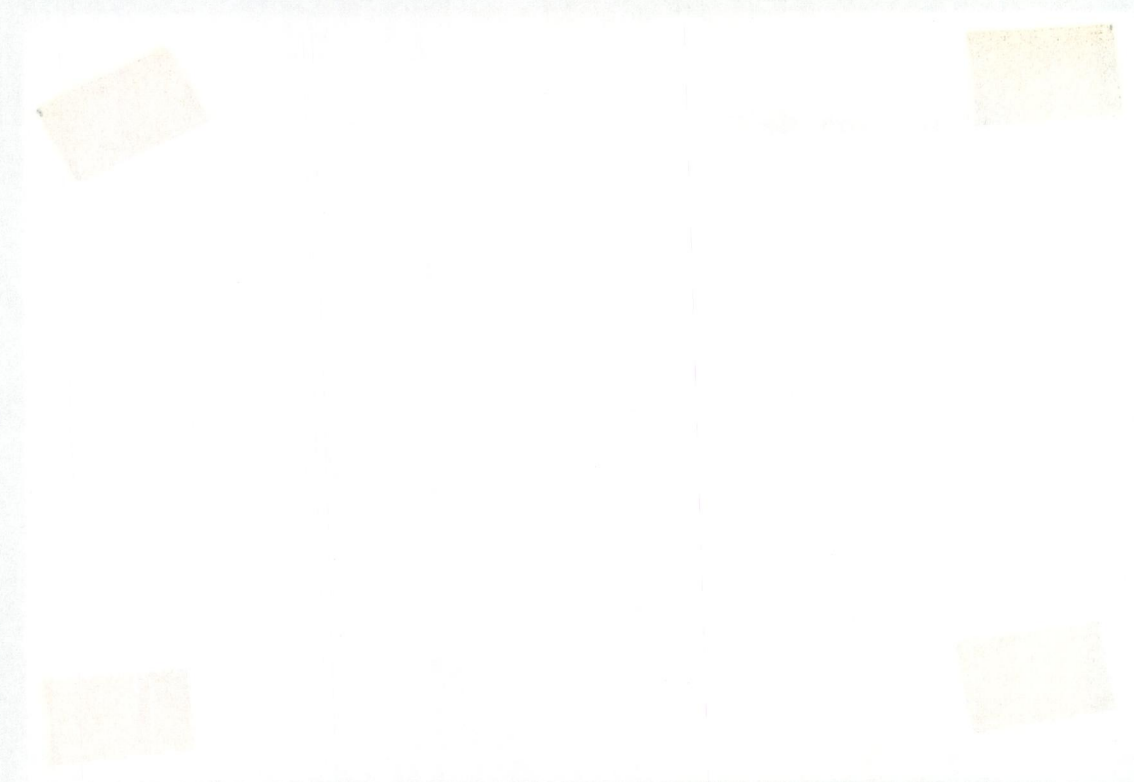


Fig 3 : Pupils work form lesson 2 - Form study with colour of chosen object.

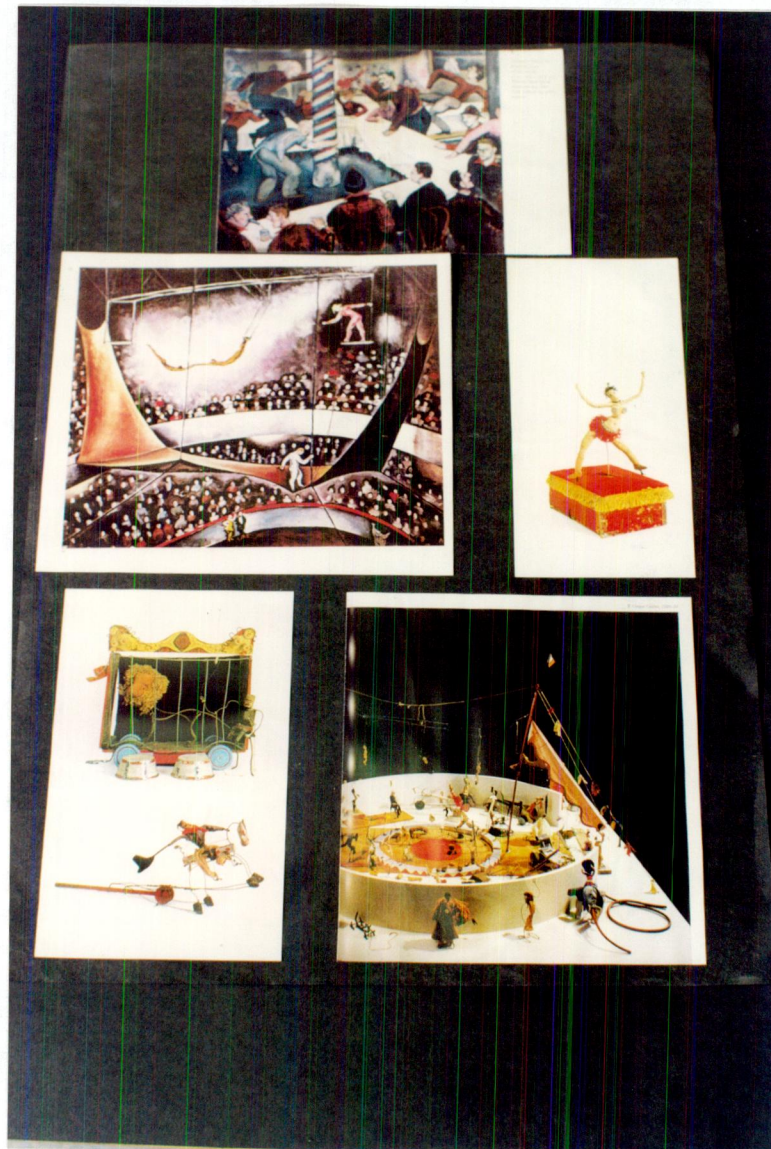


Fig 4 : from right to left.

Fireman's dinner for Brancusi, 1926 : oil on canvas, Alexander Calder.

Colour study for "Le Cirque", 1927 , Alexander Calder.

Dancer figure for "Le Cirque" - 1927, Alexander Calder.

Lion and lion tamer figures for "Le Cirque" - 1927, Alexander Calder.

Section of the complete model of "Le Cirque" , Alexander Calder.





Section of the complete model of "Le Cirque", Alexander Calder.  
 Lion and lion tamer figures for "Le Cirque" - 1927, Alexander Calder.  
 Dancer figure for "Le Cirque" - 1927, Alexander Calder.  
 Colour study for "Le Cirque", 1927, Alexander Calder.  
 Fireman's dinner for Brancusi, 1926, oil on canvas, Alexander Calder.  
 Fig 4 : from right to left.





Fig 5 from right to left :

Spring chair ,Steel and fabric, 1968 Tokyo , Shiro Kuramata .

Flower chair , velvet and plastic, 1990 Japan, Mas Anori Umeda

Vase,Ear ,Unglazed earthenware, 1986 Italy, Andrea Branzi

Armchair,Molar , fibreglass reinforced polyester, 1969 US , Wendell Castle.


Armchair, Molar, fibreglass reinforced polyester, 1969, US, Wendell Castle  
 Vase, Ear, Unglazed earthenware, 1986 Italy, Andrea Branzi  
 Flower chair, velvet and plastic, 1990 Japan, Mas Anohi Umeda  
 Spring chair, Steel and fabric, 1968 Tokyo, Shiro Kuramata  
 Fig 5 from right to left:





The class did need some help from the teacher on what container shapes might suit them best ,But once the teacher had discussed two of the pupils work with the group the rest just matched the shapes with their objects themselves. The class just needed a prompter to allow them to think for themselves. Again one thinks due to a lack of confidence not that the class couldn't think for themselves. The class had to draw their chosen container from three different angles - plan line drawings, Then they adapted the container to their model by drawing the model over the container looking at it from the different angles, understanding how the object will look from the different angles. (fig 6 )

The class completed the drawing aspect in good time allowing a lot of time for the evaluation. This part of the lesson was very successful the class had a discussion that was typical of what one understands the aims and objectives of this programme are asking for. The class sat around as a group to discuss each others work (as we always do) but today the evaluation took on a new energy. The pupils discussed how each piece could be made, What materials would be best, Where we could get them and how to fit them together. Everyone contributed and the pupils took notes on their plan drawings. The teacher had little to do as the pupils helped each other and voiced their own opinions and experience to help each other. This one thinks is exactly the type of response to work that is needed in schools where pupils can voice and share their ideas. The ideas the pupils worked with were of the use of many different media and they used lateral thinking when suggesting media ranging from card, clay and household pipe insulation. It was a real buzz to observe this transfer of ideas after many attempts to get this kind of energy and diverse thinking in previous class evaluations.



The class did need some help from the teacher on what container shapes might suit them best. But once the teacher had discussed two of the pupils work with the group the rest just matched the shapes with their objects themselves. The class just needed a prompter to allow them to think for themselves. Again one thinks due to a lack of confidence not that the class couldn't think for themselves. The class had to draw their chosen container from three different angles - plan the drawings. Then they adapted the container to their model by drawing the model over the container looking at it from the different angles, understanding how the object will look from the different angles. (fig 6)

The class completed the drawing aspect in good time allowing a lot of time for the evaluation. This part of the lesson was very successful. The class had a discussion that was typical of what one understands the aims and objectives of this programme are asking for. The class sat around as a group to discuss each others work (as we always do) but today the evaluation took on a new energy. The pupils discussed how each piece could be made. What materials would be best. Where we could get them and how to fit them together. Everyone contributed and the pupils took notes on their own drawings. The teacher had little to do as the pupils helped each other and voiced their own opinions and experience to their each other. This one thinks is exactly the type of response to work that is needed in schools where pupils can voice and share their ideas. The ideas the pupils worked with were of the use of many different media and they used lateral thinking when suggesting media ranging from card clay and household pipe insulation. It was a real buzz to observe this transfer of ideas after many attempts to get this - an energy and diverse thinking in previous class evaluations.



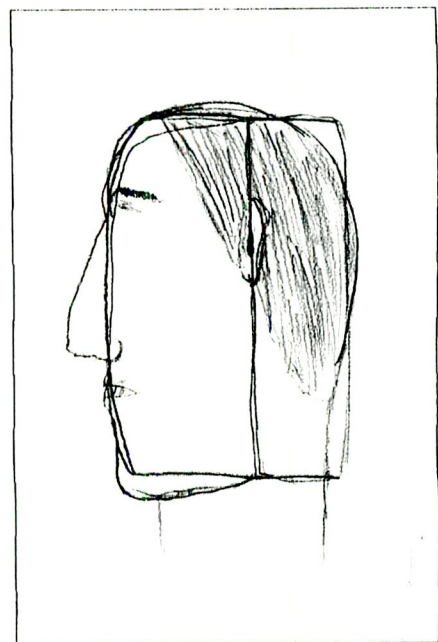
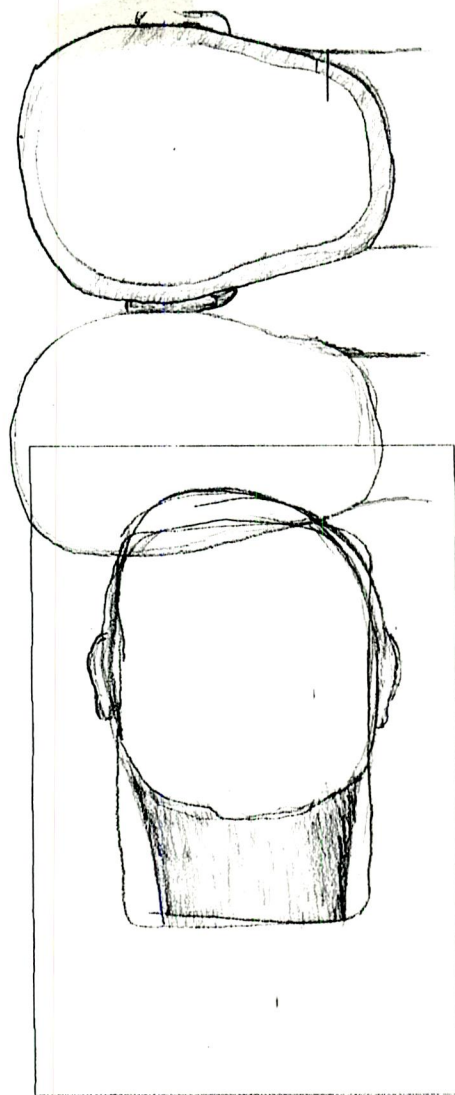


Fig 6 : Pupils work from lesson 3 - Plan drawings of a container using chosen object.



Fig. 6 : Pupils work from lesson 3 - Plan drawings of a container using chosen object.

### Footnotes chapter 3

1. Kieran Meagher - "Art,Craft and Design syllabus - *"The Changing Curriculum"*  
Dublin 1990 ,O'Brien education in association with the Irish association for  
Curriculum development, pg 26



### Footnotes chapter 3

1. Kieran Meagher - "Art, Craft and Design syllabus - 'The Changing Curriculum'"  
Dublin 1990, O'Brien education in association with the Irish association for  
Curriculum development pg 28

## CONCLUSION

*Does lateral thinking aid the achievement of the aims and objectives of the programme?*

*Is lateral thinking encouraged through this programme?*

*Is the current Junior Cert programme providing the framework for the governments aims and objectives for the country's teenagers, or are the aims too high for these pupils?*

We can see from chapters one and two that lateral thinking does aid the achievement of the aims and objectives of the Junior Cert in theory. I think the last class evaluation with this group of Junior Certs also shows that the encouragement to think laterally can give the pupils the freedom and confidence to voice their opinions and help each other in the process. This I think shows that lateral thinking does aid the aims and objectives of the Junior Cert in practice as well as theory. ✓

We can look at question two by examining the responses given by the pupils to a questionnaire about their project. When asked "Are you enjoying this project?" The answer from the majority was "No", "Why"? "Its too stressful", "No, because its not done". We can see from these responses that although I can see the group are getting into the project they do feel under a lot of pressure to get the final product finished. This is obviously going to inhibit the pupils from reaching their full potential in this project and also takes away the freedom to think for themselves and express themselves as they are under so much pressure for time. The pupils seem to rely more on the teachers opinion and guidance as they are under pressure and this inhibits their confidence in their own opinion and they feel they must get the final product done and done quickly and the teacher knows what is best so they rely on the teacher to think for them instead of having the freedom to think for themselves. I know a certain amount of this pressure is self inflicted with absenteeism and yet I can't help thinking if the course was spread over two years or lessened in some way a lot of this stress could be eliviated. I also think that if the group were prepared for the Junior Cert and its demands on them personally from 1st year that the level of stress could be lessened. We can see that to achieve the aims and objectives the pupils need more time and preparation to be able to think

## CONCLUSION

Does lateral thinking aid the achievement of the aims and objectives of the programme?

Is lateral thinking encouraged through this programme?

Is the current Junior Cert programme providing the framework for the government's aims and objectives for the country's teachers or are the aims too high for these pupils?

We can see from chapters one and two that lateral thinking does aid the achievement of the aims and objectives of the Junior Cert in theory. I think the last class evaluation with this group of Junior Certs also shows that the encouragement to think laterally can give the pupils the freedom and confidence to voice their opinions and help each other in the process. This I think shows that lateral thinking does aid the aims and objectives of the Junior Cert in practice as well as theory.

We can look at question two by examining the responses given by the pupils to a questionnaire about their project. When asked "Are you enjoying this project?" the answers from the majority was "No", "Why?" "It's too stressful". No, because it is not fun. We can see from these responses that although I can see the group are getting into the project they do feel under a lot of pressure to get the final product finished. This is obviously going to inhibit the pupils from reaching their full potential in this project and also takes away the freedom to think for themselves and assess themselves as they are under so much pressure for time. The pupils seem to rely more on the teacher's opinion and guidance as they are under pressure and this inhibits their confidence in their own opinion and they feel they must get the final product done and done quickly and the teacher knows what is best so they rely on the teacher to think for them instead of having the freedom to think for themselves. I know a certain amount of this pressure is self-inflicted with the time limit and yet I can't help thinking if the course was spread over two years or lessened in some way a lot of this stress could be avoided. I also think that if the group were prepared for the Junior Cert and its demands on them personally from the year that the level of stress could be lessened. We can see that to achieve the aims and objectives the pupils need more time and preparation to be able to think



laterally, be creative and build a sense of their own identity. So I think there needs to be work done on both the programme itself and in teacher in service to better advise the teachers on how to fulfil the programme's objectives.

When asked of the process - "Is it harder than you expected?" some replied "No" but more said "Yes", "Why?", "Because of all the studies and measuring and planning". They understand the need for the process and yet still believe that it is more important to get the finished piece done and they can then work the preparatory studies for the examiner. The preparatory work is for the examiner only in their eyes. The pupils have not been trained to see the value of the process to themselves. It is difficult to get the pupils to believe in the personal growth available to them through the design process when one begins working with them in November of their 3RD year and one only works with them once a week.

Although we have not have begun the construction stage of this project we have just completed the design stage, I did ask the pupils whether they feel the construction stage will be more difficult or easier than the design stage. The response to this question was almost half and half. Half of the class anticipating the construction may be more difficult than the design stage and half felt the design stage was more difficult than the construction stage will be. The half of the class that feel that the construction will be easier are also quite good at metalwork, so this make explain their ease with construction.

When asked what they need next almost every one said materials to make the container. Only one pupil said help from the teacher to come up with the best materials and method of construction for his container. It is interesting to note that this one pupil was not in class for the last lesson when the class discussed materials and techniques together. He sounds like he is panicking and as he is feeling the pressure he is relying on the teacher to give him ideas.

The conclusion that I draw from this study is that the pupils lack confidence in their own ability and yet when offered a project that they can work on together they seem to lose their inhibitions. The programme for Junior Cert does offer the opportunity for lateral thinking and yet the reality of this programme in the classroom is that almost all thinking is inhibited due to the pressure of completing the finished

usually be creative and build a sense of their own identity and their own needs to be work done on both the program's self and in teacher's role to better address the students on how to fulfil the programme's objectives.

I'm asked of the process - "Is it harder than you expected?" I replied "No, but more said 'Yes', 'Why?' 'Because of all the studies and measuring and planning'. They understand the need for the process and yet still believe that it is more important to get the finished piece done and they can then work on the preparatory studies for the exam. The preparatory work is for the examiner only in their eyes. The pupils have not been trained to see the value of the process to themselves. It is difficult to get the pupils to believe in the personal growth available to them through the design process when one begins working with them in November of their 3RD year and one only works with them once a week.


Although we have not begun the construction stage of the project we have just completed the design stage. I did ask the pupils whether they felt the construction stage will be more difficult or easier than the design stage. The response to this question was almost half and half. Half of the class anticipating the construction may be more difficult than the design stage and half felt the design stage was more difficult than the construction stage. The half of the class that felt that the construction will be easier was also quite good at a worksheet and make explain their ideas with construction.

When asked what they need next almost every one said materials to make the container. Only one pupil said help from the teacher to come up with the best materials and method of construction for his container. It is interesting to note that the one pupil was not in class for the last lesson when the class discussed materials and techniques together. He sounds like he is panicking and as he is feeling the pressure he is relying on the teacher to give him ideas.

The conclusion that I draw from this study is that the pupils lack confidence in their own ability and yet when offered a project that they can work on together they seem to lose that inhibition. The programme for Junior Cert does offer the opportunity for lateral thinking and yet the reality of this programme in the classroom is that almost all thinking is inhibited due to the pressure of completing the finished

product. So we can see that the programme needs to be reviewed and amended, in terms of the workload. The attitudes of teachers, pupils and parents also need to be addressed. I think one way of tackling this problem is with more comprehensive in-service available to teachers and encouraging them to communicate on a regular basis with other teachers. Another suggestion made at the Seminar for the new Leaving Cert syllabus held in NCAD Jan 1999 is to promote the art programme in schools with public advertising directed at parents. This approach was successfully used to promote the current music Leaving Cert programme.

I personally think that if I had a group to work with full time from 1st year then I could really test this theory and I fully intend to when I go back into the work force, but I have seen brief moments of hope, pupils thinking laterally, thinking for themselves, sharing their ideas and experiences and therefore developing a sense of themselves, their strengths and weaknesses. Some teachers may consider this naive and that the reality of full time teaching may inhibit me but I really do think the current situation where we can see the aims and objectives of this excellent programme not being met is really down to education for a lot of pupils and that although there will always be some who do not have the maturity at 15 to grasp the aims of their Junior Cert the majority would benefit from a review of the programme.





## SELECTED BIBLIOGRAPHY

Berger, John. *Ways of Seeing*. London: BBC and Penguin, 1972.

De Bono, Edward. *The Use of Lateral Thinking*. London: Pelican, 1971.

De Bono, Edward. *"Teaching Thinking"*. London : Penguin, 1976

## COMPONENT PARTS OF WORKS

Meagher, Kieran. "The Art, Craft and Design syllabus". *The Changing Curriculum*. Edited by Tony Crooks. Dublin 1990 , O'Brien educational in association with the Irish association for Curriculum development.

## OTHER SOURCES

*Junior Cert syllabus for Art Craft and Design*. Dublin: An Roinn Oideachais, 1989

*The White Paper on Education*. Dublin: An Roinn Oideachais, 1995

Seminar on the new draft Leaving Cert syllabus , held in NCAD Jan 1999.

ATA seminar on Junior Cert work, held at the Teachers centre Drumcondra, Nov 1998.

## ARTICLES IN JOURNALS AND PERIODICALS

Danica, Elly. "Theories on Creative Process". *Ceramic Review*. June, July, August 1995, pg 25.

Gant , John. "Nurturing Creativity in Architectural Education and Practice." *The Structurist*. No 33/34 1993/1994 : pg 22

Micheals - Pague, "Improvisation and The Creative Process." *Fibre Arts*. vol 21 Sept 1994: pg 18.

Pearlman, Chee. "A Profile Article on Edward De Bono". *Industrial Design*. vol 33. March/April 1986: pg 33.