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The effect of cross-linked learning on visual arts education

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THE EFFECT OF CROSS-LINKED LEARNING ON VISUAL ARTS EDUCATION

by

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USE OF THESIS

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

ABSTRACT

This study examined how computer technology had an effect on a Year 9 visual arts education class with regard to the Western Australian four Arts Learning Outcomes (WA 4ALO). The research was administered concurrently with a learning approach called Cross-Linked Learning (CLL) (Zervos, 1997), which consisted of three components: (1) the subject (e.g., visual arts education in relation to the WA 4ALO); (2) the learner (i.e., a target group and how they learn); and (3) the tool (e.g., computer technology).

This study addressed the problem of how to promote learning in visual arts education, especially with visual arts theory. Historically, students have preferred to make art than to study art theory subjects such as art history and art criticism/response. Furthermore, many students may have found traditional ways of learning theory to be less engaging and stimulating than making art.

For this study, a sample consisted of 19 female students from an independent secondary school in Perth for one school term. The students were divided into three groups for the three data collections methods: (1) the whole class completed pre- and post-questionnaires; (2) five pairs of students participated in pre- and post-interviews; and, (3) nine students' art portfolios representative of different levels of achievement, that were analysed at the end of the school term.

The methodology was action research. Data was collected and interpreted to answer the primary research question through four sub-questions as follows: (1.0) What was the effect of CLL on students; (1.1) What were students' attitudes towards CLL; (1.2) What skills did students require for CLL; (1.3) What knowledge did students exercise with CLL; and (1.4) What were students' preferences for learning with CLL?

The results showed that the three components of CLL had a predominately positive effect upon most students' in terms of their attitudes, skills, knowledge, and preferences. Furthermore, the students showed a first preference for learning visual arts theory in a CLL framework reflecting a social constructivist and student-centered way of learning that included using computers 75% of the time for visual arts theory instruction. This thesis demonstrates that CLL is an effective framework for the Year 9 visual arts students who participated in this study.

DECLARATION

I certify that this thesis does not to the best of my knowledge and belief:

(i)   Incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education;

(ii)   Contain any material previously written by another person except where due reference is made in the text; or

(iii) Contain any defamatory material.

ACKNOWLEDGEMENTS

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CHAPTER ONE

Introduction

Organisation of Thesis

This study examined how computer technology had an effect on a Year nine visual arts education class of female students working towards achievement of the Western Australian four Arts Learning Outcomes (WA 4ALO). The WA 4ALO consist of two visual arts practise Outcomes of Arts Ideas (AI) and Arts Skills and Processes (ASP) and two visual arts theory Outcomes of Arts Responses (AR) and Arts in Society (AS). In particular, this research examined how computer technology had an effect on students' achievement of the two visual arts theory Outcomes. This research occurred during one school term in which computer technology was implemented through a learning approach called Cross-Linked Learning (CLL), (Zervos, 1997), which consists of three components as follows: (1) the subject (e.g., visual arts education in relation to the WA 4ALO); (2) the learner (e.g., a target group and how they learn); and (3) the tool (e.g., computer technology).

Chapter One provides an explanation as to why visual arts theory became a more formal part of "visual arts education," which is the contemporary name for "art education" in Western Australia (from hereon "art education" will be referred to as "visual art education" unless it is mentioned in a historical context or in quotations). Also examined are the types of resources available for studying visual arts theory, as well as how it was taught, and how students responded to learning visual arts theory.

Following this is the significance of this study, which relates to the incorporation of a technology-centered curriculum orientation in visual arts

education. This serves to illustrate how visual arts theory may be taught to students and how it may contribute to teaching a more educative learning experience (Dewey, 1975) for students.

Then the research problem is stated followed by the primary research question and four sub-questions for this research. These are: (1.0) What was the effect of CLL on students; (1.1) What were students' attitudes towards CLL; (1.2) What skills did students require for CLL; (1.3) What knowledge did students exercise with CLL; and (1.4) What were students' preferences for learning with CLL?

Chapter Two is divided into three parts so as to examine the literature pertaining to each of the three components of CLL (subject, learner, tool). Chapter Three introduces the theoretical framework and research process adopted for this study. The next three chapters (Four, Five, and Six), provide the results of the data collected from the pre- and post-questionnaires, pre- and post-interviews and student art portfolios.

Finally, Chapter Seven closes with discussions, recommendations, and conclusions.

Background: The Beginnings of Visual Art Theory Learning in Schools

Since the early 1970s, school visual arts education has progressed towards being a more comprehensive program from what was essentially a studio-based course with little, if any, instruction in visual arts theory (Husen and Postlethwaite, 1994, p. 66; Kindler, 1992). It was generally believed that art was something that you did with your hands and not with your head (Eisner, 1987). Such practices and beliefs about art meant that students were being groomed for

careers as artists than for any other area of the visual arts. Yet, Eisner (1988) stated that people could do much more than just make art. In other words they could also look at it, understand it, and make judgements about it (Eisner, 1988, p. 189). Likewise, Payne (1985) mentioned that the three main concerns of art were "looking [at] and understanding art, talking and writing about art, and creating art" (Payne, 1985, p. 259). To fill this gap, it became apparent that more theory training was required in the visual arts education curriculum. If this occurred, it also meant that there were greater opportunities for students to have aesthetic experiences in this area.

The UK led the way in this curriculum endeavour followed closely by the USA and then Australia. In the UK, visual arts theory learning appeared with the establishment of the Four Domains (4D) (School Council, 1977 in Allison and Housman, 1998, p. 124). In the USA, it emerged within the four disciplines of Discipline-Based Art Education (DBAE). Both the 4D and DBAE endeavoured to provide a more comprehensive visual arts education program and in so doing, have had a profound effect on visual arts curricula around the world.

Not surprisingly, the 4D and DBAE also inspired visual arts education in Australia. For example, in Western Australia where this study was located, it appeared that both the 4D and DBAE were considered in the development of the WA 4ALO. The Curriculum Council of Western Australia created this in the late 1990s with the intention that all primary and secondary year students would achieve (to some extent) Outcomes in four areas as follows:

(1) Arts Ideas;

(2) Arts Skills and Processes;

(3) Arts Responses; and

(4) Arts in Society (AS).
     (Curriculum Council, 1998, p. 4).

The 4D, DBAE, and the WA 4ALO are compared to one another in Table 1.1. This shows that the WA 4ALO are similar to the 4D and DBAE in the areas of art making, art criticism, and art history/culture. They differ in that the WA 4ALO does not include a learning strand compatible to the 4D's 'Perception' or DBAE's 'Aesthetics' to any great extent. On the other hand, the WA 4ALO introduced the AI Outcome.

Table 1.1

Comparisons of the Four Domains, DBAE, and the WA 4ALO

UK The Four Domains (School Council, 1977 in Allison and Housman, 1998, p. 124)	USA The Four Disciplines of Discipline-Based Art Education (DBAE) (ArtsEdNet)	Western Australia The Four Arts Learning Strands of the WA's Curriculum Council (The Curriculum Council of WA, 1998)
		(1) Arts Ideas • Creating original ideas • Interpreting the ideas of others • Exploring arts ideas • Developing arts ideas • Presenting arts ideas
(1) Expression/Production	(1) Art Production • By making art	(2) Arts Skill and Processes • Using skills, techniques and processes • Using arts conventions • Using and adapting technologies in the arts
(2) Analysis/Criticism	(2) Art Criticism • By responding to and making judgements about the properties and qualities that exist in visual forms	(3) Arts Responses • Responding to arts works and experiences • Reflecting on arts works and experiences • Evaluating arts works and practices
(3) History/Culture	(3) Art History • By acquiring knowledge about the contributions artists and art make to culture and society	(4) Arts in Society • Valuing the arts • Understanding Australian arts • Understanding historical and cultural contexts in the arts • Understanding the economic significance of the arts
(4) Perception	(4) Aesthetics • By understanding the nature, meaning, and value of art	

Initially, students began to learn about visual arts theory through various resources such as books, slides, videos, workbooks, posters, and films to support learning in this area. Rozelle (1994) stated that many of these resources could have been borrowed free from "local libraries, universities, or the education department of a museum" (p. 46). However, these resources may have been readily available in the USA, but in Australia similar resources were often inadequate, expensive, non-existent, and/or too time consuming to bring some of

these resources together. In the case of DBAE, Kindler (1992) warned that the "scarcity of resources and other issues related to the practicality of the implementation of DBAE may act as a deterrent to appropriate enterprise" (p. 346). Without a doubt such a program that was unsupported by relevant resources was counter-productive to the teaching of visual arts theory.

Fortunately, today other resources have been introduced to this list of resources. One such contemporary resource is computer technology, which is a most useful way of learning visual arts theory. Morgan et al. (1998) discussed some of the advantages of using these new technologies:

> There are great possibilities from this new technology for the benefit of all humanity. All of the world's people potentially have access to unlimited education. Students from the most remote parts of the world can have access to leading experts. No longer will people be limited by the facilities provided by their local environment for medicine or their intellectual advancement. Problems can be addressed and solved by remote communication methods that are beyond our imagination.
> (Morgan et al, 1998, p. 12)

According to Alexander (1991), programs such as DBAE are "well-suited to interactive multimedia systems" (p. 12). For example, through multimedia CD-ROMS and the Internet, it is conceivable for art museums to provide databases of information and images of their art collections. Likewise, computer technology may also be used with the WA 4ALO and especially to address the visual arts theory Outcomes.

This study sought to examine the implementation of computer technology in visual arts education through a new learning approach developed by this researcher called Cross-Linked Learning (CLL) (Zervos, 1997) (refer to Figure 1.1).

The intention of this approach was to address and exercise students'

knowledge of the WA 4ALO; especially with the two visual arts theory Outcomes

(AR, AS). It was anticipated that this may lead to more educative learning

experiences (Dewey, 1975).

Subject

CLL

Learner   Tool
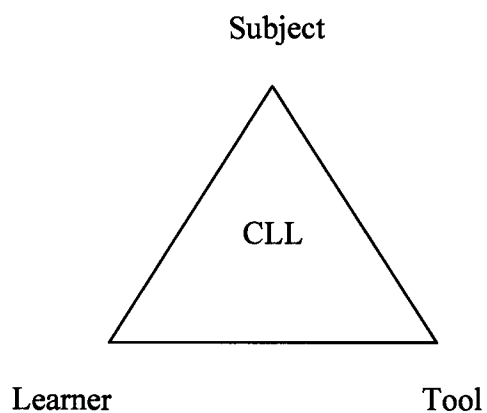
Figure 1.1 Cross Linked Learning

Significance of the Study

The significance of this research arises from the use of computer technology to promote the achievement of the WA 4ALO and in particular, the two visual arts theory Outcomes (AR, AS).

Computer technology is the primary means of learning in this research and is considered to be CLL's tool. Using computers in a visual arts education program means that a technology-centered curriculum orientation is being implemented and also that the profession is being assisted in the teaching of the WA 4ALO.

This study also sought to demonstrate to visual arts school teachers as well as museum educators how beneficial computer technology is for promoting student-centered work with the WA 4ALO and especially with the visual arts theory Outcomes, which many students have the most resistance towards. Furthermore, this research justifies to the Education Department of Western Australia how computers can play a crucial role in visual arts education and especially for visual arts theory instruction.

Background to the Problem

The problem tackled in this study was how to address and exercise knowledge in the WA 4ALO and especially in the two visual art theory Outcomes (AR, AS). It seems that the research that Paris (1999) conducted in high schools on visual arts theory learning showed that the current situation is not as educative (Dewey, 1975; Paris, 1999) as it could be. Amongst some of the reasons for this are the resources, teaching practices, and student responses to visual arts theory.

As has already been mentioned, many of the visual art theory resources found in Australia are often inadequate, expensive, non-existent, and/or too time consuming to bring together. In Western Australia, Paris (1999) found that teaching aids for such lessons included posters, prints, videos, and text (p.104). Further, Kindler (1992) believed that visual arts teachers were usually more adequately prepared to teach studio art   (p. 345) and if visual arts teachers showed any resistance to such a program as for example DBAE, it was because of "their teacher training" (Kindler, 1992, p. 346). Kindler believed that they had not been prepared "adequately to assume initiatives in developing art curricula of such broad boundaries" (Kindler, 1992, p. 346).

Paris (1999) interviewed six Western Australian middle school visual arts teachers and six classes of students about their perceptions of art history and art criticism. In this research, Paris found that visual arts teachers preferred to teach art history than art criticism. Furthermore, she found that the art history lessons were usually "brief, confined to narratives or monologues, and conducted as an aid to studio work rather than for an artwork's intrinsic value" (Paris, 1999, pp. 104-5).

Paris (1999) found it crucial that these teachers change the way that they teach their students if Outcomes were to be achieved, and thus made two recommendations. Firstly that visual arts teachers demonstrate in class more often their verbal and written responses to artworks and secondly, that professional development was urgently required in these areas (pp. 107-8).

However, it seems that no matter how much teachers are prepared to teach theory that students still prefer to make art rather than to study art. Paris (1999) found that teacher's perceptions of what they thought students could tolerate with

visual arts theory coupled with students' power to manipulate learning content often meant that visual arts teachers were pressured to "abandon or modify educational content" (Paris, 1999, p. 105).

It seems that students resist the type of learning in visual arts theory that is essentially teacher-centred. This may be because it puts them into a position of being passive participants. However, one way that this may be overcome is to change visual arts theory learning from being teacher-centred to being student-centered. This may be potentially achieved with the aid of computer technology and would allow students to be more actively engaged with the learning.

Besides finding ways to exercise knowledge with the WA 4ALO, another problem is that there have been no studies conducted in Western Australia that have explored the effect of computer technology on students' learning in the visual arts. Townsend and Townsend (1992) stated "there is little hard research that effectively proves the ability of multimedia to enhance learning for students" (p. 23). Townsend and Townsend (1992) were aware of the fact that part of the reason for this was because technology was changing and developing at such a rapid rate that educators have not been able to keep up (p. 24). As computers have the potential to provide student-centred instruction, it seems appropriate that they be used to assist students learn visual arts theory.

For this to transpire, several initial steps need to be considered. Firstly, the use of computers has to be incorporated into a viable learning approach such as CLL (Zervos, 1997) so that it is an "educative" learning experience. Secondly, computer technology as an educative tool needs to be more fully investigated in Western Australia to show whether or not it exercises student knowledge in visual arts theory.

Research Questions

There was one primary research question and four sub-questions sought to be answered in this study as follows: (1.0) What was the effect of CLL on students; (1.1) What were students' attitudes towards CLL; (1.2) What skills did students require for CLL; (1.3) What knowledge did students exercise with CLL; and (1.4) What were students' preferences for learning with CLL?

Summary

Chapter One began with a brief introduction to all seven chapters of this study. Then background information was provided as to why visual arts theory was more formally introduced into visual arts education, which was due to visual arts education being primarily a studio-based course with minimum art theory.

This chapter then proceeded with introducing computer technology as a contemporary resource for visual art practice and theory and that it will be implemented in this study through a learning approach called Cross-Linked Learning (CLL). This has three components: (1) the subject (e.g., the WA 4ALO); (2) the learner (e.g., a target group and how they learn); and, (3) the tool (e.g., computer technology). Following this was the significance of this study, which emphasised that by using a technology-centered curriculum orientation that it may possibly assist students to address and exercise their knowledge with all WA 4 ALO instead of just the preferred art practice Outcomes (AI, ASP). Following this was the background to the problem that stated that visual arts theory programs were not as educative as they could be due to limited resources, teaching practices, and student responses to visual arts theory. Finally, this chapter concluded with the primary research question (effect) and four sub-questions (attitude, skills, knowledge, preferences).

CHAPTER TWO

Review of the Literature

Introduction

This section is divided into three parts that explores the literature written about each of the three components of Cross-Linked Learning (Zervos, 1997). The three components of CLL are the following:

(1) The subject (i.e., a school subject such as visual arts education in relation to a school's curriculum such as the WA 4ALO);

(2) The learner (i.e., a target group such as a Year 9 visual arts education class and how they learn); and

(3) The tool (i.e., computer technology).

The first part of this literature will focus on CLL's subject. The literature begins with a history of visual arts education over the past 200 years in the UK, USA, and Australia. This is examined to see how visual arts practice and theory began in the UK and then spread to the USA and Australia. This history also identifies some of the key players and the circumstances that led to the reasons for why visual arts education began. In addition, the literature presents how Australia adopted and/or adapted these pre-existing visual arts education practices from the UK and USA that eventually contributed to the creation of the WA 4ALO.

This literature also highlights how four Educators have classified visual arts education over this 200-year period. That is, Efland (1990) provided four models of visual arts teaching; Eisner (1972) identified three curriculum orientations in visual arts education; Frayling (2002) highlighted three distinct phases in visual arts education; and finally, Boughton (1989) provided three phases in Australian visual arts education.

However, visual arts education is continuing to change and we are now in the midst of the computer age. This is also impacting on visual arts education and for this reason, I have also classified the history of visual arts education into three phases: (1) Industrial; (2) Individual and Collective Hand, Head, and Heart; and (3) Techno Art Education.

The second part of the literature reviews CLL's learner and how students learn most effectively. This takes a constructivist stance beginning with John Dewey and concluding with Howard Gardner's theory of the multiple intelligences.

The third part of the literature addresses CLL's tool, which in this research is computer technology. Also examined is its application as an educational learning tool.

CLL's Subject: Visual Arts Education

1800s: Industrial Visual Arts Education

Public visual arts education in the 1800s may be referred to as industrial visual arts education because industrialism played such a major role in shaping the beginnings of public visual arts education.

This section will outline the beginnings of industrial visual arts education in the UK, USA, and Australia. In particular, the role that the UK's 'South Kensington system' played in starting public visual arts education in that country as well as in the USA and Australia.

Industrial drawing begins in the UK.

In the first part of the nineteenth century the UK was competing against France and Germany in their design of industrial products. This spurred the UK into action to raise "their standards of industrial design in order to compete favourably with European business in taste, style, and beauty" (Hurwitz and Day, 1995, pp. 20-21).

This led to the formal training of all craftspeople and designers throughout England who before that time, had been trained in small businesses:

> In the past, designers were trained and apprenticed within the workshops of individuals and they produced the kind of products which that person made, went on doing so, and in turn trained their sons to do the same thing.
> (Stevini, 1968, p. 181)

By the mid-1800s, public visual arts education in the UK was backed by the Education Act (Stevini, 1968, p. 33).

One of the most famous schools during this time was London's School of South Kensington. Young (1986, in Aland, 1991) noted that this School arose as a result of socio-economic (Young, 1986, p. 235 in Aland, 1991, p. 46) and industrial factors. Previously, this was the former Government School of Design that was based in London and began in 1837 (Frayling, 2002, p. 3). Frayling (2002) pointed out that this School dealt with the "head" (Frayling, 2002, p. 4) rather than the "hand" or the "heart".

> The point of the Government School of Design was to train young people to work as designers or 'ornamentists' in manufacturing industry, especially the textiles, ceramics, and vehicle industries. It was the result of a period of economic optimism and expansion, and the educators were confident that once the School's students had learned their grammar—had learned to use their heads to absorb information—they would then be able to go out into industry and improve the visual quality of everyday products.
> (Frayling, 2002, p. 4)

Frayling also noted that this School was not meant to train artists as "art was for the Royal Academy; design for the Government School" (Frayling, 2002, p. 3). Furthermore, the students were only allowed to draw still objects and not anything that moved or was still alive (Frayling, 2002).

> So all the students would start with geometric shapes, then progress to copying a range of architectural details from books or dictionaries, then, if they were lucky, they could copy objects in glass cases—plaster castes of famous sculptures, ceramic tiles, metalwork bowls and so on. These objects played a key part in the curriculum—and the teachers collected so many of them...that they eventually ran out of room and had to found what is today the Victoria and Albert Museum in order to house them.
> (Frayling, 2002, p. 3).

When the School moved to London's South Kensington, it came to be known as the South Kensington system, where, according to Frayling (2002), "some of it still resides" (Frayling, 2002, p. 4).

Henry Cole, who is reputed to have been the mastermind of the first Great Exhibition of manufacturers in 1851 (Frayling, 2002, p. 4), was Head of the School at South Kensington. Working with him was Richard Redgrave, who was an Art Superintendent and later Inspector-General of Art. Redgrave prepared what was essentially an imitative drawing course with four divisions and 23 stages of drawing (Aland, 1991). This course was inspired by the Eighteenth Century European Academies of Art (Hammond, 1981). Macdonald (1970) described this course:

> The Stages...were mechanical steps to the acquisition of 'hand-power'. Twenty-one were successive exercises in copying from the Flat, or Round, or Nature, intended as Redgrave asserted, to be 'strictly imitative' until Stages 22 and 23 were reached – a most unlikely eventuality. Only a minority of students ever reached stage 10; indeed, sometimes about half of all the students, even in a larger School of Art, such as the one in Manchester, were only at Stage 2.
> (Macdonald, 1970, p. 288 in Aland, 1991, p. 46)

Frayling (2002) referred to this time as being driven by a "normative" tradition (p. 4) and provided four basic assumptions about this period in British visual arts education:

(1) that the education system was <u>reactive</u>—reactive to perceived needs within the industrial system;

(2) that design was something you did <u>to</u> things—things which were provided by the great Victorian machine;

(3) that aesthetics could be separated from manufacture; and

(4) that the role of design schools was to do the thinking. (Frayling, 2002, pp. 4-5)

As Australian visual arts education also began as a result of the industrial revolution, but at a later time, Frayling's (2002) four assumption applied to Australia as well.

A reaction to industrial drawing in the UK.

However, not everyone in England embraced the South Kensington system, which dealt primarily with the "head" and had "too much thinking, not enough action" (Frayling, 2002, p. 5). One consequence of this was the evolution of the Arts and Crafts movement, which brings us to the attention of the "hand" part of visual arts education.

This movement had an effect throughout the world and eventually led to the "erosion" of the South Kensington system (Bird, 1992, abstract). In Europe, the Arts and Crafts movement had different names: in France and Belgium, it was called *Art Nouveau*; in Germany it was called *Jugendstil*; and in Austria it was called *Secession* (Craftsman Perspective, n.d.).

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William Morris (1834-1896) was a name synonymous with the Arts and Crafts movement. When Morris was a student at Oxford University, John Ruskin was teaching there as an art history professor (Craftsman Perspective, n.d.). Ruskin had been campaigning against the "elimination of machine-made decoration and design free from foreign influence" (Craftsman Perspective, n.d.). Frayling (2002) quoted what Ruskin had written about the head, the hand, and the heart.

> The education of a young artist, he wrote, should always be a matter of the <u>head</u> and <u>heart</u> and <u>hand</u>. Art and design, he said, "must be produced by the subtlest of all machines which is the human hand. No <u>machine</u> yet contrived, or hereafter contrivable, will ever equal the fine machinery of the human fingers. The best design is that which proceeds from the heart, that which involves <u>all the emotions</u>—associates these with the head, yet as inferior to the heart; and the hand, yet as inferior to the heart and head; and thus brings out <u>the whole person</u>"
> (Ruskin in Frayling, 2002, p. 2)

What Ruskin had been advocating made sense to Morris and he made it his business to put into action what Ruskin had been advocating. By 1859 Morris instructed a colleague of his to build him a home. This house came to be known as the Red House, which brought to fruition the Arts and Crafts movement. What made this house stand out from others at the time was that it was a "hand-made" house. It was custom-decorated and designed rather than mass-produced. Morris went to considerable lengths to have it furnished "with simple, custom-crafted furniture, wallpaper, tiles and accessories specifically designed to fit the home" (Craftsman Perspective, n.d.).

The Arts and Crafts movement also inspired the curriculum of London's Central School where "there was a new emphasis on studio practice, and especially the crafts of throwing pots, working metal, making furniture, and weaving" (Frayling, 2002, p. 5). Later in the 1950s, the Arts and Crafts movement

was resurrected as England's basic design movement, which is discussed in the section regarding English visual arts education during the 50s. This basic design movement came about via the *Bauhaus* movement (Germany, 1920's), which itself had been inspired by England's Arts and Crafts movement.

Frayling called this time in British visual arts education as a "critical" tradition with four basic assumptions being the following:

(1)   that the education system was still reactive—but reactive in a very different way: reactive to, and disengaged from a world where—to quote John Ruskin again—"shoddy is king";

(2)   that doing was designing—less a question of grammar and information than a question of usage;

(3)   that aesthetics were a challenge to the world of manufactures; and

(4)   that the role of the design schools was to provide a practical alternative—protected from the market—a criticism embodied in artefacts.
(Frayling, 2002, p. 7)

Industrial drawing reaches the USA.

During the mid-nineteenth century, poorly designed American industrial goods failed to attract strong local demand. Kern (1985) noted that these goods were "inferior in design" (Kern, 1985, p. 40). In fact, in 1852 America imported "$36,000,000 worth of textiles from Great Britain and $11,000,000 worth from France" (Belche, 1946, cited in Eisner and Ecker, 1966, p. 2). So as to "produce products that were attractive to people abroad as well as to those in [America]" (Eisner and Ecker, 1966, p. 2), the people of Boston turned to England for guidance and direction as they had done so on so many other occasions regarding their cultural and commercial pursuits.

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It was in the state of Massachusetts that drawing first appeared as a

mandatory subject. This came about as a consequence of a growing industrial

period in the 1850s and 1860s (Eisner and Ecker, 1966).

The outcome of this was the Industrial Drawing Act of 1870 (also known as

the Massachusetts Free Instruction in Drawing Act of May 16, 1870). This Act, a

first of its kind in America, required drawing to be a mandatory subject in schools

and for other provisions to be made in industrial or mechanical drawings so that it

could be taught to anyone 15 years and over in any town or city with a population

of more than ten thousand (Kern, 1985; Bolin, 1985).

One year after the Act was passed, Walter Smith, a teacher of Industrial

Drawing and Crafts from South Kensington School (Eisner and Ecker, 1966, p.

3), was recruited from England to oversee the workings of this Act.

> Walter Smith was a graduate of Somerset House School of Design in
> London, which later became the National Training School of Art in
> South Kensington. This would be the headquarters of the
> Department of Science and Art which exercised control over the
> teaching of drawing in the public schools in Britain.
> (Hilson, 1987, p. 46)

While in Massachusetts, Smith was employed in three roles:

(1) the Supervisor of drawing in public schools of Boston;

(2) the state Director of art education for Massachusetts; and

(3) in 1873 he was the founder and principal of the Art Normal School
     that prepared teachers of art.
     (Eisner and Ecker, 1966, p. 3; Green, 1966 in Hurwitz and Day,
     1995, p. 21; Mock-Morgan, 1985).

These positions required Smith to work three-fifths of the time with the city

of Boston and two-fifths of the time with the state (Eisner and Ecker, 1966, p. 3).

At the Massachusetts Normal Art School he "adopted a modified version of the

imitative, representational academy method of drawing and composing for the art

classes" (Mock-Morgan, 1985, p. 234). Smith described the type of drawing he

aimed for:

> The kind of drawing which the state of Massachusetts requires that
> its citizens shall have the opportunity of studying, is called
> "Industrial drawing;" and wisely so called, for in that lies the
> justification of its public action in the matter.
> (Smith, 1872, cited in Efland 1990, p. 11)

Smith also wrote a series of drawing books to carry out his drawing

curriculum. Hurwitz and Day (1995) stated what the aims of these books were as

follows:

> (1)   to train the eye in the accurate perception of form, size, and
> proportion and to exactness in the measurement of distances
> and angles.
> (2)   to train the hand to freedom and rapidity of execution.
> (3)   to train the memory to accurate recollection of the forms and
> arrangements of objects.
> (4)   to cultivate and refine the taste by the study, delineation, and
> recollection of beautiful forms.
> (Hurwitz and Day, 1995, p. 22)

Smith's own version of the South Kensington system that was an example

for other states to follow (Hilson, 1987, p. 47), contributed to his reputation of

being known as the father of American public school art education (Chalmers,

1985, p. 108). In spite of his groundbreaking work in Massachusetts, Smith

returned to England in 1885 where he became the headmaster of a large English

art school (Eisner and Ecker, 1966, p. 4).

Industrial drawing arrives in Australia.

In Australia, news about the South Kensington system of drawing and the

work of Walter Smith eventually reached New South Wales although at a much

later date than when it reached the USA. Boughton (1989) referred to this first

period in Australian visual arts education as the "hand-eye training" phase (p. 197). This was from the late nineteenth century to World War 1 (1914 to 1918).

Like the USA, Australia was also influenced by the South Kensington system and eventually imported South Kensington trained Englishmen to introduce this system in several Australian states.

However, prior to the deliberate importation of South Kensington trained visual arts teachers, there was one Englishman who had migrated to Australia on his own accord. This was Joseph Fowles who came to New South Wales in 1838. Fowles was considered to be the 'Father of Drawing' in Australia (Hilson, 1991, p. 59). Besides being a marine and racehorse artist, Fowles was also a teacher who practised the South Kensington system. In 1847, he began teaching drawing at several private schools in Sydney that included Sydney College, King's College, and Lyndhurst College (Hilson, 1984, p.70). In 1853 he became the Drawing Master at Sydney Mechanics School of Arts and one year later (1854) he also became the part-time Drawing Master for the National Board of Education in which he trained and examined young visual arts teachers (Robb and Smith, 1993). During the 1850s, Fowles wrote a series of books called the Drawing Books that were based on the South Kensington system and were also used in Queensland (Hilson, 1991).

However, Fowles died in 1878 and there was no one employed to replace him even though "the annual reports of the Council of Education had been indicating dissatisfaction with the teaching of drawing in the school for some time" (Hilson, 1987, p. 51).

In the meantime, South Australia employed the Englishman Harry Pelling Gill, who had been trained and taught at South Kensington (Aland, 1991, p. 45

and p. 48), to implement the South Kensington system and to write the Course of

Instruction. He arrived in late 1882 and became the Head of the School of Design

until his death thirty–four years later in 1916.

Back in NSW, almost a decade after Fowles had died, the Combes Report

(1887-8) brought attention to the NSW Department of Education the work of the

South Kensington system. Also, this Report highlighted some of Walter Smith's

writings that were originally directed to the English Royal Commission (Hilson,

1987, p. 46). This resulted in the NSW Department of Education turning to

England, to find a new Superintendent of Drawing. This is what the USA and

South Australia had also previously done as well. In 1889, they imported

Frederick Woodhouse to act in the same capacity as Walter Smith had done in

America (Hilson, 1987 in Boughton, 1989, p. 198). Woodhouse remained for four

years. In August 1903 he resigned and, like Walter Smith, returned to England

(Hilson, 1984, p. 75). Mandelson (1985, p.36) described Woodhouse's approach:

> The drawing course he developed included five main forms of
> drawing: object, memory, design, geometric, and scale drawing.
> Expressive drawing was also included, but less frequently.

The Sociocentric Focus or Society-Centered Curriculum Orientation.

This industrial visual arts education was what Eisner (1972) referred to as

having a sociocentric focus or society-centered curriculum orientation (Eisner,

1972, p. 58). According to Eisner, there was an emphasis upon "group welfare

and meeting a community's needs through social values and studying broad,

social problems" (Clark, 1991, p. 3). Eisner (1972) explained what the society-

centered curriculum orientation meant:

> The society-centered view considers education as formalized through
> the public schools a social mechanism whereby the cultural heritage

can be passed on to the younger generation. It sees the curriculum of
the schools should emphasize the development of these skills. If the
society in which the school functions has needs to be met with respect
to air pollution or race relations, the curriculum of the school—
including the curriculum in art –is to meet these needs. Walter Smith's
Massachusetts…[and] the Owattana Art Education Project are vivid
examples of society-centered approaches to curriculum in art
education.
(Eisner, 1972, p. 59)

A more contemporary approach to a society-centered orientation may stress

environmental education and improvement, multicultural, multiethnic, or global

education (Clark, 1991, p. 4). A society-centered orientation has appeared as part

of the curriculum from time to time, but played a less important role compared to

the subject-centered and child-centered approaches.

The Mimetic-Behavioural Model.

The eye-hand training imbedded in industrial visual arts education was also

identified in Efland's (1990) Mimetic-Behavioural Model (refer to Table 2.1).

This stressed that "art is imitation and learning is by imitation" (p. 14). Therefore,

students could learn by imitation while the teacher controlled the environment by

"what shall be presented, in what sequence, level of difficulty, frequency, and

intensity" (Efland, 1990, p. 14). For example, a teacher might have had as an

objective the following: "Using the medium of charcoal the students will prepare

a nine-step gray scale including black and white" (Efland, 1990, p. 14). The

students learnt new behaviours by imitation, which was reinforced with rewards,

as was traditionally the case. For example, during the seventeenth century, the

Academies awarded art prizes for good performance (Efland, 1990, p. 14).

Table 2.1

Mimetic-Behavioural Model (Efland, 1990, p.15)

Components of Mimetic Aesthetics	Components of Behavioural Educational Theories	Prescription for Art Education
Nature of Art Art is imitation and reflects knowledge of nature	Nature of Knowledge Knowledge is inferred from behaviour	CONTENT Defined as behaviours; skills, discriminations, e.g., drawing painting, perspective etc.
Creative Process Is by inspiration: the power to make convincing representation of nature	NATURE OF TEACHING Is by controlling students through the power of convincing representations	TEACHING METHODS Involve demonstration and modelling of desired behaviours
Response to Art Is felt as pleasure: The power to reinforce the viewer	NATURE OF LEARNING Involves practice at making imitations	STUDENT ACTIVITIES Copying drawings, copying nature
Value of Art Learning Is determined by presentations of goodness	VALUES OF EDUCATION Is described as value neutral: It can impart good or bad values	EVALUATION OF LEARNING Through measurement of behaviour change

1900s: Individual and Collective Hand, Heart, and Head Art Education

This section begins by exploring what took place in visual arts education in the USA during the early 1900s. That is, Dow's synthetic form of visual arts education, which focused on the elements of art and principles of design. These continue to be practised in art schools and university visual arts education programs today in the USA as well as in Australia.

This section then proceeds with a discussion of child art during the early 1900s supported by the Arts and Crafts movement and the Progressives. This began with Franz Cizek's work in Vienna and then moved on to the child art movement in the UK with Marion Richardson, in the USA with Victor Lowenfeld, and in Australia with Robert Hetherington, who was based in Western Australia.

Although visual arts education in the 1800s was essentially an industrialised form of "hand" visual arts education, by the 1900s visual arts education changed to include the "head" and the "heart". The head, hand, and heart, which were terms attributed to John Ruskin and also the name of a paper presented by Professor Sir Christopher Frayling (2002), were practiced separately or in combination with each other.

Synthetic visual arts education and Arthur Wesley Dow.

In the USA, the drawing curriculum was eventually replaced by Arthur Wesley Dow's "synthetic" system of teaching, which focused on the elements of art and principles of design. Dow, who had written *Composition* in 1913, was the first art educator and artist to identify and classify the "synthetic" system of art (Mock-Morgan, 1985, p. 234). Dow was also responsible for moving the training of visual arts teachers out of the art academies (Mock-Morgan, 1985, p. 234) and into educational institutions such as colleges and universities.

Dow, who was born in 1857 in Ipswich, Massachusetts (Hook, 1985, p.237), was a painter, visual arts teacher, and art administrator (Hook, 1985). When Dow went to Paris, he studied art at the Academie Julian during the day while in the evenings he studied with Jean-Francois Millet at the Ecole National des Arts Decoratifs. On Sundays, Dow spent his time at the Louvre (Hook, 1985, p. 239).

By the time he returned to Massachusetts, he realised that "Boston was but a satellite of Paris and that America as a nation did not have a recognisable style of art" (Hook, 1985, p. 239). According to Hook (1985), Dow "planned to incorporate and invent a truly American way to teach art expression." (p. 239). His quest eventually led him to meeting Ernest F. Fenollosa who was also

originally from Massachusetts. Fenollosa was Curator of the Japanese collection

at the Boston Museum of Fine Arts (Hook, 1985, p. 239) and introduced Dow to

Japanese art that further inspired him to begin "his search for an all-American

form of expression, based on the mysteries of Japanese design" (Hook, 1985, p.

239).

Dow successfully managed to divert the schools from training student minds

by means of imitation and accurate representation, as the academies had

previously accomplished, towards an individual expression of creativity and

appreciation for the elements of design. (Hook, 1985, p. 238). As Mock-Morgan

(1985) discovered, Dow's work was accepted basically for three reasons:

(1)   the publication of his textbooks, and his lectures, which
      were primarily based on his system;

(2)   his position at Pratt Institute from 1895 until 1904, and
      at Teachers College, Columbia University as head of
      the Department of Industrial and fine Arts from 1905
      until 1922; and

(3)   his many pupils from both Pratt and Teachers college
      who staffed the art classes of many schools in the
      United States until the late 1940s.
      (Mock-Morgan, 1985, p. 234)

The Scholiocentric Focus or Subject-Centered Curriculum Orientation.

The purpose of Dow's approach to visual arts education moved the

emphasis of education from being a sociocentric focus to a scholiocentric focus.

This meant that the center of attention was now on the subject. Clark (1991)

announced that with this type of orientation, basic disciplines of knowledge were

studied to reveal their key concepts and structures (pp. 4-5). Eisner (1972) wrote

about this second type of curriculum orientation:

The subject-centered approach to curriculum goals, content, and teaching method lays emphasis upon the integrity of the subject matter, its uses in human experience and understanding and its intrinsic value. In this view of the goals of art education, the teacher is to emphasize the study of art per se: he is to help the student learn to see and appreciate the work of art not primarily because it will be socially useful for him to do so, but because great products of the human mind and spirit are the proper objects for educational attention. Surprisingly this orientation to art education in the United States has been emphasized the least during the course of its history. Some of the work of those in "picture study" during the first two decades of the twentieth century had this general orientation as well as during the forties, but a general and pervasive theme in the field, among the three the subject-centered orientation has been the weakest.
(Eisner, 1972, p. 59)

The subject-centered or scholiocentric curriculum orientation also ran in opposition to a third curriculum orientation called the child-centered curriculum orientation. This child-centered curriculum which focused on the child, is discussed further in this chapter under the sub-heading called "The Progressives".

The formalist-cognitive model.

Dow's form of visual arts education reflected Efland's (1990) Formalist-Cognitive Model (refer to Table 2.2). In this model, there were similarities between formalist aesthetics and cognition (Efland, 1990). The view of cognition is that "learning is the acquisition of cognitive structures" (Efland, 1990, p. 16) while formalist aesthetics is "that art objects acquire their status in art by virtue of the structural aspects of the work as an organised entity" (Efland, 1990, p. 16). What these two have in common was that "significant form" and "the idea of structure as its defining attribute" (Efland, 1990, p. 16).

The cognitive structures of art knowledge are identified in concepts, vocabularies, and elements of design seen in works of art. Together these provide the wherewithal to make, perceive, interpret, judge and

ultimately, to understand art. Value claims in formalist aesthetics are
described as intrinsic satisfactions. Aesthetic experience has
intrinsic value, and it is this quality of mind that distinguishes human
cognition from that of other species.
(Efland, 1990, p. 16)

According to Efland (1990), teachers whose approach might be termed

formalist-cognitive, needed to teach their students the skills and concepts "to

make art and to understand the art of others and it should also provide students

with procedures that enable them to make disciplined inquiries into art" (p. 18).

Efland (1990) also stated that students should be evaluated about what skills and

concepts they learnt:

For example, a student might know the fact that warm colours
advance and cool colours recede, but one should evaluate to see if
the learner can apply this knowledge to interpret the meaning of a
painting, or use this understanding to create a specific effect in a
work of art.
(Efland, 1990, p. 18)

Although Efland stated that this model emerged during the curriculum

reform movement of the 1960s, it really began with Dow.

Table 2.2

Formalist-Cognitive Model (Efland, 1990, p.15)

Components of Aesthetic Theories	Components of Education Theories	Prescription for Art Education
Nature of Art Is an object created for aesthetic experience, having formal organisation	Nature of Knowledge Is characterized by the structure of concepts which give it its disciplined character	CONTENT Should be described as conceptual and procedural knowledge
Creative Process Involves the organization of formal elements and principles	NATURE OF TEACHING Is to enable students to make discoveries of knowledge	TEACHING METHODS Should facilitate discovery by seeing discrepancies, by questioning facts
Response to Art Is made possible by knowledge of the underlying structure of art forms	NATURE OF LEARNING Is the acquisition of cognitive structures and procedures for conducting inquiry	STUDENT ACTIVITIES Developing arguments, experimenting, hypothesing
Value of Art Is found in intrinsically satisfying aesthetic experiences	VALUES OF EDUCATION Is found in intrinsic satisfactions of learning for its own sake	EVALUATION OF LEARNING Is in terms of concepts attained, application of concepts

The progressives.

A third curriculum orientation also occurred during the early 1900s. This was the child-centered curriculum orientation and, like the arts and crafts movement, was a reaction to industrial forms of visual arts education. In fact Austrian Arts and Crafts movement, which was known as *Secession*, supported the formation of the child art movement under the guidance of Franz Cizek.

The child art or Progressive movement was inspired by the writings of Johann Comenius (1592-1670) and Jean-Jacques Rousseau's (1712-1778) *Emile*, and later on by John Dewey (1859-1952). McLaran (1974), described some of the characteristics of the Progressive movement:

> The distinguishing features of progressive education practice have
> included the use of the child's level of development, mental and
> social, as the standard of achievement, rather than the mastery of a
> given body of knowledge or skills; the encouragement of each child
> to follow his [or her] own interests; an emphasis on the arts; the
> encouragement of discipline by consensus rather than edict; belief in
> co-operation rather than competition; and informality of atmosphere.
> (McLaran, 1974, p.153).

Like the Arts and Crafts movement, "child art", which was named by James

Sully (Dimmack, 1965, p. 6; Viola, 1942 in Field, 1973, p. 138), was a reaction to

the copying and imitation that was endorsed by followers of industrial visual arts

education. The focus was on the child and being given the freedom to express

themselves as they wished. This expression in visual arts education was what

Frayling referred to as the "heart" part of visual arts education (Frayling, 2002).

Efland (1990) also refers to this dimension of visual arts teaching:

> This practice would be congruent with an expressive aesthetic, which
> claims that works of art are the self-expression of artists, to be
> judged by their creativity or originality.
> (Efland, 1990, p.12)

Eisner noted the role the Progressives played and what effect they had on

visual arts education over a period of thirty years.

> The orientation that the Progressives developed to education and to
> children had profound consequences for the field of art education,
> not so much during the 1920's but during the thirty years following
> that decade. The Progressives were committed to the idea that the
> child should be free to develop naturally and that the teacher should
> function as a guide, not as a taskmaster. This meant that in practice
> the teacher was not to teach art but to unlock the creativity of the
> child by providing a stimulating environment and the necessary art
> media. Art was not so much taught as caught.
> (Eisner, 1972, pp. 49-50)

Franz Cizek was one of the leading pioneers of "child art". How he taught

art to children was quite different from how others were teaching children at the

time. Cizek said, 'I take off the lid, and the other art masters clap the lid on - that is the only difference' (Cizek quoted in Wilson, 1921 in Stevini, 1968, p. 39).

Cizek was born in 1865 in Leitmeritz, Bohemia (Dimmack, 1965, p. 7). As a young man, Cizek moved to Vienna to study art at the Academy of Fine Arts. He resided with a carpenter and his young family (Dimmack, 1965, p. 7), which changed the direction of his professional career. Cizek's interest in art soon turned to "art education" when he began providing the carpenter's children with materials to draw and paint with. Cizek was intrigued with the 'spontaneous art' (Wilson and Wilson, 1982, p. xv) that these children were producing by themselves that were noticeably different from 'school art' (Wilson and Wilson, 1982, p. xv). From these humble beginnings and with the support of Cizek's association with the Secessionists (Smith, 1985, p. 221), Cizek developed a lifelong interest in children and their art.

> He began a study of children's art—drawings done on footpaths and fences, in their homes, in schoolrooms—continually collecting examples to examine. He then made the significant discovery that there were basic differences in the nature of children's voluntary, leisure art works and those produces compulsorily in school to satisfy a teacher's requirements (Dimmack, 1965, p. 7).

In 1897, Cizek opened a Children's Art classroom. Seven years later in 1904, he began a Child Art class where he had become chief of the Department of Experimentation and Research at the Vienna School of Applied Arts (Gaitskell, et. al. 1982, p. 34). "This was a Secessionist-dominated School of Applied Arts (Kunstgewerbesschule)" (Smith 1982, pp. 28-31 and Viola, 1936 in Smith, 1985, p. 221).

Cizek also determined that there were seven stages of development in children's drawings. These were modified later on by other educators including

one of his former students, Victor Lowenfeld (Smith, 1985, p. 219). Cizek's seven

stages were as follows:

(1) Scribbling and smearing stage;
(2) Rhythm of spirit and hand;
(3) Abstract-symbolic stage;
(4) Introduction of types;
(5) Introduction of characteristics (enrichment by perceptions and experience);
(6) Differentiation of colour, form, and space; and
(7) Pure unity of 'Gestalten' (forming and shaping).
(cited in Viola, 1942, cited in Dimmack, 1965, pp.10-11).

On occasion, Cizek held art exhibitions to promote his students artworks.

His first art exhibition in England was in 1908. However, initially it received

very little attention. It wasn't until twelve years later in 1920, that he held another

art exhibition in Cambridge. This was opened by Marion Richardson and this

time, received much more attention (Hancock, 1984, cited in Holdsworth, 1988,

p. 141) due mostly to Richardson who had prepared the way for England to accept

Cizek's work with child art (Holdsworth, 1988, p 141).

Richardson had been working with child art in England. Although both

Cizek and Richardson had been both basically rebelling against industrial

drawing, they were doing this in very different ways. Richardson, who had visited

Cizek in Vienna in 1923, realised that Cizek's "pupils produced work which was

too stylized" (Holdsworth, 1988, p. 141). The similarities and differences between

these two types of child art are discussed further in the chapter regarding

Australian visual arts education during the 1960s.

Child art in the UK.

In England, Marion Richardson was basically the mother of the 'child art' movement, which was also known as the 'New Art Teaching Movement' (Holdsworth, 1988, p.88). Evidence of the way Richardson taught also influenced Australian visual arts education and is especially evident in the 1960s UNESCO film called *Approach to Art Teaching*.

> In international terms, Marion Richardson was to London what
> Cizek was to Vienna.
> (Holdsworth, 1988, p. 150)

Marion Richardson was born in 1892 in Ashford, Kent and died at the age of 54 in 1946. The day before she died, she completed writing her book called *Art and the Child*, which was then published two years later in 1948.

From an early age Richardson was talented in both literature and art. However, in 1908 when she was only 16 years old, she won a scholarship to study art at the Birmingham School of Arts and Crafts. At first, she was reluctant to go to Birmingham as the idea of technical drawing was of no interest to her. However, as her Father had died only recently, this left the family in financial difficulties (Holdsworth, 1988, p. 138) and so urged Richardson to accept this offer.

However, this School opened a whole new world for Richardson. The Headmaster, who was Robert Catterson-Smith, taught Richardson innovative ways of making art than what she had previously experienced. Catterson-Smith advocated the "shut-eye" drawing technique that relied on memory (Holdsworth, 1988, p. 139).

> Catterson-Smith used to show lantern slides of historic ornament and
> objects, which the students were asked to memorise and then draw

from memory with their eyes shut before completing a finished
drawing with eyes open.
(Holdsworth, 1988, p. 139)

This process appeared to assist students to create "art" rather than just

drawing and copying objects.

This had the additional benefit of releasing drawing from its servile
role in relation to other disciplines, raising it to the status of a
creative art in its own right.
(Thistlewood, 1985, p. 82)

By the time Richardson began teaching, she was eager to test this "shut-eye"

method upon her students. However, she did not have access to slides or lanterns

as did Catterson-Smith, so Richardson modified this "shut-eye" drawing

technique with what she called "word pictures". These were "narrative

descriptions of scenes or emotions" (Smith, 1996, abstract).

With this method, she would ask students to close their eyes while she

described colours or a particular scene. The students then used their imagination

to create a picture of this scene in their minds and then once they had a clear

picture of what they wanted to paint, would then open their eyes and begin

painting. The main differences between Catterson-Smith's and Richardson's ways

of teaching art was that Catterson-Smith's students were first shown objects in

slides and lanterns and then relied on their photographic memory of these objects

to draw or paint. On the other hand, Richardson's students first heard words or

"picture words" and then used their mind's eye to visualize and imagine these

before drawing or painting them.

The important point is that she began to realise that it was the
strength of the pupil's mental image which seemed to give rise to the
most interesting and successful art. This idea became the centre of
her philosophy and eventually governed all her teaching methods.
(Holdsworth, 1988, p. 139)

Her students' artworks also reflected a shift from imitative technical drawings to something more in line with art.

Frayling (2002) referred to this time beginning with expression in visual arts education as the "expressive" tradition (p. 9) and that it had four basic assumptions:

(1)   That the education system should aim to be proactive—nurturing the generation of next season, or perhaps tomorrow;

(2)   That design was something you did in a social and cultural world—a world of images—rather than just to things;

(3)   That if industrialists didn't take advantage of the products of the greenhouse, then so much the worse for them; and

(4)   That the role of design schools was to provide an environment within which talent could flourish.
(Frayling, 2002, p. 10)

Child art in the USA.

In the USA, Victor Lowenfeld a former student of Franz Cizek (Smith, 1985, p. 221), led the way in the child art movement. Lowenfeld emigrated from Vienna to the USA and in 1945 began teaching at the Pennsylvania State University (Artsword, 2002, p.4).

Like Cizek, Lowenfeld conducted research on the stages of children's drawings. He was convinced that there were six predetermined stages of creative and mental development that corresponded to certain age groups. These were as follows:

(1)   Scribbling stage (2 to 4 years);
(2)   Preschematic stage (4 to 7 years);
(3)   Schematic stage (7 to 9 years);
(4)   Gang Age or Dawning Realism stage (9 to 12 years);
(5)   Pseudo-Naturalistic stage (12 to 14 years); and

(6)   Adolescent Art stage (14 to 17 years)
       (Lowenfeld and Brittain, 1975, pp. viii-ix).

Most of the Year 9 students in this research are in the Adolescent Art stage because of their ages. However, there may be some students who are still in the previous stage. The Adolescent Art stage is the beginning of "purposeful learning in art" (Lowenfeld and Brittain, 1975, p. 339) as the students are now ready to receive outside help with art skills and techniques. If there is no intervention from the visual art teacher or anyone else at this stage, then it is likely that the students may remain at their former level of creative development.

Lowenfeld (1975) believed that even at this last stage of development, that student needs were still paramount and that they were entitled to "express their thoughts, emotions, and reaction to their environment" (p. 348). Therefore, the teaching of skills could be introduced with "the purpose of fostering individual self expression" (Lowenfeld and Brittain, 1975, p. 364). Furthermore, Lowenfeld identified that the program should be more than just "grooming" (Lowenfeld and Brittain, 1975, p. 339) students for an art career as the "high school art program should be based upon young adults who are involved in and concerned about today's world" (Lowenfeld and Brittain, 1975, p. 348).

Although the child art movement was eventually questioned, Lowenfeld's stages provided a framework from which one could gauge where students were in their artistic development. From this, they could determine if students were above or below standards of artistic development.

Child art in Australia.

In Australia, the child art movement had not yet caught on as it had in England and America. However, Mandelson (1985) noted that Western Australia

led the way in this child art movement from as early as 1924. This was due to

Robert Hetherington.

> The Circular indicated that Hetherington joined the W.A. Education
> Department as Art Master after February 1927 and was appointed
> Superintendent of Drawing after February 1929 and before February
> 1930. He died 12 April 1938.
> (Mandelson, 1985, p. 43)

In 1929 Hetherington had just returned from overseas and "made a dramatic

plea for reform in the Western Australian Education Department journal, The

Education Circular" (Hetherington, 1929, pp. 8-10 in Mandelson, 1985, p. 38):

> So far as the new movement in child art has gone we have found by
> comparison, particularly with the art of the children of Central
> Europe, that our school work is being hindered in its progress by the
> impediments of the past…Our work, apart from exceptions here and
> there, has not so much child art as imitation adult art.
> (Hetherington, 1929, p. 9 in Mandelson, 1985, p. 38)

The pediocentric focus or child-centered curriculum orientation.

According to Eisner, this type of visual arts education reflected a third

focus or curriculum orientation known as a pediocentric focus or child-centered

curriculum orientation (Eisner, 1972, p. 58). Eisner (1972) explained what the

child-centered view meant:

> The child-centered view of the goals, content, and methods of the
> field starts with the premise that the content of educational programs
> in the arts or elsewhere is to be used primarily to unlock the potential
> that each child possesses, that educational content is instrumental to
> self-realization, and that the first responsibility of the teacher is to
> know the child well enough to help him develop his own interests
> and aptitudes. American education during the twenties and thirties,
> and to some degree in the 1890's, tended to see the mission of art
> education in this light.
> (Eisner, 1972, pp. 58-59)

Eisner (1972) also clarified that this had more to do with what was coming

from within the child rather than from external forces:

The view of the child's development, and of the teacher's role with respect to it, is based on the assumption that the child develops best from the inside out, rather than from the outside in. In a sense it is reminiscent of Plato's belief that the task of education is to turn the individual's attention to the content of his soul: the educational problem for Plato was one of recollection.
(Eisner, 1972, p. 51)

Clark (1991) pointed out that with this child-centered view in visual arts education that children were encouraged to express their "personal needs and develop individual abilities and capacities for self-expression in art" (p. 3). Clark (1991) also maintained that a child's physiological, emotional, and intellectual development should be studied so as to design appropriate courseware (p. 3).

The expressive-psychoanalytic model.

The child-centered approach to learning also reflected Efland's (1990) Expressive-Psychoanalytic Model (refer to Table 2.3). This model aimed to have self-realised individuals because art was perceived as "a product of the artist's imagination and person-centered education, where knowledge is a personal construct validated in the feeling life of the learner" (Efland, 1990, p. 16). This model illustrated that art was a means of art therapy and had opportunities for personal growth through the expression of "ideas, feelings, and emotions" (Efland, 1990, p. 16).

Table 2.3

Expressive-Psycholanalytic Model (Efland, 1990, p.17)

Components of Aesthetic Theories	Components of Education Theories	Prescription for Art Education
Nature of Art Art is the self expression of artists	Nature of Knowledge Knowledge is experience of a unique self	CONTENT Based on subjective experiences rather than objective facts
Creative Process The creation of images in the mind and their expression in art media	NATURE OF TEACHING Is based on nurturance, guides students to explore inner feelings to generate images	TEACHING METHODS Teachers provide nurturant learning environment. Able to empathise with students
Response to Art Feelings and emotions in works of art are perceived and felt by the viewer	NATURE OF LEARNING Experience acquires meaning by integration into one's personal world view	STUDENT ACTIVITIES Free experiment with media, visualization of images and feelings
Value of Art Is found in the originality of the work of art	VALUES OF EDUCATION Is based upon the adequacy and originality of one's personal world view	EVALUATION OF LEARNING Is based on the student's sense of personal growth, self validation

1930s

This section focuses on what was happening in visual arts education in the 1930s in the UK, USA, and Australia. In the UK a move towards child art was being practised. In the USA, visual arts education changed to a revival of a sociocentric focus or socio-centered curriculum orientation. In Australia, child art began making its way into Western Australia and Tasmania, but not as yet in the other states.

UK and a scarcity of materials.

In the UK, a move towards a child art movement was still occurring under the leadership of Marion Richardson. However, with the onset of the Depression and World War II (1939-1945), there was now a scarcity of materials for art

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making. Nevertheless, Richardson noted that there were still individual schools and groups of schools that managed to have art exhibitions.

> Materials were scarce; but we made shift somehow, and before a year was up really good work was going on, and at least one school held an exhibition that would have done any of us proud in the best of our London days.
> (Richardson, 1964, p. 84)

In 1938, Richardson organised an exhibition of children's artworks. This was opened by Sir Kenneth Clark, Director of the National Gallery and was attended by 26,000 people over eight weeks (Richardson, 1964, p.79) including:

> ...the Queen herself, and with her the two Princesses. They set the seal of seriousness and dignity which we hoped had characterised the Exhibition. Naturally my senior colleagues and I were honoured at showing them around.
> (Richardson, 1964, p. 79)

USA and the Owatonna Project.

In the USA, there were cutbacks to budgets and funding to education in general, which meant that visual arts education was at risk because it was perceived to be a luxury subject in the education system. This led to many visual arts teachers losing their jobs. Edwin Ziegfield, the resident director of the Owatonna Project, wrote what was happening at the time:

> In the nineteen-thirties, such critical analysis [of school subjects] brought many people to the conclusion that art was one subject, which could well be spared from the public school curriculum. All over the country art teachers were dismissed because art seemed to be one of education's frills, a pallid luxury-subject without sufficient vitality to be considered essential to the training of children.
> (Ziegfield and Smith, 1944, p. 1, cited in Eisner, 1972, p. 54)

If visual arts education was to survive, it had to find another reason for its existence that showed it to be a fundamental subject to the every day life of the

majority of people rather than as something that thrived only in museums.

Members of the College of Education at the University of Minnesota began the

Owatonna Art Education Project (Dimmack, 1965, p. 32). It began in 1933 in

Owatonna, Minnesota and was one such program that endured during this most

difficult and challenging period. According to Melvin Haggerty who was the

Dean of College of Education of the University of Minnesota, the Owatonna

Project sought to "discover how the art needs of current American life [could] be

picked up and made the basis of a school curriculum" (Haggerty, 1936, p. 5, cited

in Eisner, 1972, p. 54). Dimmack (1965) wrote what the purposes of this project

were.

> (1)   to develop a method of discovering the art needs of a community;
> (2)   to develop a functional course of study in art suited to these needs;
> (3)   to develop an interest in the daily life of the community.
>   (Dimmack, 1965, p. 32)

Haggerty and the Owatonna staff realised that visual arts education had to be

relevant to the decisions that people had to contend with in their everyday life

such as with decisions about "draperies, room layout, landscaping, furniture,

dress, automobiles, and so forth". Therefore, this Project was "devoted to using

art to improve community life and home interiors" (Eisner, 1972, p.3).

Such a Project led visual arts education to expanding its purpose in the

school curriculum.

> Under these circumstances the uses of art as a tool for enlivening
> not simply those rarefied moments in a museum but of daily life
> seemed a potent justification for the inclusion, if not the expansion,
> of art in the school curriculum. The approach developed at
> Owattona and the philosophical position upon which it was built,
> was when considered with other works such as Dewey's *Art as
> Experience*, instrumental in expanding the domain and
> responsibility of art education. No longer was it adequate to
> simply help children build pleasing objects, no longer were great

works of art to be the sole objects of artistic contemplation, no longer was developing skills in drawing and painting sufficient, with the realization that art was a quality of experience to be had in any realm of human activity, the scope of art education and the responsibility of art educators expanded enormously.
(Eisner, 1972, p.55-55)

Australia and the transformation of 'drawing' to 'art'.

In Australia, Boughton (1989) wrote about the changes that occurred in visual arts education and how it was lacking coherence:

> Prior to World War One art in Australia was called 'drawing'; by World War Two it was called 'art'. The development of art within Australia between the wars was curiously disjointed (Mandelson, 1985)
> (in Boughton, 1989, p. 199).

Boughton (1989) also mentioned how Western Australia was the only state that was more open to new ideas.

> The only state to recognise overseas developments before 1940 was Western Australia....It was not until the 1936 syllabus rewrite that Western Australia expressed an interest in creativity, albeit in the form of compromise.
> (Boughton, 1989, p. 199)

According to *The Education Circular*, the 1936 Western Australian Syllabus had four strands. These were: (1) picture making; (2) nature drawing and modelling; (3) constructive work and pattern making; and (4) appreciation studies (W.A. Ed. Dept., The Curriculum, 1936, p. 262 in Boughton, 1989, p. 199).

> The Western Australian course itself was divided into four strands; picture making, nature drawing and modelling, constructive work and pattern making and appreciation studies 31 [W.A. Ed. Dept., The Curriculum, 1936, pp. 262-269]. In picture-making children were to be allowed to draw and paint in their own way with the teacher providing encouragement and, when asked for, advice and instruction 32 [W.A. Ed. Dept, 1936, pp.263-264]. Nature-drawing had as its aim the gradual development of "Skill in truthful rendering". 33 [W.A. Ed.

Dept., The Curriculum, 1936, pp. 265]. The subjects chosen were to be interesting to the pupil. Animals, plants, people, landscapes and machines were suggested. 34 [W.A. Ed. Dept., The Curriculum, 1936, p. 265]. No rational was offered for constructive work and pattern-making. Presumably these were included for the same reasons they had been suggested in the Hadow report. Appreciation studies were intended to quicken interest and increase artistic knowledge. 35 [W.A. Ed. Dept., The Curriculum, 1936, pp. 264-265].In the senior grades it was suggested that these studies extend beyond pictures to include sculpture and craft work. 36 [W.A. Ed. Dept., The Curriculum, 1936, p. 269].
(Boughton, 1989, p. 199)

Please note: the numbers are as they appeared in this quote.

Similarly Mandelson (1985) wrote that Western Australia and Tasmania were more open to what was happening overseas than were the other states. Also, that until the 1937 New Education Conference in which visual arts education experts came from overseas, Australia was generally indifferent about new developments abroad.

States other than Western Australia and Tasmania operated as if the new concepts of child art did not exist…developments in Western Australia and Tasmania experiments received no mention outside their own state. Even those who travelled abroad failed to notice the new approach.
(Mandelson, 1985, p. 40 in Boughton, 1989, p. 199)

The sociocentric focus or society-centered curriculum orientation.

Like Smith's eye-hand training program, the Owattana Art Education Project was also an example of a Society-Centered Curriculum Orientation, which was also referred to a Sociocentric Focus.

Progressive educators used this model in the 1930s who "identified with social reconstruction" (Efland, 1990, p. 16) during the Great Depression and World War II. Teaching predominately centered on "life-centered situations" (Efland, 1990, p. 16), which were in themselves constantly changing.

The pragmatic-social model.

The Owatonna Project reflected Efland's (1990) Pragmatic-Social

Reconstruction Model (refer to Table 2.4). This linked "pragmatic aesthetics with

the view that education is an instrument for social reconstruction" (Efland, 1990,

p. 14). In this model, art and education have "instrumental value" (Efland, 1990,

p. 14) in that "learning is the process of constructing knowledge through one's

encounters with the environment and such knowledge has instrumental value"

(Efland, 1990, p. 14). In terms of visual arts, "one constructs knowledge of art by

encountering artistic problems through personal and social living. The learning

task involved the intellectual reconstruction of knowledge as new experience

alters or confirms previous views of the world" (Efland, 1990, p. 14). Dewey

(1980) believed that artists do this as he described in *Art as Experience* (1934).

Also, what viewers should be doing is having an experience with artworks so that

their reality is altered "as a consequence of this vivid encounter with art" (Efland,

1990, p. 14).

In teaching students, teachers could "organise learning around life-centered

situations...A pragmatically oriented teacher would organize instructional

resources for problem-solving and the evaluation of the instruction would be in

terms of success experienced by students and teachers alike" (Efland, 1990, p.

14).

Table 2.4

Pragmatic-Social Reconstruction Model (Efland, 1990, p.15)

Components of Pragmatic Aesthetics	Components of Social Reconstruction Educational Theories	Prescription for Art Education
Nature of Art Art is an object that provides aesthetic experience and has instrumental value	Nature of Knowledge Knowledge is experience that has instrumental value	CONTENT Is expressed in terms of problem situations
Creative Process Reconstruction of experience through transactions with works of art	NATURE OF TEACHING Uses problem situations to enable students to transact with their environment	TEACHING METHODS Poses problems to be solved, helps students identify resources to solve problems
Response to Art Reconstruction of experience through transactions with works of art	NATURE OF LEARNING Reconstruction of knowledge through transactions with the environment	STUDENT ACTIVITIES Students work on artistic problems in the home, school, and community
Value of Art Emerges through transactions with works of art, criterion is instrumental value	VALUES OF EDUCATION Emerges through transactions with experience, criterion is instrumental value	EVALUATION OF LEARNING Students and teachers determine instrumental value of aesthetic solutions to problems

1940-50s

This section concentrated on what was happening in visual arts education in the 1940s and 1950s in the UK, USA, and Australia. In the UK and the USA, the *Bauhaus* movement was taking effect while in Australia the child art movement was now at its peak.

UK: the basic design movement.

In the UK, the *Bauhaus* movement reached its peak in the 1950s whereas in the USA it was a decade earlier. This had an influence on the teaching of the arts and crafts (Stevini, 1968, p. 44) and promoted handiwork.

> ...a new educational movement that set out to amalgamate art and crafts, to link art and industry, and to have the machine perform its proper function in this age of mass production.
> (Hopwood, 1968, p. 34)

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The *Bauhaus*, which meant House of Building, began in Germany in 1919. Its founder was Walter Gropius who was an architect, philosopher, and teacher. The Arts and Crafts movement was actually considered to be an "ancestor" of the *Bauhaus* (Chilvers, 1990, p. 20). However, where they differed from each other was that the Arts and Crafts movement completely rejected industrialism and what it stood for whereas the *Bauhaus* worked with it and attempted to establish a "relationship between design and industrial techniques" (Chilvers, 1990, p. 34).

One of the main reasons why the *Bauhaus* movement spread throughout the world was because in 1933 the Nazis closed the *Bauhaus* and many of its teachers and students fled to other countries such as North America, the UK, and even Australia.

The *Bauhaus* also contributed to what came to be known as the basic design movement (Stevini, 1968). For example, the ideas of Victor Pasmore's basic design course had come from the *Bauhaus*. Pasmore had taught at Kings' College, Newcastle, which was "the first fine art schools to have what is known as a basic design course" (Stevini, 1968, p. 45). Such courses soon spread throughout the country and included Leeds with Harry Thubron and Leicester with Tom Hudson (Stevini, 1968, p. 45).

However, not everyone was in agreement with the basic design movement, which was suitable for high schools and higher education. This was, it appeared, in direct opposition to the child art movement, which was mostly practised in primary schools. In fact, at the 1956 Society of Education through Art (SEA) conference at Bretton Hall, University of Leeds there was a 'fierce debate' about these two opposing movements (Naea, n.d., no page number).

> There arose a great 'for and against' argument that was in a way a
> good thing because it made people aware of the existence of such an

idea and they could form their own opinion about it. The controversy arose around the fact that the pro's said that it was a realistic way of looking at what had hitherto been a matter of emotional prejudice and ignorance. With our technological advances we need a more informed approach. The anti's said that this was really just a new academic approach and defeated all that they had been working for—the artist as an individual, not a slave to convention, even if it was a recent one.
(Stevini, 1968, p. 45)

USA: the influence of the Bauhaus.

During the 1940s, the USA saw a rise in the *Bauhaus* movement due to the migration of a number of *Bauhaus* teachers and students after the Bauhaus was closed in Germany. Many of these *Bauhaus* educators taught in American educational institutions. This included Walter Gropius who became Professor of Architecture at Harvard University (Duro and Greenhalgh, 1994, p. 57) and Moholy-Nagy, who "founded the New Bauhaus (which became the Institute of Design) in Chicago in 1937" (Chilvers, 1990, p. 34).

> Bauhaus teachers (or their students) found, in the Bauhaus emphasis on experimentation, an approach to art that seemed in accord with Dewey's emphasis on creativity for children and the experimentation method in learning....
> (Chapman, 1978, p. 15)

In particular, the *Bauhaus* impacted on the teaching of high school art education (Gaitskell, et. al. 1982, p. 39) more so than with primary visual arts education that inclined towards child art. Chapman (1978) discussed what happened with child art in the schools in the 1950s.

> By the early 1950s, however, it became apparent to some art educators that teachers had lost sight of the meaning of experimentation as a systematic inquiry into the nature of materials. In practice, it had come to mean little more than improvisation with media, and the more media the better. Although children were indeed inspired by opportunities to explore art materials, teachers too often accepted the superficial manipulation of materials as a genuine experiment or creative effort.
> (Chapman, 1978, p.15).

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Australia: the rise of child art.

In Australia, the influence of the *Bauhaus* had not yet caught on. In fact,

industrial drawing was still being practiced in some schools during the 1940s. For

example, in 1947, Joseph Burke, Professor of Fine Art at the University of

Melbourne, noted that when he arrived in Melbourne from England, he was

astonished to find that aspects of the South Kensington system were still being

taught (Peers, n.d., p. 5).

> Children were still being taught in many schools to draw 'correctly',
> according to the laws of perspective, from models as uninteresting as
> they were simple; and to fill rectangular and circular shapes with
> floral motives according to formulae such as 'balance, alternation,
> rhythm, and harmony (Burke, 1964, p. 7 in Peers, n.d., p. 5)

However, industrial drawing was eventually replaced with child art. When

this occurred, it signalled the second phase of Australia visual arts education

referred to as the 'creativity' phase and lasted from the 1940s to the 1960s

(Boughton, 1989, p.197). This was prompted by a travelling conference around

Australia in 1937.

> One influence, which may be regarded as a turning point for Australian
> art education, was the 1937 *New Education Conference*...This was a
> travelling conference which moved from Brisbane to Sydney,
> Canberra, Melbourne, Hobart, Adelaide, and Perth over a period of
> seven weeks....In some states the response to the conferences
> presentations was reflected in curriculum change. New South Wales
> effected an uneasy compromise between a teacher-centered approach
> and a child-centered curriculum. South Australia recommended...both
> approaches, that children should have unrestricted opportunities to
> draw on the one hand, while at the same time claiming that drawing
> required disciplined lessons and formal training to acquire the
> necessary conventions. Victoria placed more emphasis upon formal
> work and the development of good taste, while Queensland made no
> change until 1952 (Mandelson, 1985). It was not until the early fifties
> that evidence of a commitment to the creative 'free expression'
> ideology was apparent in every state and territory in Australia.
> (Boughton, 1989, p. 200)

1960-70s

This section explores what was occurring in visual arts education in the 1960s and 1970s in the UK, USA, and Australia. In the UK, the basic design movement still existed in the 60s. However, by the 70s, Brian Allison introduced the Four Domains that included visual arts theory components besides art making as part of one's visual arts education.

In the USA in the 1960s, there were many discussions about expanding visual arts education from being just an art making activity to including art theory disciplines such as art history, criticism, and aesthetic.

In Australia in the 1960s, there was a UNESCO film made about visual arts education called *Approach to Art Teaching*. However, it seemed that many art educators mis-interpreted this film and believed that it showed a reform of industrial visual arts rather than child art. Yet, this film seems to be more of a reflection of another type of child art. That is, Marion Richardson's style of child art rather than industrial visual arts or even the type of child art practiced by Cizek or Lowenfeld.

UK art education in a state of confusion.

In England the basic design movement was still occurring during the 1960s. However, Gilbride (1985) noted that English visual arts education from the 1960s up to the 1980s was a time of "confused and competing rationales for art education in comprehensive schools" (Gilbride, 1985, abstract page).

By the 1970s, it appeared that English visual arts education were taking note of what American educators such as Manual Barkan were saying about visual arts education.

Brian Allison, a leading English art educator, was president of the National Society for Education in Art and Design (NSEAD) and also of the International Society for Education through Art (INSEA). He had been teaching "summer schools at California State University" (Mason, 2001, p. 8) and had been communicating with many American educators (Mason, 2001).

Allison created the Four Domains (4D), which preceded America's Discipline-Based Art Education (DBAE) that emerged a decade later in the 1980s.

Allison sought to expand visual arts education to include visual arts theory besides art, craft, and design. Furthermore, he was determined to see that visual arts education was promoted to a professional subject, as did Manual Barkan.

Allison (1972) described how art was more than just about making art:

> To be educated in art means considerably more than being able to manipulate some art materials, no matter how skilful and expressive that manipulation might be. It also means to be perceptually developed and visually discriminative, to be able to realise the relationships of materials to the form and function of art expression and communication, to be able to critically analyse and appraise art forms and phenomena, to be able to realise the historical context of what is encountered and to be able to appreciate the contribution to, and functions within, differing cultures and societies that art makes. (Allison, 1972, p. 4 in Mason, 2001, p. 9)

Allison and the National Society for Art Education, which is now the National Society for Education in Art and Design, came up with Four Domains for visual arts education. These were:

(1) Expression/Production;
(2) Perception;
(3) Analysis/Criticism, and
(4) History/Culture
(Schools Council, 1977 in Allison and Housman, 1998, p.124).

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Essentially the Four Domains proposed a sequential curriculum covering the whole of general education which would involve the learners in looking at, responding to and talking about art, craft and design from the present time and the past and from one's own and other cultures.
(Allison, 1978 in Allison and Housman, 1998, p.124).

The Four Domains and America's Discipline-Based Art Education (DBAE) with its four disciplines were alike. The DBAE disciplines were the following:

(1)   Art history;

(2)   Art criticism;

(3)   Art production; and

(4)   Aesthetics.

The similarities between the two are with art history, criticism, and art making.

Mason (2001) noted that Allison used a Four Domains curriculum when he was training teachers. Mason (2001) also mentioned how this was quite different from the usual way of artist-teacher style of training at the time.

In 1975, Brian Allison moved to Leicester Polytechnic (now De Montfort University)...As Head of the School of Educational Studies and then its first professor in 1978, he set about organising what became The Centre for Postgraduate Teacher Education in line with his own curriculum and cultural concerns. The innovative secondary PGCE art teacher training course, which he described as 'an exercise in hard nosed professionalism', included school-based studies and training in visual literacy. It was rigorous and demanding of students academically, and differed radically from the prevailing artist-teacher model of preparation of the time.
(Mason, 2001, p. 9)

In the same year that he moved to Leicester Polytechnic, Allison took another important step in helping to professionalise visual arts education. He began the *British Index of Research in Art and Design* (Mason, 2001, p. 10), which consisted of 274 studies that were hand typed on index cards (Mason,

2001). By 1986, he published his second edition. This time the job was made easier with computer technology. This was just as well as there were three times as many entries. This time, Allison recorded 1,000 studies (Mason, 2001).

USA, Manual Barkan, and a prelude to DBAE.

The child art movement that began with Cizek, Richardson, and Lowenfeld seemed to have changed over the years and attracted criticism from several visual arts educators.

One such critic was Manual Barkan. Barkan (1966) criticised this child-centered approach in art education by saying that what occurred in elementary school classrooms was "non-artistic busy work and play at best" (Barkan, 1966, cited in Clark, 1991, p. 13).

Manual Barkan was considered a "tactician who set out a blueprint to broaden the scope of art education, [so as] to have it encompass more than the activity of making art" (Payne, 1985, p. 262).

In 1955, Barkan wrote his first book entitled *A Foundation for Art Education* in which he "recognized and examined some of the fundamental questions in art education which he divided into three distinct groups" (Payne, 1985, p. 260). These were as follows:

(1)   Value in the arts;
(2)   Creative processes in the visual arts; and
(3)   The development of personality throughout the arts.
        (Payne, 1985, p. 260).

From the time he had written his first book in 1955 up to 1965, Barkan had been inquiring into why there was a decline in the discipline of art education (Payne, 1985).

In 1961, Barkan spoke at the National Committee on Art Education and changed his wording from a foundation of *art education* curriculum to creating a new discipline-centered art education (Payne, 1985), which appeared to have been inspired by Jerome Bruner.

> The transformation of which he spoke was the shift from the child-centered approach of the Progressive movement to the disciplined-centered approach advocated for general education by Jerome Bruner. (Henry, 2002, p.8)

Barkan (1962) addressed The Western Arts Association Conference in Cincinnati, Ohio. His presentation was called *Transition in Art Education: Perceptions of Curriculum Content and Teaching.* In this he spoke about the importance of historical reflection (Henry, 2002, pp. 7-8).

Then in 1965, Barkan presented a paper called *Curriculum Problems in Art Education* for the Seminar in Art Education for Research and Curriculum Development at Pennsylvania State University. This paper was considered a prelude to the formation of Discipline-Based Art Education (DBAE) that began in the 1980s. In this paper, Barkan (1966) questioned where visual arts education was heading under the current circumstances and highlighted why there was an urgent need for changes to be made in the visual arts education curriculum. Barkan (1966) wrote:

> I will begin with reasons why curriculum development in art education has been too ambiguous and too halting for current requirements. I will follow with a summary of some reliable and shocking estimates of where art education is in the public schools to underscore the urgency of the curriculum task. Then, I shall indicate major curriculum problems requiring attention. Finally, I will propose an essential course of action which, in my opinion, could lead to significant break-throughs.
> (Barkan, 1966, pp. 240 –241).

Barkan's interest in changing the curriculum arose mainly from what he read in three papers:

(1) an NEA study on art and music in schools;

(2) a study on art instruction in secondary schools by Reid Hastie and David Templeton; and

(3) Elliot Eisner's preliminary report on what students know about art and their attitudes towards art.

The NEA study provided information about what percentage of primary schools in the USA did not have help from visual arts specialists, require their teachers to be trained in visual arts "as a condition of employment" (Barkan, 1966, p. 242), or use a curriculum guide. These results surprised Barkan:

> The NEA study shows: "The regular classroom teacher was expected to teach art without help from a specialist in over half the elementary schools reporting". Ironically, the data also indicates that over sixty percent of the schools did not require teachers to have ability to teach art as a condition of employment. Only about one-quarter provided specialist help, and art was taught by specialists in less than ten percent. Only 38.5% used curriculum guide, and over two-thirds of these were locally developed.
> (Barkan, 1966, pp. 242).

The Hastie-Templeton study indicated that only one school district out of ten showed any major interest in visual arts education. The most important goal for this school district was to have a general education that provided visual arts experiences for all high school students (Barkan, 1966). The second goal was to provide pre-professional preparation and training that would lead to a career in art (Barkan, 1966).

Elliot Eisner's preliminary report was a study on 1,000 students that represented students from ninth grade right up to students in the senior year of college. This report showed that forty-one percent of the secondary students had studied visual arts for two years while all the other students studied visual arts for

only one year (Barkan, 1966). Barkan found this most disturbing especially as all

the college students studied "were prospective elementary school classroom

teachers enrolled in art education courses" (Barkan, 1966, p. 242). Barkan (1966)

also noted what Eisner discovered about these students in terms of what they

knew about art terms and artists:

> Eisner reports: sixty three percent did not know the meaning of the
> word "hue;" seventy percent did not know what the word "value"
> means; fifty-two percent did not know that "opaque" colors are not
> transparent; and over seventy-five percent did not know what the
> word "medium" referred to. More than fifty percent thought
> Rembrandt was either Italian or French. Among the college
> seniors—these people would be judged competent to teach art in
> elementary schools with such a requirement—these students
> identified the period when Picasso and Matisse worked as follows:
> fifteen percent thought the eighteenth century; ten percent indicated
> the seventeenth; and seven percent relegated Picasso and Matisse to
> the late Gothic period.
> (Barkan, 1966, p. 242)

This information reveals that students are not learning about some

fundamental information for visual arts theory learning especially with regard to

art history and responding to artworks. Furthermore, without being familiar with

visual arts terms regarding the elements of art and principles of design, it will be

quite difficult to analyse artworks.

Barkan (1966) was also surprised with what he discovered about Eisner's

research regarding student attitudes towards the visual arts:

> Eisner's findings on attitude show more than twenty percent agreeing
> that "artists should paint pictures that the majority of people can
> understand." Thirty-five percent were either uncertain or disagreed
> that "Advances in the field of art are important for a country's
> progress." Two-thirds agreed that "Good art is a matter of personal
> taste."
> (Barkan, 1966, p. 243)

Barkan was also inspired by what Jerome Bruner had to say about the importance of "giving students an understanding of the fundamental structure of whatever subjects we chose to teach" (in Barkan, 1962 in Henry, 2002, p. 8).

Further problems that Barkan (1966) highlighted were that the visual arts education curriculum was centered on making art with the intention of turning students into artists (Payne, 1985). Instead, Barkan wanted to see a visual arts education that was more widely available as he was concerned with "quality art instruction for all American children" (Barkan, 1966, p. 250). Consequently, Barkan (1966) believed that it was essential that visual arts theory subjects be included in the curriculum besides producing art.

> To the detriment of art education, however, we have anchored curriculum almost entirely in relation to the artist, only slightly in relation to the art historian; we have ignored the aesthetician and critic. Art curriculum is faltering, not because of efforts to attend to art history, but rather, because we have not learned to use the aesthetician and critic, nor do we properly use the art historian. (Barkan, 1966, p. 243)

Barkan (1966) offered for consideration a theoretical structure for curriculum content outlined in five levels of curriculum control.

The first level of curriculum control was problem-centered and discipline-centered. Barkan turned to Arthur Foshay's paper entitled *Discipline-Centered Curriculum* for his proposed "resolution to the goal direction problem of education" (Barkan, 1966, p. 245). Foshay spoke about the subject- and problem-centered approaches to education. With the subject-centered approach the subject taught is not the same as that of the scholar—that is, spelling and grammar instead of essay writing; arithmetic in place of mathematics. In problem-centered approach the students treat the task like the professional does; the problems are real and the professional is the model. Barkan believed that these two ways were

also needed in visual arts education. He named the problem- and discipline-

centeredness as the first level of curriculum control (Barkan, 1966).

The second level of curriculum control stemmed from the modes of inquiry

exemplified in fields of visual arts and included studio production, criticism, and

history. Barkan (1966) also stated that the professional scholars in art—the

artists, the critics, the historians—would be the models for inquiry (p. 246).

> The artist and critic would serve as model for questions that could be
> asked about contemporary life. The historian would serve as models
> for questions that might be asked about art and life in other times,
> other societies, and other cultures in order to illuminate the meaning
> of the past for better understanding of current pressing problems.
> (Barkan, 1966, p. 246)

The third level of curriculum control would be the structural relationships of

the three curriculum content components—production, criticism, and history.

These structural relationships would be criticism-production and criticism-history.

The fourth level of curriculum control would be "the concept of life

problem as organizing center (Barkan, 1966, p. 247).

Finally, the fifth level of curriculum control would be "activities and their

objectives" (Barkan, 1966, p. 247).

> Implied in this conception of curriculum structure is the need to
> reconceive the meaning of the word "activity" in the nomenclature
> of art education. The idea of activity as inquiry-moving activity
> would no longer be restricted to studio production activities as the
> primary moving activities for inquiry in and about art. Rather,
> activities associated with critical and historical analysis would
> become duly recognized and consciously utilized for their moving
> powers. There would then be an array of different kinds of
> inquiry-moving activities; such as: painting, constructing,
> sculpting, etc.; examining, comparing, reading, describing,
> judging, evaluating and writing.
> (Barkan, 1966, p. 247)

Barkan also noted that the emphasis on art making "left less for texts, slides, and quality reproductions" (Barkan in Payne, 1985, p. 261). He also stated that "major attention needs to be given to bringing works of art and literary materials by artists, critics, and historians into the classroom (Barkan, 1966, p. 250). Literary materials for critical and historical inquiry are almost totally absent from the schools (Barkan, 1966). Barkan suggested an exploration of technology to achieve the goals of education in art by means of an art study laboratory.

> There would be a bank of booths where students can go to study individually; and these booths would be equipped with dual projection screens and a synchronized tape recorded with earphones for listening. The student would control the mechanism to start, or to back it up in order to be able to repeat. On the projection screens could be shown comparisons out of a small collection of art works of the kind I described and gave as example. And, the voice of a connoisseur could be brought into the classrooms, thus to take students on the adventure of learning how to "read" works of art, to enjoy, understand and to inquire through them. Literary materials of the kinds I sketched would be selected and ready for students to engage in reading assignments. (Barkan, 1966, p. 247)

Of course, nowadays computer technology would be a good alternative to the bank of booths that Barkan suggested for the critical-historical component of visual arts education.

Australian visual arts education in a state of confusion.

In the 1960s, the 'creativity' phase still existed in Australia, which meant that children were essentially free to create as they wished without too much interference from their teacher. This was in line with the type of child art that Cizek and Lowenfeld promoted. However, during this 'creativity' phase an Australian UNESCO film was produced called *Approach to Art Teaching* (Dabron, 1961). This was "intended to showcase the development of innovative curriculum policies in New South Wales" (Peers, n.d., p. 1).

This film was basically about teaching visual arts to students. However, there was one part in the film that showed a high school visual arts teacher by the name of 'Mrs. Lawson' announcing to her students that the topic of the day was 'Myself in the Dentist's Chair' (Peers, n.d). The students were then required to use their imagination to draw this particular scene.

The fact that 'Mrs. Lawson' chose a theme for her students to draw caused some concerns as "the methods represented by 'Mrs. Lawson' constituted an infringement on the creativity of her students" (Peers, n.d., p. 2). Many visual arts educators thought that this was a reform of industrial visual arts education moreso than the more common practice of Cizek's and Lowenfeld's style of child art.

However, what 'Mrs. Lawson' was actually teaching was a second type of child art moreso than industrial art education. This was similar to Marion Richardson's style of teaching art, which consisted of "word pictures".

The differences between these two types of child art and the industrial visual arts are now discussed. Cizek's and Lowenfeld's style of child art that was more commonly practised in Australia, had no goals, no teacher "interference", but provided children the complete freedom to express themselves in their artworks. Marion Richardson's style of child art had goals, some teacher "interference" in terms of providing "word pictures", but the children were then permitted to use their imagination to interpret these "word pictures" as they desired. The industrial style of visual arts education began with goals, some teacher "interference", and then the children were required to copy an exact depiction of an object or whatever else the teacher required them to draw.

The confusion arises because there appears to be some overlapping between the two styles of child art and industrial art. For example, industrial art and

Richardson's style of child art are similar in that they both have goals and teacher 'interference'. However, they differ towards the end in that with industrial art the children draw an imitation of an object whereas with Richardson's style of child art the children are free to interpret the 'word pictures' in their artworks as they desire.

The difference between Richardson's style of child art compared to Cizek's, and Lowenfeld's style of child art appears at the beginning of instruction. Richardson's child art had goals and teacher "interference" whereas Cizek and Lowenfeld's child art did not begin with goals and had no teacher 'interference'. However, it is in the final stages of child art that Richardson's style of child art and Cizek's, and Lowenfeld's styles of child art are similar. That is, the children are free to create artworks as they wish.

It seems that some visual arts educators expected to see this film based on Cizek's and Lowenfeld's styles of child art which was based on a child-centered curriculum orientation (Eisner, 1972). However, this was not the case and it was mis-interpreted as being a reflection of the industrial model, which was a reflection of the society- and subject-centered curriculum orientations (Eisner, 1972). What it was in fact was a reflection of Marion Richardson's style of child art, which was a combination of child-centered and subject-centered curriculum orientations. These three curriculum orientations are discussed further in this chapter under the sub-heading "Cross-Linked Learning: Four focuses/curriculum orientations" and in Figure 2.1 at the end of this chapter.

1980s

This section outlined what was happening in visual arts education during the 1980s in the UK, USA, and Australia. That is, in the UK, Allison

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continued lifting the profile of visual arts education as a professional subject while the National Curriculum came into effect; the USA saw the emergence of the first generation of DBAE; and finally, Australia entered its third phase in visual arts education called the studio-discipline phase (Boughton, 1989), which supported art, craft, and design. By the mid-1980s, some form of art history was also being taught as part of students' formal training in visual arts education.

UK and visual arts education within the National Curriculum.

In England in the 1980s, Brian Allison continued to work towards expanding visual arts education so that it is was not just an art practice subject, but also included theory. His work eventually led to the USA and Australia doing the same. Furthermore, he endeavoured to promote visual arts education as a professional subject that was backed by research.

In 1982, the *Journal of Art and Design Education* (Allison and Housman, 1998, p.124) was first published under the guidance of Brian Allison. This "included a further exposition and extension of Allison's Four Domains curriculum conception" (Allison, 1982 in Allison and Hausman, 1998, p. 125).

By 1988, the year that Allison retired from Leicester Polytechnic, curriculum reform was taking place due to the 1988 Education 'Reform' Act. With it came the National Curriculum. Gillard (2001) described this Act.

> This was the most important Education Act since 1944. It is
> sometimes referred to as 'The Baker Act' since Kenneth Baker was
> then Secretary of State for education. It was presented as giving
> power to the schools. In fact, it took power away from the LEAs and
> the schools and gave them all the Secretary of State. The Act gave
> him hundreds of new powers.
> (Gillard, 2001, p. 11).

USA and the first generation of DBAE.

This section introduces Discipline-Based Art Education (DBAE) and then provides an explanation of DBAE's four disciplines.

In the 1980s, DBAE took centre stage as it was a contemporary subject-centred construct (Clark, 1991, p. 4). Before long, DBAE had become the talking point of many visual arts educators around the globe. Almost a decade later, Kindler (1992) discovered that an ERIC search on DBAE showed that over seventy articles and papers had been published about DBAE between 1988 and 1991 (p. 345). However, DBAE was not a curriculum, but an approach to visual arts education (Kindler, 1992, p. 345) and surfaced as a result of two important circumstances that impacted upon visual arts education.

The first major influence was with the Getty Center for Arts in Education (GCAE). The GCAE had an interesting history in itself. In 1976, J. Paul Getty, who was an American oil magnate, art collector, and the richest man in the world (Chilvers, 1990, p.177) died and left most of his estate to the J. Paul Getty Trust. Six years later in 1982, the J. Paul Getty Trust formed the Getty Center for Education in the Arts (GCAE) "for the expressed purpose of improving the quality and status of arts education in American's schools" (Duke, 1998, in Delacruz and Dunn, 1996, p. 70). They adopted Discipline-Based Art Education (DBAE) that subsequently had a profound impact on visual arts education reform throughout the world.

The second major influence was the US Department of Education. They published *A Nation at Risk* in 1983, which was a year after the formation of the GCAE. This publication began the "excellence-in-education movement" (Delacruz and Dunn, 1996, p.67), which was "intent upon improving the quality

and status of education in the United States in a threatening and increasingly competitive global community" (Delacruz and Dunn, 1996).

Greer (1984) declared that the aim of DBAE was to "produce educated adults who are knowledgeable about art and its production and responsive to the aesthetic properties of works of art and other objects (p. 212). Eisner (1987) believed that with DBAE, children could develop not only from the "inside out but also from the outside in" (p. 14). This meant that children could express themselves in art as well as learn about other art, artists, and the world around them. Almost a decade later, Dunahoo (1993) said that DBAE was not just about knowing and recognising "adult" art, but that it also enabled children to "articulate feeling or opinions about works of art…[which] is a valuable education contribution" (pp. 55-56). The four disciplines of DBAE are now discussed.

Art history.

With DBAE it was now necessary to increase the amount of art history offered to students than what instruction they had in the past. This would allow students to have a greater appreciation of art history and to be able to talk about and understand art "in their appropriate historical and cultural context" (Greer, 1984, p. 215).

Art criticism.

Greer (1993) noted that art criticism was usually practised as "part of the studio activity where students discussed the results of their efforts" (p. 95) and that "criticism was seen as critique" (Greer, 1993, p. 95). However, with DBAE, art criticism also included talking and writing about existing works of art besides what artworks students made (Greer, 1993). For this most visual arts educators

turned to Feldman's (1987) four performances or stages of art criticism. These were identified as: (1) description; (2) formal analysis; (3) interpretation; and (4) judgement (Feldman, 1987, p. 8).

As an alternative, Ott (1989) devised five steps or stages in art criticism that he called 'Image Watching'. This included the first three of Feldman's art criticism stages and then added another two steps or stages that consequently led to the making of an individual artwork (Ott, 1989). However, this could also be applied to other creative or intellectual pursuits such as in the performing arts. The five steps in Image Watching were referred to as describing, analysing, interpreting, funding, and disclosing. These are now discussed.

First, with the describing stage the students made an "inventory or a list of all that is perceived in the art work under criticism" (Ott, 1989, p. 185). Second, with the analysing stage the students analysed artworks in terms of the elements of art and principles of design. Third, with the interpreting stage, artworks were interpreted and this provided "for the personal and emotional responses of students...[and] permits students to express what they feel about the art work" (Ott, 1989, p. 186). Fourth, with the funding stage, outside information was collected about the artworks that provided "additional knowledge available from art history or art critics who have written or spoken about the art work" (Ott, 1989, p. 186). This may also include label information that accompanies artworks and are usually displayed with artworks in art galleries. Also, further information may be found from art galleries and also from individual artists from Multimedia CD-ROMs and Internet sites. Finally, the fifth stage is called the disclosing stage and this allows students to "reveal their knowledge about art through an act of artistic expression [while]...other forms of criticism often culminate in the

production of written or literary works about the art that has been viewed" (Ott, 1989, p. 188).

Aesthetics.

Aesthetics, or the philosophy of art, is a branch of philosophy that according to Palmer (1988) deals with such questions as "What makes something a work of art? Are there absolute values in art, or are aesthetic values always relative? Can there be aesthetic arguments, or are aesthetic judgments based only on preference? What is the status of art among other human intellectual and creative endeavours?" (p. 381).

Moore (1994) questioned whether aesthetics was too difficult to teach to young children as it is alleged to be "demanding, technical, complex, and wrapped in the coils of abstruse theory" (p. 13). Likewise, Battin (1994) agreed that this subject is "abstract, theoretical, and sometimes [perceived as a] pompous field of the art-related academic disciplines" (p. 89). Hagaman (1990) also acknowledged that aesthetics is largely verbal [in] nature and that most art teachers lack experience with "its content and modes of inquiry" (Hagaman, 1990).

Such perceptions of aesthetics caused it to be one of the most problematic disciplines in a DBAE program (Hagaman, 1990) and the least practiced (Battin, 1994, p. 89). This also meant that some teachers were "averse to, or phobic about, philosophical aesthetics" (Moore, 1994, p.54) and saw aesthetics as being too difficult to teach children. Moore (1994) and Battin (1994) depicted some of the reasons why:

> A single taste of Hegel, Croce, or Heidegger on art is sufficient to
> convince the average reader that these naturals should be kept out

of the hands of children.
(Moore, 1994, p. 13)

After all, just picture yourself lecturing, say, on the aesthetics of
Kant (skirting, of course, the full scholarly complexity of the
Critique of Judgment), or on Santayana, or on Clive Bell, or any
other major figure in the history of aesthetics—even if you try to
buy relevance by jazzing it up with a couple of references to comic–
book art or rap tunes—and you see a roomful of squirming, restful,
utterly bored kids, eager for you to quit....."So what," the kids will
say, "who cares?"
(Battin, 1994, p. 89)

Moore (1994) believed that teaching aesthetics as one would to adults is not

appropriate and needs to be presented to children in a way that is compatible to

student's "stages of cognitive and emotive development" (p. 13) and that also

allows them to "think and respond rather than simply to absorb and record

information" (p. 14). One way that Moore (1994) believed that aesthetics could

be taught to children was through the 'case-method' that essentially "employs

puzzles and posers to capture the curiosity and imagination of students" (p. 15).

Battin, Fisher, Moore, and Silvers (1989) provided cases of puzzles for

teaching children aesthetics in their book *Puzzles about Art: An Aesthetics*

Casebook (for examples of some of these cases, refer to Appendix A). These

cases may come from any area of the visual arts such as painting, sculpture,

photography, music, dance, poetry, fiction, drama, film, and so on. Whatever the

case used, Battin (1994) found that these cases essentially come under six general

groups:

(1)   Cases about the nature of art;
(2)   About beauty and aesthetic experience;
(3)   About the meaning and interpretation of art;
(4)   About creativity and fidelity in performance, replication, and
      reading;
(5)   About the intersection of art and other values; and
(6)   About the evaluation of art.

(Battin, 1994, p. 94).

Art production.

Prior to DBAE, art production was the primary subject taught in art

education. However in a DBAE program art production, which Rush (1987)

referred to students' artworks as tutored images, was supposed to be shared with

the other three disciplines so that there was more of a balance between art making

and art theory.

Australia and a studio-based visual arts education.

By the 1980s, child art seemed to have been replaced in most states of

Australia with art, craft, and design art education. By the mid-1980s, art history

was also included.

Boughton (1989) pointed out that 1960s Australian visual arts education

went from being "free" to "disciplined" (Boughton, 1989, p. 201). However, this

"discipline" was not quite the same as the one occurring in the USA. Boughton

proposed that the Australian "discipline" art education was actually studio-based.

Boughton (1989) described this third phase as the "studio-discipline" phase,

which began in the 1960s and was continuing up to the time that Boughton had

identified this third phase being in 1989. Boughton (1989) described this

Australian "discipline" art education as follows:

> A 'disciplined' form of studio, skill-based, product oriented
> expression widely accepted throughout the country.
> Students…engage in disciplined study, through studio practice, of
> traditional fine art and craft disciplines such as painting, drawing,
> printmaking, metal-crafts, ceramics, and so on. (Boughton, 1989, p.
> 201)

In 1985, a report on the state of visual arts education in each state indicated that art history was not necessarily practised in all states. However, four years later, Boughton (1989) discovered that art history or appreciation was being practised in all states and especially in high schools. (Boughton, 1989, p. 201). For example, in New South Wales, Years 7 to 10 had three optional courses. These were Art in Australia, Art and Culture, and Art and Media (Birkett, 1985, p 50). Furthermore, Years 11 and 12 had a fourth option being Art and Design (Birkett, 1985, p 50).

Hiller (1985) commented about what was occurring in Tasmania:

> I sought the opinions from art teachers on the place of art history in the art curriculum and was not surprised to find that in the majority of schools it does not play a dominant role. It is taught in an incidental way either as an aid to the students' practical endeavours or as an aid to the development of critical abilities and general appreciation. This being so there is no common knowledge base provided for those wishing to study art history at HSC level. Some schools do teach the subject in chronological sequence with some sense of historical perspective but these are rare....extremely boring art history lessons during their own schooling or tertiary training may have produced a negative attitude amongst teachers. (Hiller, 1985, pp. 57-58)

In Victoria, Perry (1985) was questioning why art history students from Melbourne, Monash, and LaTrobe Universities were "excluded from teaching HSC Art in most Victorian Schools...caused primarily because of the nature of the HSC art course, which demands practical expertise." (Perry, 1985, p. 60). In Canberra, art teachers were essentially "specialist craft teachers" (Collings, 1985, p. 48). In South Australia, a new curriculum was written called the *Art, Craft and Design in Schools: A Curriculum Framework R-12* (Education Department of South Australia, 1984).

In NSW, they were drafting three new syllabusis in the areas of K-6, 7-10,

and 11-12. K-6 included six types of planned learning experiences. Key words in

each of these were the following: (1) direct experiences; (2) interactions with

media; (3) memory and recall; (4) imagine, visualise, fantasise, and dream;

(5) mediated and portrayed; and (6) qualities and relationships (Birkett, 1985).

As mentioned before, Years 7 to 10 had three optional courses being Art in

Australia, Art and Culture, and Art and Media (Birkett, 1985, p 50) and Years 11

and 12 had a fourth option being Art and Design (Birkett, 1985, p 50).

In Western Australia, the *Art and Craft Syllabus K-7* (Ministry of Education

Western Australia, c. 1989) and *Frameworks: Unit Curriculum Art Guide: 8-10*

(1989) were both published in the same year by the Ministry of Education in

collaboration with the support of many visual arts educators. The *Art and Craft*

*Syllabus K-7 (*Ministry of Education Western Australia, c. 1989) was a 430 page

book and included 140 art making activity cards as well as four folded sheets. The

Frameworks consisted of six sections on art, six sections on craft design, and six

sections on the practical arts. Frameworks also had five dimensions to the courses

in art being visual literacy, visual inquiry, studio, art criticism, and art history.

According to De Bruin (1989), this was the "result of current international

theory in relation to practice in art education in lower-secondary schools in

Western Australia" (p. vii). The international theory that De Bruin was referring

to was essentially research about visual arts education primarily from England and

America at the time and reviewed above.

1990s: Second Generation of DBAE: Neo-DBAE

This section focuses on what was happening in visual arts education during

the 1990s in the UK, USA, and Australia. That is, in the UK the National

Curriculum was still being implemented and referred to as a straightjacket

(Hughes, 1997 and 1998); in the USA, a second generation of DBAE arose called

Neo-DBAE; and finally, in Australia, a National Curriculum arose that could be

adopted and/or adapted accordingly by each state.

UK: visual arts education continues in the national curriculum.

In England the National Curriculum came into effect in 1992 (Allison and

Hausman, 1998, p. 125). This Act continued to promote a type of visual arts

education that consisted of art, craft, and design.

> The National Curriculum for art (DES, 1992) set out to identify and
> promote what pupils are 'able to understand, know and do' in art,
> craft, and design. The two aspects of making and responding were
> embodied in the formulation of two 'Attainment Targets':
> Investigating and Making, and Knowledge and Understanding.
> (Allison and Hausman, 1998, p. 125)

Allison and Hausman (1998) noted that the National Curriculum might have

had its 'shortcomings' (Allison and Hausman, 1998, p. 125), but that it was well

received especially amongst generalist primary teachers "who had not specialist

training in art" (Allison and Hausman, 1998, p. 125).

However by the end of the 1990s, Arthur Hughes referred in two articles he

had written (Hughes, 1997 and 1998) that the Curriculum was like a

straightjacket:

> ...secondary art and design education in England and Wales is, in
> general, static, safe and predictable. There are many reasons for the
> existence and continuation of this state of affairs, but probably the
> most potent at present is the imposition of a filmsy National
> Curriculum which at one and the same time, lacks philosophical
> clarity or adequately articulated content but which imposes a narrow
> structural straightjacket which fails to recognise the real breadth and
> complexity of the subject...It is a curriculum developed in almost
> total isolation from thinking on art and design in other parts of our
> educational system, let alone current professional practice. A hybrid,

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divorced from contemporary ideas in the spheres of art practice,
critical theory, art history or museology.
(Hughes, 1998, p. 41)

During the early 1990s, Allison's commitment to research and professional

practice in visual arts education continued. He created the ARIAD (Allison

Research Index in Art and Design) in 1991 and four years later in 1995, there was

an Australian version included (Mason, 2001).

USA: second generation of DBAE.

DBAE outraged some educators who thought that DBAE did not include

child-centered or society-centered curriculum orientations (Clark, 1991, abstract

page). However, all DBAE really did was expand visual arts education to include

visual arts theory disciplines. According to Clark (1991, p. 8) critics of DBAE

"asserted their support for alternative orientations rooted in child-centered or

society-centered (and, occasionally, technology-centered) orientations" (Clark,

1991, p. 8).

Although Clark (1991) suggested that society-, subject-, and child-centered

curriculum orientations be incorporated into visual arts education, he believed that

the combination of the three curriculum orientations or focuses should be utilized

in visual arts education in co-operation with one another in assisting students to

become enlightened citizens. Accordingly he stated that the three major goals of

visual arts education are to "help students to achieve personal fulfilment (child-

centered), improve society (society-centered), and transmit cultural heritage

(subject-centered)" (Clark, 1991, p. 6).

In America, they had reached the second generation of DBAE called 'Neo-

DBAE' (Hamblen, 1993). This came about as a reform movement to DBAE.

Neo-DBAE impacted on DBAE as it brought to light feminism, multiculturalism, and postmodernism into the curriculum. Although early DBAE literature allowed for "folk art, the applied arts, and art from non-Western cultures" (Delacruz and Dunn, 1996, p. 71), many critics of DBAE perceived it as being predominantly "Euro-centric, male-dominated, misogynist, and elitist" (Hamblen, 1988; Huber, 1987, both cited in Delacruz and Dunn, 1996, p. 71) as it failed to *"mandate* attention to non-European, folk, feminist, and ethnic art." (Delacruz and Dunn, 1996, p. 73). Likewise, Hicks (1990) also criticized DBAE as a "Western, Eurocentric tradition grounded in patriarchal attitudes, values, and ideals" (p. 38). Hicks (1990) further stated that Eisner ignored the fact that "women and non-mainstream students are being asked to look, see, and experience art and the world through the eyes of male European artists" (p. 38). Hicks (1990) believed that to take in the feminist view in visual arts education, it was then essential to also take the "political nature of empowerment that education offers to students" (p. 43).

Hicks (1990) defined three goals for a feminist visual arts education. The first goal of feminist visual arts education was *education to diversity and difference* so that students could be helped to understand "alternative ways of being" (p. 44) and are educated of their own cultural background and multiplicity of human experiences.

The second goal of feminist visual arts education was *education to context* so as to focus attention on the "contextual character of art work, as well as the contextual character of all thought and interpretation.

The third goal of feminist visual arts education was *education to a community of difference* that included the other two goals within it. With this goal

Hicks (1990) stated that we needed "a vision of what we want to educate our students to be free to do and become" (p. 45) and that the "ideal is a society in which diversity, particularity, and context are understood and valued, and where this common valuing of the concrete otherness of people is the basis for political unity" (p. 45).

The Getty Center was quick to respond to these requests by undertaking the following:

(1) a general acknowledgement (in professional and theoretical writings) of the need for more diverse programs of study;

(2) an attempt on the part of the GCEA directly to involve feminists, multiculturalists, and other critics in the development, refinement, and modification of DBAE theory towards multicultural aims;

(3) the publication of numerous papers and curriculum resources dealing with diverse artists and issues in the arts;

(4) the appointment of Thandiwee Michael Kendall, an African-descended woman, to replace Phillip Dunn as Program Officer when he returned to his position at the University of South Carolina; and

(5) financial and institutional support for the development and dissemination of pedagogical approaches to multicultural DBAE practice in conferences, preservice education programs, and in professional teacher summer institutes.
(Delacruz and Dunn, 1996, p. 73)

In response to the changes made to DBAE, Greer noted:

DBAE now seems to define art more broadly, includes the art of other cultures, seems to no longer promote only the 100 canons of art made by dead white Euro-American males, seems to embrace the "popular arts" as worthy of serious consideration, no longer equates aesthetics only with aesthetic experiences and responses, realizes the limitations of aesthetic scanning, acknowledges that art has social content as well as form, and is tolerant of contributions of feminist scholars.
(Greer, 1993, cited in Delacruz and Dunn, 1996, p. 73)

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Australia: national curriculum.

Like England, Australia also planned on having a national curriculum. This was documented in *The Arts—A Curriculum Profile for Australian Schools* (1994). However, it was not a mandatory national curriculum as was the case in the UK. The Australian curriculum was more flexible in its approach and meant that each state could adopt and/or adapt the Curriculum Outcomes accordingly (De Bruin, 2003, personal interview, Wednesday, 5 February 2003).

The WA 4ALO are adaptations of three national curriculum Outcomes. These three Outcomes are listed below and compared to the WA 4ALO that are written in brackets:

(1) Creating, making and presenting: exploring and developing (AI); using skills, techniques and processes; and presenting (ASP);

(2) Arts criticism and aesthetics (AR); and

(3) Past and present contexts (AS).

2000s: Techno Visual Arts Education

This section examines the current situation of visual arts education at the beginning of the 21st century in the UK, USA, and Australia.

For some time now, computer technology has been steadily creeping into visual arts education for both art practice and theory. Although it began sometime in the 1900s, it seems that it is now here to stay and so this period in time may now be referred to as "techno visual arts education".

UK: call for reform in visual arts in the National Curriculum, but no developments with computers.

The current situation in the UK appears to be that there is a decline in visual arts education and as such, there is a call for reform. Prince Charles was also concerned with the state of the UK's visual arts education and has commented on how little money is spent per child. Prince Charles stated that "less than 60p per pupil per year is spent on art materials" (Kenyon, 2001, n.d.). Prince Charles also criticised that visual arts education was too deeply prescribed within the national curriculum and, by exams for the secondary schools (Kenyon, 2001, n.d.).

John Steers, the General Secretary of the National Society for Education in Art and Design, also had doubts about the National Curriculum (Kenyon, 2001; Kenyon, 2002). He noted that if artists such as Picasso had been studying art in England today, he would probably receive a "D" grade (Kenyon, 2001, n.d.).

The *BBC News* (Kenyon, 2001, n.d.) highlighted that school visual arts education left little room for spontaneous children's drawings or even with art and design:

> The over-prescription – the criteria that had to be met – meant that youngsters were producing what had become known as "school art" – which had no resemblance to anything in the real world of art and design. (Kenyon, 2001, n.d.).

Although there were concerns with the National Curriculum, Frayling (2002) saw things differently. He believed that the three traditions in British visual arts education history that he called normative (or head), critical (or hand), and the expressive (or heart) (Frayling, 2002), are now being practised along side each other under the umbrella of art and design education (Frayling, 2002).

At the same time, computer technology has also been steadily making its way into visual arts education. Research conducted by UK visual arts educators regarding the use of computers for visual arts education indicated that computer technology was basically utilised with art making activities rather than for art theory activities.

USA: changes in DBAE and growth of computer technology.

In the USA, the focus on DBAE has shifted so that the four disciplines are not treated as separate entities as much anymore. For example, the Getty's ArtEdNet Internet site includes a guide called the *Scope and Sequence: A Guide for Learning and Teaching in Art?* This guide "deliberately avoids the customary separate listing of the four art disciplines" of DBAE in favour of integration of the disciplines in a holistic way (Artsednet, 2003A, p. 2). Furthermore this Guide links six National Standards for Art Education with "18 ability areas in art based on the four art disciplines" (ArtEdNet, 2003A, p. 1) and is also divided into four levels for primary and secondary grades. The six National Standards and 18 ability areas based on the four disciplines (ArtsEdNet, 2003A, p. 1) are as follows:

The six National Standards:

(1)   Understanding and applying media, techniques, and processes;

(2)   Using knowledge of structures and functions;

(3)   Choosing and evaluating a range of subject matter, symbols, and ideas;

(4)   Understanding the visual arts in relation to history and cultures;

(5)   Reflecting upon and assessing the characteristics and merits of their work and the work of others; and

(6)   Making connections between visual arts and other disciplines. (ArtsEdNet, 2003B, p. 1)

The18 ability:

(1)   Personal expression in art making;

(2)   Sensory perception for art;

(3)   Inquiring about art;

(4)   Encounters with art;

(5)   Ideas for art making;

(6)   Organization of visual elements in art making;

(7)   Flexibility in art making;

(8)   Materials and technologies in art making;

(9)   Presentation and critique in art making;

(10) Art makers' roles and influences;

(11) Historical and cultural contexts in art;

(12) Historical and cultural understanding of artworks;

(13) Styles, influences and themes in art;

(14) Interpretations of artworks;

(15) Art and community;

(16) Judgements in art;

(17) Issues and viewpoints about art; and

(18) Valuing art.
      (ArtsEdNet, 2003C, p. 1)

How the six Standards are used with these 18 Standards based on the four

disciplines are available at the ArtsEdNet Internet site as follows:

http://www.getty.edu/artednet/resources/Scope/Standards/achievement.htm.

DBAE also changed at university level. At the Pennsylvania State

University, DBAE is no longer practiced in the same way as it was during the

1980s and 1990s. A newsletter from Penn State University explains the changes

that have occurred and why:

> We knew that the Discipline-Based Art Education (DBAE) structure
> under which we had been operating since its inception by the Getty
> in the 1980s had not only lost its edge, but had become a burden, an
> impossibly fragmented approach to teaching about art. We had not
> lost our belief that the world of art and artworks had become more
> complex and that the teaching of art must reflect that complexity.

> Nor did we believe any less in the importance of looking at the
> critical and philosophical foundations of artworks, but looking at
> them as separate and detached entities created a program that was
> becoming increasingly problematic for us. After several discussions,
> we agreed on a set of common threads that we wanted to run
> throughout the program and to appear in individual courses in
> various configurations...The threads that run through all the course
> include historical and contemporary issues in art education; teaching
> as reflective practice; language that is specific to art, visual culture,
> education, and art education; technology; opportunities for
> continuous professional and intellectual growth; interdisciplinary;
> critical pedagogy; varied teaching and assessment strategies to help
> students with diverse abilities learn; understanding how
> developmental, social, emotional, intellectual, and other
> characteristics of diverse learners affect their learning; inquiry in art
> and visual culture; and collaboration with colleagues and
> communities.
> (Artwords, 2001, p. 3)

Besides the changes that have occurred with DBAE, computer technology

had been gradually appearing in visual arts education. Some twenty years earlier,

Crowe (1988) noted that teacher resistance and attitude towards computers meant

that computers were not readily accepted in art classrooms. There was also an

assumption that student creativity may have been lost (Crowe, 1988, abstract)

with the use of computers. An ERIC search today shows that computer

technology is used more for visual arts practice than visual arts theory.

Australia: Outcomes.

Throughout the past 200 years, the UK has often played a major role in

shaping Australian visual arts education. However, in the past twenty years or so,

the USA has also influenced Australian visual arts education with DBAE. For

example, in Western Australia the focus shifted from the studio-discipline phase

of art, craft, and design so as to better accommodate the theory Outcomes even

though it had been practiced in Western Australia. This meant that the *Art and*

Craft Syllabus K-7 (Ministry of Education Western Australia, c. 1989) and

Frameworks (1989) were both replaced with the Western Australian four Arts

Learning Outcomes (WA 4ALO). This consisted of two art practice Outcomes

(AI, ASP) and two art theory Outcomes (AR, AS). For more information on these

Outcomes, refer to Table 1.1.

However, within these Outcomes computer technology has also been

working its way into the curriculum just like it has been doing elsewhere.

For this research with Cross-Linked Learning (CLL), computer technology

has been a prime teaching and learning tool for students to use in addressing the

WA 4ALO

Cross-Linked Learning: Four focuses/curriculum orientations

Eisner's (1972) three curriculum orientations are known as society-, child-,

and subject-centered curriculum orientations, reflected three distinct and separate

pedagogical approaches in visual arts education over the past 200 years.

However, since the 1980s DBAE brought together all three of these curriculum

orientations (Clark, 1991).

Clark (1991) believed that the combination of the three curriculum

orientations or focuses should be utilised in visual arts education in co-operation

with one another in assisting students to become enlightened citizens.

Accordingly he stated that the three major goals of visual arts education were to

"help students to achieve personal fulfilment (child-centered), improve society

(society-centered), and transmit cultural heritage (subject-centered)" (p. 6).

Today, with the use of computers in visual arts education for both visual arts

practise and theory, there is a fourth focus or curriculum orientation in visual arts

education. This is the technocentric focus or technology-centered curriculum orientation.

This means that there are now possibly four foci or curriculum orientations that may be used in visual arts education.

The learning approach for this study called Cross-Linked Learning (CLL) draws from all four foci or curriculum orientations.

Figure 2.1 shows how the four curriculum orientations are used in CLL. For example, CLL's first component, the subject, reflects the subject- and society-centered curriculum orientations; CLL's second component, the learner, reflects a child-centered curriculum orientation; and finally, CLL's third component, the tool, reflects the technology-centered curriculum orientation.

Cross-Linked Learning: Efland's four models

Efland's four models of visual arts teaching can also be related to CLL's subject. Firstly, elements of the Mimetic-Behavioural Model could be practised in a CLL program to help students gain skills in drawing and painting. Secondly, the Pragmatic-Social Reconstruction Model could also highlight environmental issues such as salinity or water pollution. Thirdly, the Expressive-Psychoanalytic Model may also be practised in that students may express themselves through their art and upon request, have the visual arts teachers to assist them with knowledge and skills in making artworks. Finally, with the Formalist-Cognitive Model, the principles of art and elements of design are practised in the art making, responding to art and locating art works in appropriate contexts (such as historical or social).

Cross-Linked Learning: Frayling's three phases

Frayling (2002) identified three phases in the history of visual arts education being the following: normative (head); critical (hand); and expressive (heart). All three of these may also be practised in the subject component of a CLL program. For example, normative (head) may be practised in design courses such as industrial or graphic design. Critical (hand) may be practised as craftsmanship and art making, while expressive (heart) may be practised as creativity and expression in art making.

Cross-Linked Learning: Boughton's three phases

Boughton (1989) identified three phases in the history of Australian visual arts education (hand-eye training, creativity, and studio-discipline). These also may be practised in CLL's subject. For example, with the hand-eye phase, students may draw a still life of several objects placed together of which they would draw or paint these exactly as is to the best of their ability. With the creativity phase (or child art), this would be more in line with what Richardson advocated than what Lowenfeld supported as students are not entirely free to draw anything they like without some sort of guidance and/or direction from the visual arts teacher and the requirements of curriculums in visual arts education. As with this research, the Year 9 students were asked to create a paperclay hero or villain mask. From this point on they were then able to create their mask as they wished, but only after creating several drawings and collages.

Summary.

This section examined the literature regarding CLL's subject. The literature traced the history of visual arts education over the past 200 years in the UK, USA, and Australia. This was done so as to examine how visual arts practice and theory

began in the UK and USA and how it eventually spread to Australia. Also highlighted was how Australia had been influenced by British visual arts education practices and then more recently by USA's visual arts education practices. These art practices have been adopted and/or adapted accordingly and have contributed in shaping the Western Australian four Arts Learning Outcomes (WA 4ALO).

This section also brought to light how four Educators had previously categorised these different periods of time in this history of visual arts education as follows: (1) Efland (1990) provided four models of teaching (Mimetic-Behavioural, Formalist-Cognitive, Expressive-Psychoanalytic, and Pragmatic-Social Reconstruction); (2) Eisner (1972) provided three curriculum orientations (society, subject, and child-centered curriculum orientation) while I identified a fourth focus or curriculum orientation being a technocentric focus or techno-centered curriculum; (3) Frayling (2002) identified three phases (normative or head, critical or hand, and expressive or heart); and (4) Boughton (1989) identified three phases in the history of Australian visual arts education (hand-eye training, creativity, and studio-discipline).

In addition to what these four Educators did to categorise these different periods of time in this history of visual arts education, I also identified three periods in a 200-year history of visual arts education in relation to these three countries. I called these: (1) Industrial Visual Arts Education (1800s); (2) Individual and Collective Hand, Head, and Heart Visual Arts Education (1900s); and, (3) Techno Visual Arts Education (2000s)

Next, I focus on CLL's learner being a target groups in relation to their multiple intelligences and how they may learn most effectively.

CLL's Learners: A Target Group and How They Learn

This section focuses on the literature about CLL's second component is the learner. This begins with identifying who the target group of learners were followed by an examination of how learners may learn. One way that learners may learn is via constructivism. This includes the following: (1) John Dewey's educative and mis-educative learning experiences; (2) Lev Vygotsky and his Zone of Proximal Development and scaffolding; (3) Constructivism; (4) Jerome Bruner and his three modes of learning; and (5) Howard Gardner and his multiple intelligence theory. From these, 24 key factors are gathered together and related to how the particular target group of Year 9 students learnt during this study.

The Target Group of Learners

The target group of learners for this study was a Year 9 visual arts class from an independent high school in Perth, Western Australia. There were 19 females in this study ranging in age from 14 to 15 years. Amongst these students were also three boarders who were from regional areas of Western Australia. As parents and guardians of these students pay such high school fees each term, it is assumed that these students were from middle to upper socio-economic backgrounds.

How Learners Learn

John Dewey

This section examines the literature regarding John Dewey's educative and mis-educative learning experiences. This has been examined, as it is the overall goal of CLL is to have educative learning experiences.

John Dewey (1859-1952) was a philosopher and a leader in education. Amongst his many contributions to education were his writings about educative and mis-educative learning experiences.

Dewey regarded educative learning experiences as essentially positive learning experiences that had an ongoing, corkscrew like effect that had the potential to lead to more meaningful learning experiences in the future. On the other hand, Dewey referred to mis-educative learning experiences as negative learning experiences, which alert us to the fact that learning had ceased before it should have and so prevents the occurrence of any future or lifelong learning.

Dewey (1980) believed that to have a truly authentic experience the material presented must "run its course to fulfillment" (p. 35) and in so doing, could "stand out as an enduring memorial (p. 36)". Dewey (1980) provided the following examples:

> A piece of work is finished in a way that is satisfactory; a
> problem receives its solution; a game is played through; a
> situation, whether that of eating a meal, playing a game of
> chess, carrying on a conversation, writing a book, or
> taking part in a political campaign, is so rounded out that
> its close is a consummation and not a cessation.
> (Dewey, 1980, p. 35)

Furthermore, Dewey believed that the parts of this authentic experience should flow from one to another and come together as one unified body. There may be pauses and places to rest on the way but there wouldn't be any "holes, mechanical junctions, or dead centers" (Dewey, 1980). Dewey described how a rolling stone may have an experience as an example:

> A generalized illustration may be had if we imagine a stone,
> which is rolling down hill, to have an experience. The activity
> is surely sufficiently "practical." The stone starts from
> somewhere, and moves, as consistently as conditions permit,
> toward a place and state where it will be at rest—toward and

end. Let us add, by imagination, to these external facts, the
ideas that it looks forward with desire to the final outcome; that
it is interested in the things it meets on its way, conditions that
accelerate and retard its movement with respect to their bearing
on the end; that it acts and feels toward them according to the
hindering and helping function it attributes to them; and that
the final coming to rest is related to all that went before as the
culmination of a continuous movement. Then the stone would
have an experience, and one with esthetic quality.
(Dewey, 1980, p. 39)

Likewise, a truly educative experience depends upon the *quality* (Dewey,

1980, p. 27) of the experience. This may have two aspects to it. That is, that

there is an immediate aspect of agreeableness or disagreeableness and its

influence upon later experience (Dewey, 1980, p. 27). Therefore, it is important

to "select the kind of present experiences that live fruitfully and creatively in

subsequent experiences" (Dewey, 1980, p. 28).

Dewey further explained that experiences of different kinds all have

common patterns.

The outline of the common pattern is set by the fact that every
experience is the result of interaction between a live creature
and some aspect of the world in which he lives…interaction of
the two constitutes the total experience that is had, and the
close which completes it is the institution of a felt harmony.
(Dewey, 1980, pp. 43-44)

Dewey also acknowledged that the action and its consequences of

experiences must be joined in perception.

A painter must consciously undergo the effect of his every
brush stroke or he will not be aware of what he is doing and
where his work is going. Moreover, he has to see each
particular connection of doing and undergoing in relation to
the whole that he desires to produce.
(Dewey, 1980, p. 45).

Children are also capable of having authentic experiences in their classrooms (to undertake purposeful action). However, Dewey (1980) pointed out that in many cases, schools have provided mis-educative (Dewey, 1980, p. 25) learning experiences that were of a wrong kind. These are not all "genuinely or equally educative" (Dewey, 1980, p. 25). Such mis-educative learning experiences are "defective from the standpoint of connection with further experience" (Dewey, 1980, p. 27).

Summary and Application for this Study.

This section provided a brief description of John Dewey's educative and mis-educative learning experiences. In particular, some of the characteristics that may lead to educative learning experiences were highlighted being:

(1) authentic learning experiences that flow from one to another into a unified whole;

(2) have a quality about them that is agreeable or disagreeable;

(3) effects future learning;

(4) have a pattern of interactivity between the person and some aspect of the world, and

(5) that perception joins in actions and consequences of actions. This study will be guided by the first key factor that Dewey identified that is, an educative learning experience.

Lev Vygotsky

Lev Vygotsky was born in Russia in (1896-1934) in the same year as Piaget. He was a social constructivist who believed that learning occurred within a social context as in the case with a teacher or with other students. Two of Vygotsky's contributions to education were the Zone of Proximal Development (ZPD) and scaffolding, which became known to the Western world when his research was translated some twenty years after it was written.

The Zone of Proximal Development (ZPD) was "the difference between the actual development level as determined by independent problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

It is within this ZPD that it is possible for scaffolding to occur. This is when a teacher or more experienced learner assists a learner at the beginning stages of their learning until they move to more independent learning. As this occurs, the scaffolding is slowly removed.

> *Scaffolding* refers to the supports the teacher provides to help the student carry out a task. These supports can either take the forms of suggestion or help...or they can take the form of physical supports...when scaffolding is provided by a teacher, it requires the teacher to carry out parts of the overall task that the student cannot yet manage. It involves a kind of cooperation problem-solving effort by teacher and student in which the express intention is for the student to assume as much of the task on his own as possible as soon as possible. A requisite of such scaffolding is accurate diagnosis of the student's current skill level or difficulty and the availability of an intermediate step at the appropriate level of difficulty in carrying out the target activity. *Fading* consists of the gradual removal of supports until students are on their own.
> (Collins, Brown, and Newman, 1989, p. 482).

Summary and Application for this Study.

This section introduced Lev Vygotsky as a social constructivist and two of his contributions to education being the Zone of Proximal Development (ZPD) and scaffolding. With the ZPD and scaffolding, learning occurs in a social setting in which assistance is provided in the beginning stages of learning and then gradually removed as the student becomes more capable of learning by themselves. Social constructivism, ZPD, and scaffolding will be considered as key factors in this study as they guided the implementation of CLL.

Constructivism

This section introduces the literature regarding constructivism, its key elements, and types. Constructivism has been chosen for this study as it supports student-centered learning, which it is believed, is how learners learn with computers. It is anticipated that this study will show how the application of constructivism to the use of computers will assist students to achieve the WA 4ALO and especially with the two visual arts theory Outcomes (AR, AS). This will be gauged against another nine key factors, which are identified at the end of this section called *Summary and Application for this Study*.

One of the main criteria of Constructivism is that learners actively construct meaning for themselves (Hein, 1991) rather than a type of knowledge that exists "out there" such as in books (Lorsbach and Tobin, 1992, p. 1), or independently of the learner (Hein, 1995, p. 1), or by absorbing ideas spoken to them by teachers or by rote learning (Strommen, 1992).

There are several definitions of Constructivism that further support and expand upon this definition as follows:

> Constructivism...claims that reality is more in the mind of the knower that the knower constructs a reality or at least interprets it based upon his/her experiences. Constructivism is concerned with how we construct knowledge from our experiences, mental structures and beliefs that are used to interpret objects and events. Our personal world is created by the mind, so in the constructivist's view, no one world is any more real than any other. There is no single reality or any objective entity. Constructivism holds that the mind is instrumental and essential in interpreting events, objects and perspectives on the real world, and that those interpretations comprise a knowledge base that is personal and individualistic. The mind filters input from the world in making those interpretations. An important conclusion from constructivist beliefs is that we all conceive of the external world somewhat differently, based upon our unique set of experiences with that world and our beliefs about those experiences.
> (Jonassen, 1991, p.29)

...(constructive) learning is an active, constructive, cumulative and goal directed process...It is **active** in that the student must do certain things while the processing incoming information in order to learn the material in a meaningful manner. It is **constructive** in that new information must be elaborated and related to other information in order for the student to retain simple information and to understand complex material. It is **cumulative** in that all new learning builds upon and/or utilizes the learner's prior knowledge in ways that determine what and how much is learned. It is **goal oriented** in that learning is most likely to be successful if the learner is aware of the goal (at least in a general sense) toward which he or she is working and possesses expectations that are appropriate for attaining the desired outcome.
(Shuell, 1988 pp. 277-8, cited in Simons, 1993, p. 291)

To these four characteristics of constructivism, Simons (1993) added another two characteristics that he referred to as diagnostic and reflection:

This means that the learner should undertake activities like monitoring, self-testing and checking that help them diagnose and judge whether they are still pursuing the goal they had set. Moreover, it means that learners should be or become aware of their way of learning. (pp. 291-292).

Hein (1991) found that there were at least nine guiding principles of constructivism thinking. These are as follows:

(1) Learning is an active process in which the learner uses sensory input and constructs meaning out of it...;

(2) People learn to learn as they learn: learning consists both of constructing meaning and constructing systems of meaning...;

(3) The crucial action of constructing meaning is mental: it happens in the mind...;

(4) Learning involves language: the language we use influences learning...;

(5) Learning is a social activity: our learning is intimately associated with our connection with other human beings, our teachers, our peers, our family as well as casual acquaintances, including the people before us or next to us at the exhibit...;

(6) Learning is contextual: we do not learn isolated facts and theories in some abstract ethereal land of the mind separate from the rest of our lives: we learn in

relationship to what else we know, what we believe, our prejudices and our fears...;

(7) One needs knowledge to learn: it is not possible to assimilate new knowledge without having some structure developed from previous knowledge to build on...;

(8) It takes time to learn: it is not instantaneous...; and

(9) Motivation is a key component in learning.
(Hein, 1991, p. 2-3)

Likewise, Hendry (1996) listed seven constructivist principles as follows:

(1) Knowledge exists only in the minds of people...;

(2) The meanings or interpretations that people give to things depend on their knowledge...;

(3) Knowledge is constructed from within the person in interrelation with the world...;

(4) Knowledge can never be certain...;

(5) Common knowledge derives from a common brain and body which are part of the same universe...;

(6) Knowledge is constructed through perception and action...; and

(7) Construction of knowledge requires energy and time.
(Hendry, 1996, cited in McInerney et al. 2002, p. 5-6).

There are also at least four different types of constructivism. These are known as personal, social, information processing, and radical constructivism. The first three are as follows:

(1) Personal constructivism—Focuses on the learner's internal mental state and transformation of understanding that occur within the individual.

(2) Social constructivism—Focuses on the learner's construction of knowledge in a social context, with the individual making personal meaning from socially shared perceptions.

(3) Information constructivism—Focuses on the learner actively selecting, organising and integrating incoming experiences with existing knowledge to create understanding.
(McInerney and McInerney, 2002, p. 5).

The fourth type of constructivism, which is known as radical constructivism, holds "that the only external world that exists is the one that our minds create, so [that they] don't recognise the existence of an independent reality." (Herlihy, 2001, p.23).

Von Glasersfeld (1995) recognised that the main principles of radical constructivism were the following:

(1) Knowledge is not passively received either through the senses or by way of communication.

(2) Knowledge is actively built up by the cognising subject.

(3) The function of cognition is adaptive, in the biological sense of the term, tending towards fit or viability; and cognition serves the subject's organisation of the experiential world, not the discovery of an objective ontological reality.
(von Glasersfeld, 1995, p. 51, in Herlihy, 2001, p. 24).

This study will be guided by nine key goals that arose out of this constructivist literature as follows:

(1) Students will have goals to achieve;

(2) Students will construct meaning, interpretation, and/or knowledge for themselves;

(3) Students will learn through action, perception, and communication (verbal and non-verbal);

(4) Students will be motivated to learn;

(5) Students will learn by participating in the process;

(6) Students will be take time to learn;

(7) Students will build upon past learning and experience;

(8) Students will learn from facts that are not isolated facts;

(9) Students will be tested and/or self-tested; and

(10) Students will learn in a social context.

Summary and Application for this study.

This section introduced constructivism, its key elements, and four types of Constructivism being personal, social, information, and radical constructivism.

This section also identified nine key goals that arose out of this constructivism literature that will guide this study regarding CLL's learner.

Jerome Bruner

Jerome Bruner (1915-), was a Professor of Psychology at Harvard University for 20 years (1952-72). Amongst his contributions to education were the concept of discovery learning, the three modes of learning, and the spiral curriculum. In particular, all three of Bruner's modes of learning are evident in CLL and are discussed in terms of the multiple intelligences in Chapter Seven.

Bruner believed that discovery learning was one of the most effective ways for learners to gain knowledge. Discovery learning meant that learners actively discover concepts for themselves that are believed to provide greater ability to remember information.

> [Discovery learning] involves the teaching of principles, rules, and problem solving through minimal teacher guidance, and maximal student exploration and trial-and-error learning.
> (Vander Zanden, and Pace, 1984, p. 588, in Herlihy, 2001, p. 9).

However this way of learning does not mean that the teacher is redundant. Rather, that the teacher arranges activities, "engage[s] students in active dialogue and...guide[s] them when [they] need some additional direction" (Thompson, 1999, p. 1).

Bruner also believed that with this type of learning learners' thought processes could be represented as three different modes of learning. The first

mode of learning was called enactive. Bruner believed that the enactive mode of learning began at birth and action occurred via a child's motor skills as a means to explore and learn about their environment. This may begin with crawling, walking, imitating and other general activities and then advance to other forms of action as he or she progress to adulthood. Even so, the enactive mode of learning is most dominant in young people. Overall, the enactive mode of learning is one of the most effective modes of learning and ways for all learners to remember what needs to be learnt. For example, if one is just discussing or talking about something, then recall is 70%. However, if one is saying and doing something at the same time, then recall is 90% (Hooper-Greenhill 1994, p. 145).

The second mode of learning is called iconic mode of learning and has to do with visual images. This may begin at approximately age three.

The third mode of learning was called symbolic mode of learning and consists of cognitive processing using words or language (Bruner, 1975, p. 11). This began from eight years of age onwards and meant that one could "understand and work with concepts that are abstract" (Hollyman, n.d., p. 16). On the other hand, if a child just heard information, recall was 20% (Hooper-Greenhill 1994).

Bruner acknowledged that the usual course of intellectual development moved from the enactive mode to the iconic mode and then finally to the symbolic mode of learning (Bruner, 1975, p. 49). Bruner was aware that some students who were more advanced in the symbolic mode of learning may be able to actually skip one or two of the first modes. However, Bruner cautioned that there was a "risk that the learner may not possess the imagery to fall back on when his symbolic transformations fail to achieve a goal in problem solving" (Bruner, 1975, p.49).

A teacher wanting to help children learn about dinosaurs could use all three modes: students could be asked to construct models of dinosaurs (enactive); they may watch a film about, or involving dinosaurs (iconic); or they could consult reference text and then discuss these findings (symbolic).
(available: wysiwig://47/
http://au.geocities.com/vanunoo/Humannature/bruner.htm. pp. 18-19).

Bruner also believed that curriculum needs to be designed so that it is built from one school year to the next. He referred to this as a spiral curriculum.

Curricula should be organized in a spiral manner so that the student continually builds upon what they have already learnt. <u>Teachers must revisit the curricula by teaching the same content in different ways depending on students' developmental levels</u>. Before children can comprehend abstract mathematical operations representative enactively (with blocks) and iconically (in pictures)
(Ching, 2000).

Summary and Application for this study.

This section introduced Jerome Bruner's three modes of learning, which are enactive, iconic, and symbolic. The enactive mode of learning requires action through motor skills such as a person's hands. The iconic mode is learning through visual images such as pictures. Finally, the symbolic mode is learning through different symbols such as through words. These three modes of learning will be identified in the CLL program and compared to the multiple intelligences in Chapter Seven.

Howard Gardner

This section examines the literature that has been written about Howard Gardner's (1993) theory of the multiple intelligences. According to Gardner, students are made up of a mixed profile of several intelligences (Gardner, 1988) rather than a "single-dimensional perspectives" of one intelligence (Veenema and Gardner 1996, p. 73). If Gardner's proposition is accepted, then it seems

appropriate that as many of these intelligences as possible be utilised in an visual arts education program to help students learn about art through their preferred intelligences. It is anticipated that this study will highlight the possibility of how several (or all) intelligences may be used in an visual arts education program and especially when computers are used for visual arts theory instruction. All these intelligences are identified in relation to CLL's learner so that students have the opportunity to learn about art via their preferred intelligences as well as the most frequently and most accepted forms of intelligences in relation to art. This way they have a greater chance of learning about art that promotes student-centered learning not only physically, but intellectually as well.

I created a PowerPoint slideshow on Sidney Nolan's Ned Kelly paintings for this study. In this, there was evidence of each of the multiple intelligences in relation to Nolan's Ned Kelly paintings. For example, for the linguistic intelligence, there was a slide that showed an image of Peter Carey's (2000) book called *The True History of the Kelly Gang* and was accompanied by some excerpts from this book. In another example regarding the interpersonal intelligence, there was an image of a self-portrait of Sidney Nolan juxtaposed on Ned Kelly. This was accompanied with further information about how Nolan identified with Ned Kelly.

Traditionally, the main contingents of intelligence were thought to be found in such subjects as Maths and English. This meant that a person's "IQ", which is usually regarded as a ratio of their mental age to their chronological age (Gardner, 1988), was biased towards these two subjects (Grow, 1995, p. 2). Therefore, mastery of these two subjects was crucial for student achievement and career

success. Gardner also wrote about what some of the other intelligence tests missed.

> ...intelligence tests rarely assess skill in assimilating new
> information or in solving new problems...[they] reveal little
> about an individual's potential for further growth...[and] to put
> it in terms of the Soviet psychologist Lev Vygotsky,
> intelligence tests fail to yield any indication of an individual's
> 'zone of potential [or "proximal"] development.'
> (Gardner, 1993, p. 18)

Furthermore, other subjects such as art, music, and sports did not qualify as being "intelligent" subjects and "received little honor" (Veenema and Gardner, 1996, p. 70). However, Gardner's research backed by results from anthropology, cognitive psychology, developmental psychology, psychometrics, biographical studies, animal physiology, and neuroanatomy (Armstrong, 1999, p. 13) assumed that other forms of intelligence did exist in these subjects as well.

Gardner (1993) produced his own definition of intelligence as being "the ability to solve problems, or to create products, that are valued within one or more cultural settings" (p. xiv). Gardner looked at eight criteria or "signs" to establish a theoretical foundation for his theory of multiple intelligences. These were the following:

(1) Potential isolation by brain damage;
(2) The existence of idiot savants, prodigies, and other exceptional individuals;
(3) An identifiable core operation or set of operations;
(4) A distinctive development history, along with a definable set of expert "end-state" performances;
(5) An evolutionary history;
(6) Support from experimental psychological tasks;
(7) Support from psychometric findings; and
(8) Susceptibility to encoding in a symbol system.
(Gardner, 1993, pp. 63-66)

From his investigations, Gardner (1993) postulated that instead of there being only two traditional intelligences (Maths and English), there were at least seven intelligences. Therefore, such subjects as art, music, and sports all qualified as being "intelligent" subjects. However, Gardner also noted that there will never be a "master list of three, seven, or 300 intelligences" (Gardner, 1993, p.59).

Gardner (1988) thought of these seven intelligences as being seven different kinds of information processors in our heads that vibrate to certain contents in the world. Their names and a description of each are the following:

(1) *Linguistics intelligences* include the skills involved in reading, writing, listening, and talking. Poetry is the prime example of application of linguistic intelligence, because it involves sensitivity not only to the meaning of words, but also to the order of words, to the sounds, rhythms, and inflections of words, and to different function of language.

(2) *Logico-Mathematical intelligence* enter, for example, mathematical and scientific thinking, solving, logical puzzles, and in a wide range of situations met in everyday life which require analysis and judgment.

(3) *Spatial intelligence* affects the accurate perception of the visual world, transformations and modifications of initial perceptions, and recreation of visual experiences when the physical stimuli are no longer present. This intelligence is important in activities such as navigation, piloting a plane, drawing, and playing chess.

(4) *Musical intelligence* is involved in the production of music, such as singing, playing an instrument, composing, and to some extent, appreciating music.

(5) *Bodily-Kinaesthetic intelligence* enters into activities where the body, or different portions of it, are used, such as in dancing, athletics, acting, and surgery.

(6) *Interpersonal intelligence* is important in relations with other persons, and represents abilities to discern other persons' moods, temperaments, motivations, and intentions.

(7) *Intrapersonal intelligence,* finally, involves the ability to understand oneself for example, to understand one's

emotions and behave in ways that are appropriate to
one's needs, goals, and abilities.
(Husen and Postlethwaite, 1994, p. 3877).

Gardner (1989) believed that we all may have these intelligences, but use a

range of them at any time depending on hereditary and environment (p. 5). He

held that these intelligences led to specific vocations or end-states (refer to Table

2.5 in this section). Therefore, a single intelligence or a combination of

intelligences produces different vocations or end-states. For example, a single

intelligence such as the bodily-kinaesthetic intelligence may produce an Olympic

athlete while two intelligences such as spatial and bodily-kinaesthetic

intelligences may produce a surgeon. The combination of three intelligences such

as linguistic, logical-mathematical and interpersonal intelligences may produce a

scientist. However, there is no correlation between any two intelligences in

particular that guarantees to produce a specific end-state.

Table 2.5

The intelligences, end-states, and core components
(from Gardner, and Hatch, 1989, p. 6).

Intelligences	End-States	Core Components
Logical-Mathematical	Scientist Mathematician	Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning
Linguistic	Poet Journalist	Sensitivity to the sounds, rhythms, and meanings of words; sensitivity to the different functions of language
Musical	Composer Violinist	Sensitivity to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness
Spatial	Navigator Sculptor	Capacities to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions.
Bodily-Kinesthetic	Dancer Athlete	Abilities to control one's body movements and to handle objects skilfully.
Interpersonal	Therapist Salesman	Capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people.
Intrapersonal	Person with detailed, accurate self-knowledge	Access to one's own feelings and the ability to discriminate among them and draw upon them to guide behaviour; knowledge of one's own strengths, weaknesses, desires, and intelligences.

Although Gardner (1995) acknowledged that there existed many types of intelligences rather than just one or two types of intelligences, he did not believe that it was essential to include all of the multiple intelligences in learning unless it was believed to be necessary.

> ...most topics can be powerfully approached in a number of ways. But there is no point in assuming that every topic can be effectively approached in at least seven ways, and it is a waste of effort and time to attempt to do this.
> (Gardner, 1995, p. 5).

More recently, Gardner introduced two new intelligences to his list of the multiple intelligences. These were the naturalist and the existential intelligences.

> *Naturalist intelligence* is expertise in the recognition and classification of numerous species—flora and fauna—of his or her environment. (Armstrong, 1999, p. 225)

> *Existential intelligence* is a concern with ultimate life issues. Such questions as "What is life?" "What's it all about?" "Why is there evil?" "Where is humanity heading?" and "Does God exist?
> (Armstrong, 1999, pp. 231-2).

The naturalist intelligence is not, however, restricted just to people who are surrounded by flora and fauna. Armstrong (1999) wrote that Gardner found that children brought up in the city transferred their naturalist intelligence to the built environment:

> For example, instead of being able to differentiate among certain kinds of leaves, or flowers, or birds, the child may use this capacity to discriminate among certain types of CD album covers, sneakers, or automobiles.
> (Armstrong, 1999, p. 228)

Finally, Gardner (1993) suggested that within each intelligence or domain, there were a "series of steps or stages" (p. 26), in which a learner can progress from novice to apprentice to expert or master (Gardner, 1993, p. 26). In relation to CLL's learner, the target group (being Year 9 students) will be treated as novice learners rather than apprentices or experts. They will be introduced and directed in their art making and art theory Outcomes; they will be provided with models as to how others have used their favoured intelligences in relation to Sidney Nolan and Ned Kelly as well as be given assistance in using some of their intelligences in relation to art making and art theory; and will be aided with computer technology.

Summary and Application for this Study.

This section examined Howard Gardner's (1993) theory of the multiple intelligences. Originally Gardner's research found that there were seven intelligences, but later added another two intelligences. This study was guided by nine key factors, which are the nine multiple intelligences: (1) visual-spatial; (2) bodily-kinaesthetic; (3) musical; (4) linguistic; (5) logical-mathematical; (6) interpersonal; (7) intrapersonal; (8) naturalistic; and (9) existential.

CLL's Tool: Computer Technology

This section focuses on the literature regarding CLL's tool, which for this study focuses on computer technology. The literature begins with a discussion of the obstacles and benefits of designing programs utilising computer technology and makes recommendations for overcoming these design obstacles. Literature concerning the obstacles and benefits of students' use of computer technology is then reviewed. Also, how the tool is used in CLL is described. This literature has been taken into account in creating the PowerPoint slideshow of Sidney Nolan's Ned Kelly paintings for a Year nine class.

Design obstacles.

Computers in visual arts education may be used to deliver and address visual arts theory Outcomes that are both student-centered and user-friendly. This section examines four design traps in providing multi-media packages with recommendations as to how these traps may be avoided.

Squires (1996) discovered three design traps in multimedia packages. These were called the superficial complexity trap, the passivity trap, and the fantasy trap (pp. 10-17).

With the superficial complexity, the learning appears attractive and novel, but doesn't encourage authentic learning or task focus. (Squires, 1996, pp. 10-17). Norman (1993, in Colbourn, 1995) also noted that some computer programs have "cute entertainment features...[and a]...lack of depth" (in Colbourn, 1995, p. 1). To avoid the superficial complexity trap from occurring, deep complexity is required that promotes educational Outcomes with "intentional links between content and the choice of media" (Squires, 1996, pp. 10-17). This means that it is an integrated structure and usually made up of pictures and text in which if either were removed, it would fall apart.

In terms of constructivism, deep complexity would assist students to be able to construct knowledge for themselves much more easily (Hein, 1991), learn through the processes of learning (Hein, 1991) and provide ways of learning that involve several senses rather than one sense (von Glaserfeld, 1995).

"Edutainment" is one way of avoiding superficial complexity. This is when education and entertainment merge together to create a dynamic learning experience. Jordan (1996) pointed out that the goal of Random House *Living Books* was to "seek to educate as well as entertain (hence the word edutainment) and, in many ways, this is exactly the strength of any CD-ROM title" (p. 37).

With the passivity trap, the learner plays a rather passive role instead of being actively challenged. This does not support a constructivist way of learning because the students need to be actively engaged in the learning process (Hein, 1991; Shuell, 1998 in Simons, 1993; and Hendry, 1996, cited in McInerney et al. 2002).

Squires (1996) made three recommendations for how passivity can be reversed. First, omission design in which not all information is provided in the

program so that learners have to fill in the missing information from other sources. Second, that the learners were perceived as multimedia composers instead of multimedia consumers, which signify that learners are required to create "assignments" with the aid of multimedia. Third, that students have time for social interaction and feedback with their peers and teacher rather than spending the whole time by themselves. Watson (1991-92) also supported this claim. He identified three reasons why students should work together in small groups of two or three around a computer that are provided in the section called *Learner benefits.*

The third design trap is called the fantasy trap. This is when learning is inauthentic in that it appears to mimic real life situations, but it is in fact not an accurate representation of reality. Squires (1996) gave as an example video conferencing, which limits the view of one's overall body language.

However, in terms of constructivism, the fantasy trap really depends on the learner's previous knowledge and experience with the learning and what meaning and/or interpretation they give to it (Hendry, 1996, cited in McInerney et al. 2002, p. 5-6). If they are more experienced learners, it may not be necessary to provide all the information provided to a beginning learner. It really all depends on whether they are novice, apprentice, or master learners (Gardner, 1993).

To combat the fantasy trap, Squires (1996) made two recommendations. First, that multimedia have sufficient deep complexity to allow for authentic learning to occur and secondly, that there is enough of a match between the fantastic environment and reality to "allow learners to indexicalise their learning" (Squires, 1996, p. 6). For example, the CD-ROM called *The Louvre: Museums of the World for Kids* (The Louvre: Museums of the World for Kids, n.d.) shows

each artwork in a virtual gallery space with an adult or child standing nearby. This provides a more realistic view of how large or small the artwork is in relation to the room and also to the onlookers. In another example, learners may see what spatial relationships are like between the Earth and Sun as the night becomes day (Future Tense, 1991, p. 16).

I have referred to a fourth design trap as the reading and writing trap. Nielsen (1997) noted that learners read quite differently with what is written on the Web than when they read books. He found that learners tend to scan written Web pages rather than to read each word (Neilsen, 1997, p. 1).

In terms of constructivism, the reading and writing trap is not actively engaging students in the learning or helping them to construct learning for themselves (Hein, 1991). This also reflects the passivity trap (Squires, 1996).

Neilsen (1997) recommended that scannable text be used in computer programs. This can be implemented through six factors as follows:

(1) Highlighted **keywords** (hypertext links serve as one form of highlighting; typeface variations and colors are others);

(2) meaningful **sub-headings** (not "clever" ones);

(3) bulleted **lists**;

(4) **one idea** per paragraph (users will skip over any additional ideas if they are not caught by the first few words in the paragraph);

(5) the <u>inverted pyramid</u> style, starting with the conclusion; and

(6) **half the word count** (or less) than conventional writing. (Neilsen, 1997, p. 1)

<u>Design benefits.</u>

This section focuses on two benefits that museum visual arts educators, school visual arts educators, and web masters may consider when designing educational computer programs.

First, educational computer programs may be designed in a non-linear fashion rather than a linear fashion as is the case with books, films, and teacher-centered learning. With linear learning, the learning is like a straight line in which the students begin at one end and then progress to the other end. On the other hand, non-linear educational computer programs are like trees with branches on them. The students begin at the base of the tree and then may select to progress on one of the main branches that has smaller branches. The students may even skip branches or sections that have no relevance to them or the learning. However, Colbourn (1995) warns that a non-linear design alone does not constitute an educational package. Students may need to be guided with some parts of the information they need to go to.

This non-linear way of learning gives the student greater ownership of the learning as mentioned below in this section about the third benefit of multimedia.

Secondly, educational computer programs may be designed to have multi-media elements in them rather than uni-media elements. Multi-media elements include text, still and moving images, audio, graphics, and animation. When these media are mixed together in various combinations, they may help to provide stimulating and engaging lessons. Furthermore, learners are able to access information from a broader and deeper standpoint that helps to dissolve what Veenema and Gardner (1996) called "single-dimensional perspectives" (p. 73).

If designed appropriately, there are at least six benefits of using multimedia in learning listed below:

> First, multimedia reaches all the senses, thus enhancing learning. It can be tailored to the learning styles of individuals whether that style is verbal, auditory...or physical;
>
> Second, multimedia encourages and validates self-expression by allowing students to decide how they want to create a

project, or assimilate information. With this approach teachers are telling students that it is OK to have more control and voice in your own educational process;

Third, this technology gives a sense of ownership to the user. Students are actually creating what they learn and there is physical evidence for this process gathered in the form of artfolios and collections of their work;

Fourth, multimedia creates an active rather than passive atmosphere for learning. It forces the students into participation, making them think about what is being presented;

Fifth, the technology fosters communication between students, and between student and teacher. It acts as a catalyst for conversation about what is being presented, or how information can be organized and presented to others; and

Sixth, the use of multimedia makes a lot of sense for the teacher today. Technology is already built into the everyday life of all students, from automatic bank machines, to video games, television, and even the drive-in ordering systems at fast food places.
(Benefits. 1991, in Townsend and Townsend, 1992, pp. 24-25).

The technology-centered curriculum orientation for contemporary visual arts education is one option proposed in this study. The technology-centered curriculum orientation may be suitable for visual arts education because according to Townsend and Townsend (1992), "'students' varied learning needs can be more successfully met when using a multimedia approach to teaching than when relying solely on traditional lecture/textbook/workbook approaches to teaching" (Townsend et. al, 1992, p. 3).

Kerin and Frank (1995) believed that multimedia could become the core of new curricula due to its potential to reach all students in the most effective ways possible.

Learner obstacles.

This section examines who and what may cause obstacles to learning with computer.

Morgan, Morgan, and Hall (1998) noted that a psychological effect related to computers, such as computer phobia, was one obstacle that learners often experienced (p. 3). The three symptoms associated with computer phobics include the following:

(1) Resistance to talking about computers;

(2) having fear or anxiety towards computers; and

(3) having hostile or aggressive thoughts towards computers.
     (Morgan et al., 1998, p. 3).

However, Weil et al. (1990) found that if computer phobics were to obtain training with technology, then the attitudes and gender of the person training them seemed to play a vital role in how they would feel about computers later on (Weil et al., 1990, in Morgan et al, 1998, p. 3).

The presence of a supportive and understanding teacher in the classroom may assist phobics to overcome their computer phobia. This may be accomplished with teacher scaffolding while students are working with computers. This is discussed further in the following section called *Learner benefits*.

However, there were also some teachers who created barriers for students to learn with computers. Roshelle et al. (2000) found that there were several key factors that contributed to this in the research they conducted with 4,000 teachers in the USA. These included how much experience and training teachers had with computers and their philosophy and objectives regarding computer use (Roshelle et al, 2000, p. 76).

Likewise, some schools also resisted students learning with computers.

Once again, Roshelle et al. (2000) found that there were other key factors that

contributed to this:

(1)   Location and number of computers available to a class; and

(2)   School culture.
        (Roshelle et al, 2000, p. 76).

In visual arts education, Greh (1986) found that there were four obstacles

that may prevent learning:

(1)   Economic factors;

(2)   Political resistance;

(3)   Teacher resistance; and

(4)   The question of whether creating art with computers is considered art
        or not.
        (Greh, 1986, p. 5)

Learner benefits.

In this section, who and what benefits arise from learning with computer

packages are discussed in terms of individuals, social groups, teacher, and the

subject being visual arts education.

The interactive computer program on Picasso's *Guernica* provided one of

the first examples of how beneficial multimedia CD-ROMS could become for

visual arts education students in learning visual arts theory.

> In the program, an image of the painting, which is Picasso's
> interpretation of a German attack on a Spanish town during the
> Spanish Civil War is accompanied by a series of 'tools' that allow
> users to ask questions and get information on a number of levels.
> They can locate the painting and the actual incident it depicts on a
> time line, get a comment from the artist or from an eyewitness to the
> actual event, read formal evaluations of the painting and its place in
> Picasso's career, or hear an interpretation of the entire work from one
> of several experts. By mixing formal, contextual, art historical, and
> aesthetic material, the program allows its users to interact with a

major work of art at different levels, according to individual interests and ability.
(Future Tense, 1991, p. 8)

Roshelle et al. (2000) believed that computer technology could be used with children to help them to learn while they are in their classrooms. In terms of individual benefits, Roshelle et al. (2000) found that "active engagement" was at least one benefit (Roshelle et al, 2000, p. 76).

Veenem and Gardner (1996) found that these new technologies provided different ways for a variety of minds to gain ways into knowledge (p. 72). This was especially beneficial for all learners regardless of whether they had strengths in the non-traditional intelligences or the "core" intelligences relating to English and Mathematics. In each case, they could gain information and knowledge through educational computer programming.

In terms of social benefits, Roshelle et al. (2000) believed that there were three characteristics to learning with computers. These were:

(1) Participation in groups;
(2) frequent interaction and feedback; and
(3) connection to real-world contexts.
    (Roshelle et al, 2000, p. 76).

Watson (1991-92) also identified three reasons why students should work together in small groups of two or three around a computer:

(1) Students working together seem to do better work;
(2) Students working together appear to be more able to solve their own problems and need less direct one-on-one from the teacher; and
(3) Students working together seem to be on-task more of the time and have greater on-task endurance.
    (Watson 1991-2, p. 5, in Townsend and Townsend, 1992, p. 25)

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Students may also benefit from teacher scaffolding when they are working on computers. This not only helps computer phobics, but assists all students to learn. Yelland and Masters (1999) conducted research on teacher scaffolding while children were working with computers and found that there were four types of teacher scaffolding:

(1) Cognitive,
(2) Affective,
(3) Strategic, and
(4) Technical scaffolding.

Cognitive scaffolding included task reinforcement, planting seed ideas, and steering children in decision making. Affective scaffolding included granting children permission and reassuring students. Strategic scaffolding included defining roles, recruiting, and time management. Finally, technical scaffolding included technical instruction and technical recovery (Yelland and Masters, 1999, p. 5).

Matthews (1988) pointed out that there were at least ten good reasons for integrating computers into an visual arts education classroom. These were as follows:

(1) Ease of use;
(2) Versatility;
(3) Relevance;
(4) Interest;
(5) Status;
(6) Collaboration and professional development;
(7) the Internet;
(8) a creative tool;
(9) an experimental medium; and
(10) a key to commercial employment.

Likewise, D'Angelo (1988) discovered how computers could contribute to visual arts education in at least three significant ways. These were:

(1) Versatility;
(2) Simplicity; and
(3) Graphic capabilities.

Summary.

This section examined the literature regarding CLL's tool, which for this study focused on computer technology. It began by identifying the obstacles and benefits of computer packages. Then four design obstacles were examined (superficial complexity, passivity, fantasy, and writing trap), and then Squires (1996) made two recommendations for overcoming these design traps (deep complexity and a match between the fantastic environment and reality). Following this, two benefits of computer packages were identified (non-linear design and multi-media functions).

Then, the literature focused on who and what may cause obstacles or benefit to learning with computer packages. Potential obstacles included individuals, teachers, schools, and also subjects such as visual arts education. Those who could benefit included individuals, social groups, teachers, and subjects (e.g., visual arts education).

This study was guided by the literature about the design of multi-media packages and learner obstacles and benefits identified in this section to see how effective CLL's tool is currently or can be when further developed.

The purpose of this review was to consider the current effectiveness of CLL's tool (computer technology) in practice and its potential for further development.

Criteria for learning

The overall goal of CLL is for learners to have educative learning experiences in visual arts education so as to address the WA 4ALO. This means that the students in this study may have a greater opportunity to have aesthetic experiences during their visual arts education. Furthermore, it is envisaged that learning will continue in the future. It is now possible to summarise the essential elements from the literature discussed above. The elements constitute the CLL approach adopted for this study. Table 2.6 presents this approach and its elements.

Table 2.6

Cross-Linked Learning Model

CLL's subject	CLL's learner	CLL's tool
Visual Arts Education	Target group and how they learn	Computer Technology

WA Arts Learning Outcomes:
 	
(1) Arts Ideas (AI);
(2) Arts Skills and
(3) Processes (ASP); Arts Responses; (AR) and
(4) Arts in Society (AS).
	Elements/Learning Approach
	
	John Dewey and Constructivism:
	   (1) Educative learning experiences;
	   (2) Goals;
	   (3) Construct knowledge for themselves
	   (4) Action, perception, communication;
	   (5) Motivation;
	   (6) Process;
	   (7) Time;
	   (8) Build upon past experiences;
	   (9) Non-isolated facts;
	   (10) Tests, self-tests; and
	   (11) Social context.
	
	Lev Vygotsky's
	   (12) ZPD and Scaffolding
	
	Jerome Bruner's three modes of learning:
	   (13) enactive
	   (14) iconic
	   (15) symbolic
	
	Multiple Intelligences:
	   (16) Visual-spatial;
	   (17) Bodily-kinaesthetic;
	   (18) Musical;
	   (19) Linguistic;
	   (20) Logical-mathematical;
	   (21) Interpersonal;
	   (22) Intrapersonal;
	   (23) Naturalist; and
	   (24) Existential.
		Design
		
		   Four obstacles to avoid:
		   (1) Superficial Complexity trap
		   (2) Passivity trap
		   (3) Fantasy trap
		   (4) Writing trap
		
		   Two benefits:
		   Non-linear and Multi-media
		
		   (1) The WWW/ Internet/Intranet;
		   (2) PowerPoint slideshows;
		   (3) Word processing; and
		   (4) Auxiliary equipment: colour printers/ photocopiers; digital cameras.
		
		Learners
		   Who and what causes obstacles to learning with computer packages:
		   (1) Individuals
		   (2) Teachers
		   (3) Schools
		   (4) Subject (e.g., Visual Arts education).
		
		   Who and what benefits from learning with computer packages:
		   (1) Individuals
		   (2) Social groups
		   (3) Teachers
		   (4) Visual arts education

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The theoretical framework

Figure 2.1 shows the theoretical framework underpinning this study. The learning approach is called Cross-Linked Learning (CLL), which aims to provide educative learning experiences for learners by drawing on the four curriculum orientations in visual arts education (subject, society, child, and techno-centered curriculum orientations). CLL's subject, which in this case refers to visual arts education, uses the WA 4ALO as this is the current practice in Western Australia. CLL's learners are Year 9 visual arts education students and are examined in terms of how they may learn, which in this case is via Constructivism and the Multiple Intelligences. Finally, CLL's tool is computer technology using such software as the WWW, Word documents, PowerPoint Slideshows, and auxiliary equipment such as digital cameras and colour printer/photocopiers.
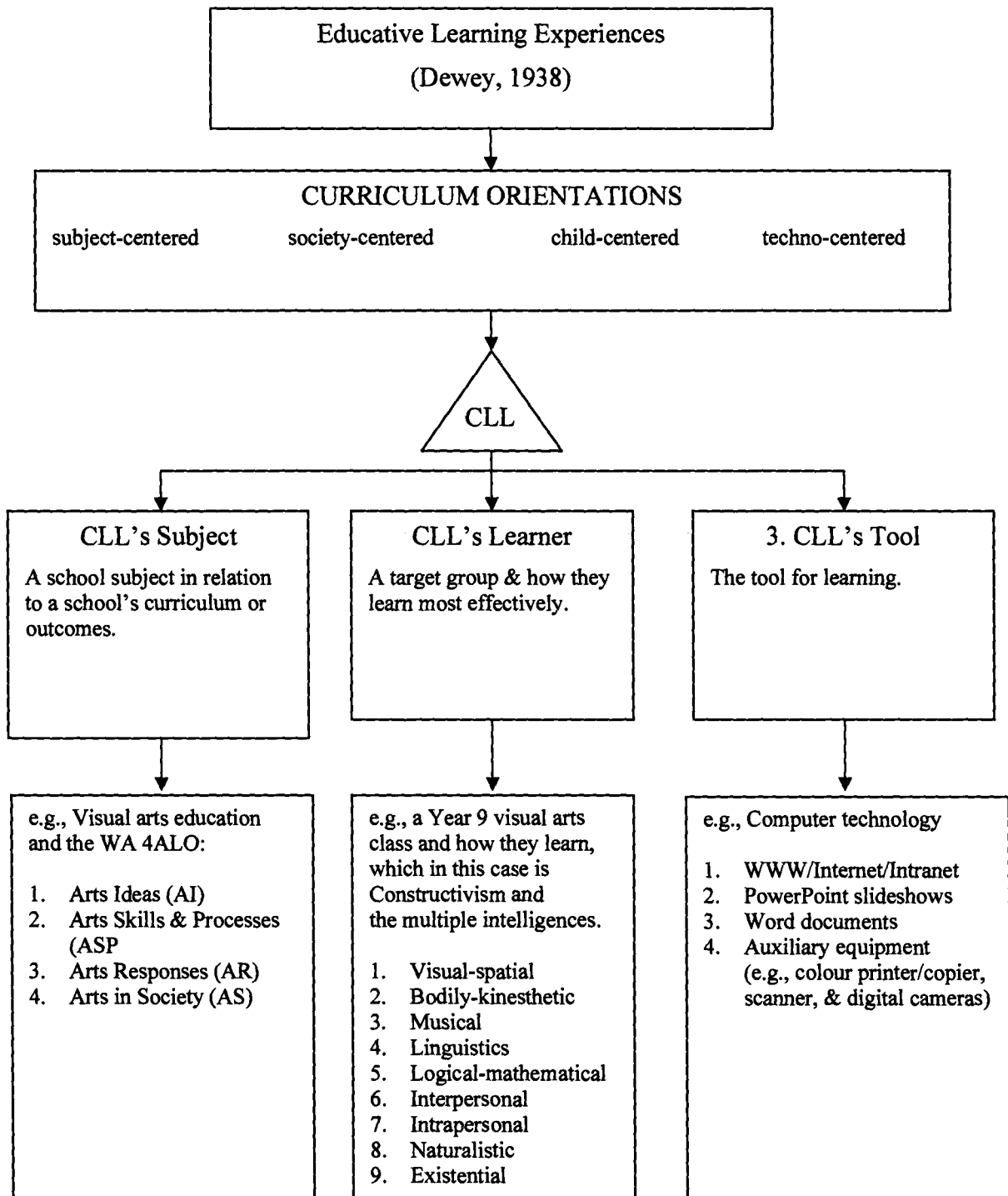
Figure 2.1 Theoretical Framework

CHAPTER THREE

Research Methods

This section identifies the research process for this study. This includes the epistemology, theoretical framework, methodology, sample, three data collection instruments, and finally, how the data were interpreted. Furthermore, information is provided about validity and reliability as well as the overall procedure for conducting this study.

The epistemology, theoretical perspective, methodology, and methods for this study, have been taken from Crotty's (1998) four basic elements of a research process. Crotty (1998) highlighted many different types of epistemologies, theoretical perspectives, methodologies, and methods that can be used for research studies. Table 3.1 presents the research process for this study.

Table 3.1

Summary of research process for this study.

Epistemology	Theoretical Framework	Methodology	Sample	Data Collection	Data Analysis
Constructivism	Interpretivist	Action research	Year 9 Class	(1) Survey Questionnaires	Statistical
				(2) Interviews	Coding
				(3) Art Portfolios Arts Ideas: Four exercises: 2-d hero/villain paper collages; drawings; self-portraits; and blueprint drawings. Arts Skills and Processes: paperclay mask Arts Responses: critique of paperclay mask. Arts in Society: historical, cultural, and socio-economic background of a hero or villain who inspired students' paperclay masks.	Interpretation

Epistemology

The epistemological view for this study is Constructivism, which is based on the belief that meaning is created or constructed by human beings rather than from something that already exists. Crotty (1998) wrote:

> There is no objective truth waiting for us to discover it. Truth or meaning, comes into existence in and out of our engagement with the realities in our world. There is no meaning without a mind. Meaning in not discovered, but constructed. In this understanding of knowledge, it is clear that different people may construct meaning in different ways, even in relation to the same phenomenon. Isn't this precisely what we find when we move from one era to another or from one culture to another?
> (Crotty, 1998, pp. 8-9)

Crotty (1998) provided an example of constructivism in relation to trees:

> Accepting that the world we experience, prior to our experience of it, is without meaning does not come easy. What the 'commonsense' view commends to us is that the tree standing before us is a tree. It would be a tree, with that same meaning, whether anyone knew of its existence or not. We need to remind ourselves here that it is human beings who have construed it as a tree, given it the name, and attributed to it the associations we make with trees. It may help if we recall the extent to which those associations differ even within the same overall culture. 'Tree' is likely to bear quite different connotations in a logging town, an artists' settlement and a treeless slum.
> (Crotty, 1998, p. 43)

Theoretical Framework

The theoretical framework for this study is an interpretivist approach. However, the other paradigms such as the positivistic and critical approaches were not entirely overlooked. Candy stated that "any paradigm will have some 'blind spots', which could well be addressed by another approach" (Candy, 1989, p.10).

Instruments used in this paradigm are essentially the same as those used for the interpretive approaches (Fetherston, 2000, p. 7). These include interviews, field notes, document analysis, and observations

Methodology

The methodology for this study was action research, which can be defined as the following:

> Action research is small-scale intervention in the functioning of the real world and a close examination of the effects of such intervention. (Halsey, 1972 in White, 2000, p. 43)

> The study of a social situation with a view to improving the quality of action with it. (Elliot, 1980 in White, 2000, p. 43)

With this type of research, the researcher can conduct action research individually or in a research team in which they act as interventionist(s) with a definite plan in mind to bring about change and improvement (White, 2000, p. 4). Together, the researcher and/or research team set out to obtain information concerning a specific local problem (Borg, 1987, p. 14) by utilising methods on a single classroom situation. Consequently, as action research sets out to resolve local education problems on a smaller scale than most research studies, it is a lot simpler and easier to perform (Borg, 1987, p. 4).

Cohen and Manion (1980) identify four tangible features of action research.

> ...it is *situational* – it is concerned with diagnosing a problem in a specific context and attempting to solve it in that context; it is usually (though not inevitably) *collaborative* – teams of researchers and practitioners work together on a project; it is *participatory* – team members themselves take part directly or indirectly in implementing the research; and it is *self-evaluative* – modifications are continuously evaluated within the ongoing situation, the ultimate objective being to improve the practice in some way or other.
> (p. 174)

Cohen and Manion (1980) recognised five ways that action research can benefit schools and classrooms:

(1)   it is a means of remedying problems diagnosed in specific situations, or of improving in some way a given set of circumstances;

(2)   it is a means of in-service training, thereby equipping the teacher with new skills and methods, sharpening his [or her] analytical powers and heightening his [or her] self-awareness;

(3)   it is a means of injecting additional or innovatory approaches to teaching and learning into an ongoing system which normally inhibits innovation and change;

(4)   it is a means of improving the normally poor communications between the practising teacher and the academic researcher, and remedying the failure of traditional research to give clear prescriptions; and

(5)   although lacking the rigor of true scientific research, it is a means of providing a preferable alternative to the more subjective impressionistic approach to problem-solving in the classroom. (Cohen & Manion, 1980, pp. 176-7)

Action research also provides improvement and involvement (Grundy, 1995, p. 10). Improvement can be found in three circumstances. These are in the practice, in the situation in which practice is occurring, or in understanding both the practice and the situation (Grundy, 1995, p. 10). Fetherston (2000) provides an example of how this may work with Interactive Multimedia (IMM) in that it would "improve the use of IMM, improve the learning in the classroom, [and] help us understand how to use IMM in the classrooms" (p. 17). Involvement can be found in the collaboration of different practitioners working together and in this study I am the researcher working in collaboration with a visual arts high school teacher.

According to Cohen and Manion (1980) the occasions when action research is most appropriate and fitting to use is "when specific knowledge is required for a specific problem in a specific situation; or when a new approach is to be grafted

on to an existing system" (p. 181). Action research is suitable for this CLL study as specific information is required to find out if computer technology, which in this case is CLL's tool, has an effect on students in terms of their attitude, skills, knowledge and preferences.

Action research will be used in this study to investigate how well the CLL learning approach performs in a single classroom situation. My role as researcher will be to observe the visual arts teacher and students in their studio and adjoining computer lab throughout the term. I will also distribute the pre- and post-questionnaires to the students, conduct the pre- and post-interviews, and study the students' marked art portfolios at the end of the term. The visual arts teacher's role is to teach the students over the term using both the visual arts studios in addressing the visual arts practice Outcomes (AI, ASP) and the computer lab in address both the visual arts practice and theory Outcomes (AI, AR, AS), as well as to mark the students' art portfolios. One of the reasons why this school was chosen for this study was that it had only recently constructed a contemporary visual arts building that had incorporated into the design a computer lab with adjoining visual arts studios as well as an art gallery.

Sample

The sample for this study was a Year 9 visual arts class from an independent secondary girls' school in Perth, Western Australia. The visual arts teacher chose this class for the study, which consisted of 19 female students. Previously, these students may have elected to have other visual arts education classes in Years eight and nine. However, none of the students had used computers to assist them learn about the theory side of art and artists. In this case, I created a special CLL PowerPoint slideshow about Sidney Nolan and his Ned Kelly paintings. That is,

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CLL's subject focused on Sidney Nolan and his Ned Kelly paintings in relation to the WA 4ALO; CLL's learner was for the Year nine visual arts students in relation to the multiple intelligences; and the tool was computer technology using PowerPoint slideshow software.

The students had written consent from their parents to participate in this study (refer to Appendix E). The study involved three different sample groups: (1) the whole class group of 19 students; (2) five pairs of students from this class; and (3) nine students' art portfolios representing three 'A' grade students, three 'B' grade students, and three 'C' grade. From the results of these three groups of students the primary research question (effect) was attempted to be answered through four sub-questions (attitude, skills, knowledge, preferences).

The whole class participated in pre- and post-questionnaires to discover what their attitude and preferences were with the three components of CLL. The five pairs of students participated in pre- and post-interviews to find out what their attitude was and what knowledge they exercised with the three components of CLL. Finally, nine students' art portfolios were examined to see what skills they used and where they exercised their knowledge with the three components of CLL. These art portfolios were graded by their teacher and then I collected them for further examination.

Data Collection

This study focussed on the Australian diptych paintings by Sidney Nolan called *Burning at Glenrowan* and *Siege at Glenrowan* (refer to Figure 3.1 and 3.2, and Appendix F) from the National Gallery of Australia. This particular artist and his paintings were chosen because of the vast amount of information available about Sidney Nolan and Ned Kelly, the artworks, and also because of the

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narrative content of these artworks. I created this PowerPoint slideshow on this artist and his artworks in relation to the WA 4ALO. This was custom designed for the Year nine students, which they could view from their visual arts computer lab or from home at any time via the Intranet.

Figure 3.1 *Burning at Glenrowan*. Sidney Nolan. 1946
Enamel on Composition Board. 121.2 x 90.7cm. National Gallery of Australia. Gift of Sunday
Reed, 1977.

Figure 3.2 *Siege at Glenrowan*. Sidney Nolan. 1946
Enamel on Composition Board. 121.2 x 90.3cm. National Gallery of Australia. Gift of Sunday
Reed, 1977.

This study was conducted over one school term (10 weeks) in the students' visual arts studio and adjoining computer lab. The first round of data was collected at the beginning of the term (pre-questionnaires, pre-interviews) while the second round of data was collected at the end of the term (post-questionnaires, post-interviews, art portfolios). Three separate data collection instruments were used in this study so as to provide triangulation wherever possible and a comprehensive representation of what was occurring when CLL was administered. These were as follows:

(1) Pre- and post-questionnaires;
(2) Pre- and post-interviews; and
(3) Art Portfolios (relating to the WA 4ALO).

These instruments were administered to the subjects as shown in Table 3.2.

Table 3.2

Data Collection methods used for the three sample groups

	Pre- and Post-Questionnaires	Pre- and Post-Interviews	Art Portfolios
The whole class of 19 students	X		
Five pairs of student groups		X	
Nine students representing three 'A' grade, three 'B' grade, and three 'C' grade students.			X

<u>**Survey questionnaires.**</u>

Each member of the class participated in the pre- and post-questionnaires (refer to Appendix B) held once at the beginning of the term and once again at the end of the term. There were 14 main questions and some of these questions had sub-questions. Therefore, there were 56 questions altogether, which attempted to

discover students' attitudes and preferences towards the three components of CLL (subject, learner, tool).

Interviews.

The researcher conducted the pre- and post-interviews. Ten students were interviewed in pairs at their request as they did not want to be interviewed by themselves. With two students being interviewed together, it meant that one student may have spoken more than the other student. However, it also meant that with two students present at the interviews, that the students were learning from each other. The interview questions were the same for both the pre- and post-interviews. The interview questions consisted of open-ended questions about CLL's subject (i.e., Sidney Nolan's and his interpretation of Ned Kelly in relation to the WA 4ALO) to find out if the students could exercise their knowledge of about Nolan and the Ned Kelly paintings from the beginning to the end of the term. These students were able to view Nolan's Ned Kelly paintings through a PowerPoint slideshow (refer to Appendix H) as well as through a hard copy poster at the time of the interview.

Art portfolios.

At the beginning of the term, the visual arts teacher provided students with written and verbal instructions about what work they needed to do to achieve the WA 4ALO. The title of this course was called "Heroes and Villains" and tied in with Sidney Nolan's diptych of Ned Kelly called *Burning at Glenrowan* and *Siege at Glenrowan*. The written instructions were as follows:

(1)   Four AI exercises in which images of heroes and villains from the Internet/WWW and elsewhere are used for two-dimensional paper collages, pencil drawings, self-portraits of themselves as heroes and/or villains, and a final blueprint drawing that draws from ideas taken from these four exercises and leads to the design of a three-dimensional paperclay mask;

(2)   An ASP three-dimensional paperclay mask of a hero and/or villain using the drawing blueprint as a guide; and

(3)   An AR workbook critiquing their paperclay mask; and

(4)   An AS document worksheet that focuses on a hero or villain who inspired their mask.

Analysis and Interpretation

This section focuses on the analysis and interpretation of the questionnaires, interviews, and art portfolios in answering the research questions.

Questionnaires.

The researcher analysed the questionnaires by entering the data into an Statistical Package for Social Sciences statistical package (SPSS), (SPSS 11.0 for Windows, 2001).

Once all the scores were placed into a matrix, the data was then analysed to report the mean and the standard deviation for the before and after results, and a MANOVA conducted to test for significant differences in before and after responses. These results were presented in tables.

Then, the results of the pre- and post-questionnaires were interpreted to seek answers to the primary research question 1.0 (effect) through sub-question 1.1 (attitude) and sub-question 1.4 (preferences).

Interviews.

The pre- and post-interviews with the five pairs of students were at the beginning and end of the term. The students were interviewed in groups of two at their request as they did not want to be interviewed all by themselves. The questions were basically about each of the three components of CLL (subject, learner, tool) as follows:

(1)   The "subject" questions were asked so as to find out if students had exercised and expanded their knowledge about Sidney Nolan's Ned Kelly paintings in relation to the WA 4ALO by the end of the term;

(2)   The "learner" questions were asked to discover students' thoughts on which multiple intelligences they thought were utilised in relation to their visual arts education; and

(3)   The "tool" questions were asked to find out students' attitudes about utilising computers for their visual arts education.

The interviews were tape-recorded and later transcribed. Following this, the interview data was entered into a NUD*IST software package (QSR International, 2000), coded, and analysed.

As this study generated a large amount of data from the interviews, the researcher needed to manage this information so that it could be interpreted with ease. With NUD*IST and Microsoft Word it was possible to organise and reduce the data by means of coding. This was a process of dividing data into parts by a classification system (Schumacher and McMillan, 1993). Researchers develop a classification system by using one of three categories:

(1)   Segmenting the data into units of meaning called topics and grouping the topics into larger clusters to form categories; or

(2)   Starting with predetermined categories and breaking each category into smaller subcategories; or

(3)   Combining the strategies, using some predetermined
      categories and adding discovered new categories.
      (Schumacher and McMillan, 1993, p. 486).

Coding the interview data for this study was taken from newly discovered

categories. Then, the researcher searched for patterns that arose out of this data.

Once patterns were identified from the predetermined and newly discovered

categories, then the researcher could interpret this information to answer the

primary research question 1.0 (effect) through sub-question 1.1 (attitude) and sub-

question 1.3 (knowledge).

Art portfolios.

Throughout this CLL project, the students worked on four main assignments

for their art portfolios that endeavoured to address the WA 4ALO. These were

the following:

(1)   For AI Outcome, the students produced four graphite pencil
         drawing exercises;

(2)   For the ASP Outcome, the students created a three-dimensional
         paperclay mask;

(3)   For AR Outcome, the students completed a PowerPoint Slideshow
         workbook; and

(4)   For the AS Outcome, the students completed a graphically
         designed Word document worksheet of a hero or villain who
         inspired their mask.

At the end of the project, the visual arts teacher collected their art portfolios

so as to assess them. The researcher also analysed nine of these student's art

portfolios for further evidence of the students addressing the WA 4ALO

throughout the term. These nine students represented typical "A", "B", and "C"

grade students.

The data gathered from the analysis of the students' art portfolios were then interpreted to answer the primary research question 1.0 (effect) through sub-question 1.2 (skills) and sub-question 1.3 (knowledge).

The data was also interpreted to discover whether students had addressed the WA 4ALO. If this occurred, then the CLL program succeeded. If not, then further improvements or revisions were required to the three components of CLL. For example, if students did not do well in their AS worksheet, then further revisions were required with the worksheet to make it more user-friendly.

Triangulation

Where appropriate, two data sources were triangulated (refer to Figure 3.3) so as to provide a comprehensive view in answering the research questions. That is, the questionnaires and interviews were triangulated for sub-question 1.1 (attitudes). Secondly, the interviews and art portfolios were triangulated for sub-question 1.3 (knowledge).

Questionnaires

Interviews   Art Portfolios
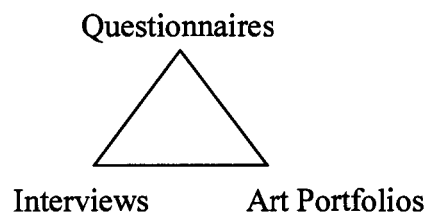
Figure 3.3 Triangulation of data in answering the research questions

Summary of Research Questions in relation to Sample, Data Collection, Analysis, and Interpretation

Table 3.3 demonstrates how the research questions of this study were

answered with regard to the three groups of students and the four data collection

methods.

Table 3.3

The research questions in relation to the sample, data collection, data analysis, and data interpretation.

QUESTIONS		GROUPS	DATA COLLECTION	DATA ANALYSIS
Primary Question	Sub-Questions			
1.0 What was the effect of Cross-Linked Learning (CLL) on students?	1.1 What were students' attitudes towards CLL?	The whole class (19 students) 5 pairs of students	Questionnaires Interviews	Statistics, Mean SD, MANOVA. Coding, Themes
	1.2 What skills did students use with CLL?	Nine students ('A', 'B', and 'C' grades)	Art Portfolios	Observations Student grades Coding, Themes.
	1.3 What knowledge did students exercise with CLL?	5 pairs of students 9 students (representing 'A', 'B', and 'C' grades)	Interviews Art Portfolios	Coding, Themes Observations Student grades.
	1.4 What were students' preferences for learning with CLL	The whole class (19 students)	Questionnaires	Statistics, Mean, SD, MANOVA

Criteria for Assessing Evidence

Four criteria related to interpretivistic approaches and action research were

used to assess the "evidence" (Grundy, 1995, p. 22) of this study. These were

truth, appropriateness, authenticity, and validity (Grundy, 1995, pp. 22-3).

<u>Truth</u>

Evidence of truth was shown in this study by way of triangulation. This

meant that "evidence about the same event is gathered from different data

sources...and compared to build up at least the most credible interpretation."

(Grundy, 1995, pp.22-3). In this case, instead of using just one instrument to test

the validity of some of the findings, there were three different data gathering

approaches. Sub-questions 1.1 (attitudes) and 1.3 (knowledge) were major research questions and so were triangulated whereas sub-questions 1.2 (skills) and 1.4 (preferences) were minor research questions and were not triangulated. Therefore, sub-question 1.1 (attitudes) was triangulated by way of the questionnaires and interviews. Likewise, sub-question 1.3 (knowledge) was triangulated by way of the interviews and art portfolios.

Appropriateness

Using only primary sources of information in this study provided evidence of appropriateness. For example, as the students were the only ones directly involved in this study, they were the primary sources. Others such as parents, teachers, the school principal, did not participate directly in this study as they were considered to be secondary sources.

Furthermore, the methods used in this study were appropriate as they drew out the most desirable information required from the primary subjects. For example, the first method used was the pre- and post-questionnaires and this provided information about student attitudes towards the three components of CLL and also what were their preferences for learning visual arts theory using computer technology. The second method was the pre- and post- interviews that revealed their attitudes towards CLL and especially if they had exercised their knowledge and had enhanced learning of Nolan's Kelly paintings from viewing the PowerPoint slideshow of Nolan's Kelly paintings throughout the term. The third method was the analysis of art portfolios, which revealed what skills students required for the three components of CLL and whether (or not) they had exercised their knowledge and enhanced learning in addressing the WA 4ALO.

Authenticity

This is an authentic account of what happened in this study as it was conducted in a bona fide school classroom. The sample group of 19 Year nine school students, were considered to be the primary sources for this study. No secondary sources such as the Principal or parents were included in this study.

Validity

Validity was provided by cross checking data.

> Cross checking of interpretations or meanings (another form of triangulation), feeding data back to participants for reflective consideration; checking for face validity (the 'click of recognition').
> (Grundy, 1995, pp. 23)

Cross checking for validity was performed with the students after conducting the interviews and the observations to review if what they said or did was accurate. Crosschecking was also dealt with between the PhD Supervisor and Researcher for further analysis, comments, and suggestions.

Ethical Considerations

As this research is an authentic school situation with regular classroom instruction, there is no reason to believe that this study would present risk to the lives of the sample group. However, some precautions were taken such as written consent from the students and their parents to participate in the study and for confidential reasons the students were identified only by an alpha-numerical code rather than their name.

Limitations of the study

Some critical limitations were identified for this study that would mean that results would not be the same if repeated with other students. First of all, there was only one classroom of students used in this study that focused on local problems and solutions. Therefore, it is unlikely that the results of this study would be exactly the same if repeated with another school or number of schools.

Second, this study was conducted with a private high school of female students. Consequently, if this research was conducted with other public or private schools regardless of whether they are single or mixed gender classes, the results would not necessarily be the same for these students.

Third, there was a small sample size and an even smaller sampling of the subsets of the students in this class.

Fourth, there was limited time for conducting the pre- and post-interviews.

Fifth, there were difficulties with quantifying qualitative data.

Sixth, we do not know how much previous experience the Year 9 students have had in visual arts education.

Seventh, my relationship with the classroom was as a researcher and not as an visual arts teacher.

Eighth, other schools may have access to only two or three computers for their visual arts education students.

Finally, if computers are used as CLL's tool, it is possible that visual arts teachers and students may have inadequate computer skills and may require introductory sessions in computing (e.g., multimedia or PowerPoint slideshows) to participate in this CLL program.

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CHAPTER FOUR
Questionnaires

Introduction

This chapter provides the results of the pre- and post-questionnaires that students completed at the beginning and end of the term three (10weeks). The students answered the same questions each time regarding the three components of CLL (subject, learner, tool). These questionnaires sought answers to the primary research question 1.0 (effect) and sub-questions 1.1 (attitudes) and 1.4 (preferences). A copy of this pre- and post-questionnaire is provided in Appendix B.

All questions except for questions 1 to 5, 7 to 9, and 14, were analysed according to individual results. That is, there were five types of responses that the students could choose from. These were as follows: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree; and (5) strongly agree. The numbers from each category for each question are reported in the tables.

The mean, standard deviation, and P_{2tail} for these questions are listed where appropriate. The means are tested for significant differences for each pre- and post-question. Statistics are reported where items are compared to one another using either a t-test or MANOVA. For the Likert scale reporting, responses were classified as either being positive, neutral, or negative. That is, the means were first rounded up or down accordingly. For example, a mean of 3.66 was rounded up to 4.0 whereas a mean of 3.24 was round down to 3.0. The adjusted means would then read as follows: a mean of more than 3.0 equals a positive response; a

mean of less than 3.0 equals a negative response; and a mean equal to 3.0 is neutral. Each question is now described in further detail.

Table 4.1

Question 1

	Response	Questionnaires	
		Pre-	Post-
Do you have a computer at home?	Yes	18	18
	No	1	1

The pre- and post-questionnaire for question 1 (Table 4.1) results were the same in each case. This showed that all but one student (n=18 each, 95%) had a computer at home for the duration of the study. All students had access to computers at school.

Table 4.2

Question 2

	Times per Week	Questionnaires	
		Pre-	Post-
How often do you use a computer each week?	Never	0	0
	1	2	4
	2	1	0
	3	1	1
	4	5	4
	5	3	3
	6	0	1
	7	7	6

The individual results for question 2 (Table 4.2) showed that the largest number in the group of students in the pre- and post-questionnaire (15 and 14 students respectively) worked with computers four to seven more times per week.

Table 4.3

Question 3

	Times per Week	Questionnaires	
		Pre-	Post-
How often do you use	0	1	1
the WWW (World	1-3	13	12
Wide Web) for	4-6	3	3
information each	7-9	1	2
week?	10+	1	1

Question 3 (Table 4.3) showed that the largest number in the group of

students in the pre- and post-questionnaire (13 and 12 students) used the WWW

one to three times per week with only one less student by the post-questionnaire.

Table 4.4

Question 4

		Questionnaires	
		Pre-	Post-
What do you	WWW	18	12
mainly use the	CD-ROMs	3	2
computer for?	Word	12	8
	PowerPoint Slideshows	1	19
	Graphics	1	1
	Email	16	12
	Chat	8	7
	Spreadsheets (e.g., Excel)	1	0
	Games	2	1
	Other	0	0
	I don't use a computer at all.	0	0

Question 4 (Table 4.4) showed that most students in the pre-questionnaire

(18 students) used the WWW, followed by Email (16 students) and then Word (12

students). In the post-questionnaire all students (19 students) were now using

PowerPoint slideshow, as this was required for their visual arts education course.

This was followed by a tie between WWW and Email (12 students each) and then

Word (eight students).

Table 4.5

Question 5

	Answer	Pre-Q.	Post-Q.	Pre-Q Mean	sd	Post-Q. Mean	sd	P_{2tail}
Do you think that	Yes	16	18	.84	.37	.95	.23	0.163
computers should be available in your visual arts education classroom?	No	3	1					

Question 5 (Table 4.5) showed that most students (16 students) agreed with this question that computers should be available for their visual arts education. This number increased by two students by the end of the term. The P_{2tail} was 0.163, which was not significant.

Question 6 was a six-part question (i.e., questions 6.1 to 6.6) regarding students' attitudes about utilising a computer during their visual arts classes. The first two questions asked the students to indicate how much they valued computers for their visual arts classes and what opportunities they saw in using computers for visual arts education. The remaining four questions were with regard to students' beliefs about computers in helping them to research, write, discuss, and make art.

For questions 6.1 to 6.6, a MANOVA was conducted. The results indicated that F=0.151; df=1, 36; and P_{2tail}=0.493, which indicates no significant difference, pre- and post-test in these items (refer to Table 4.6). However, questions 6.3, 6.5 and 6.6 showed that some students did change even though there were no significant differences in the means shown.

Table 4.6

Questions 6.1 to 6.6

Questions	Pre	sd	Post	sd
6.1	3.26	.93	3.21	.98
6.2	3.16	.76	2.79	.92
6.3	3.79	.71	3.84	.76
6.4	3.95	.62	3.89	.81
6.5	3.26	.87	3.32	.82
6.6	2.79	1.03	3.16	1.17

Table 4.7

Question 6.1

I think that utilising a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...be of great value to me such as helping me to exercise my knowledge of this subject.	Strongly Disagree	1	1
	Disagree	2	4
	Neutral	8	4
	Agree	7	10
	Strongly Agree	1	0

The individual responses for question 6.1 (Table 4.7) showed that the largest

number in the group of students in the pre-questionnaire began with a "neutral"

response (eight students) and then moved to having "agree" responses (ten

students). Although both means were neutral throughout the term (3.26, 3.21), the

results showed that some students did change to more positive responses about

computers having great value in helping them to exercise their knowledge of this

subject.

Table 4.8

Question 6.2

I think that utilising a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...have many opportunities for me such as helping me to get a job.	Strongly Disagree	0	2
	Disagree	4	4
	Neutral	8	9
	Agree	7	4
	Strongly Agree	0	0

The individual responses for question 6.2 (Table 4.8) showed that the largest

number in the group of students in the pre- and post-questionnaires had a

"neutral" response (eight and nine students respectively) about what opportunities

existed for them career wise (e.g., such as graphic design). The means were also

neutral, but showed a drop towards the negative response (3.16, 2.79).

Table 4.9

Question 6.3

I think that utilizing a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...help me to research visual arts theory (studying art history and artworks in greater detail).	Strongly Disagree	0	0
	Disagree	1	1
	Neutral	4	4
	Agree	12	11
	Strongly Agree	2	3

The individual responses for question 6.3 (refer to Table 4.9) showed that

most students in the pre- and post-questionnaires had "agree" responses

throughout the term (12 and 11 students respectively) and that this decreased by

one student by the end of the term. The two means were positive and showed a

slight increase by the end of the term (3.79, 3.84).

Table 4.10

Question 6.4

I think that utilizing a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...help me to write about the visual arts theory part of my classes.	Strongly Disagree	0	0
	Disagree	0	1
	Neutral	4	4
	Agree	12	10
	Strongly Agree	3	4

The individual responses for question 6.4 (Table 4.10) showed that most students in the pre- and post-questionnaires had a "agree" response throughout the term (12 and ten students respectively). Also, the two means were positive (3.95, 3.89).

Table 4.11

Question 6.5

I think that utilizing a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...help me to discuss the visual arts theory part of my classes.	Strongly Disagree	1	1
	Disagree	2	1
	Neutral	7	8
	Agree	9	9
	Strongly Agree	0	0

The individual responses for question 6.5 (Table 4.11) showed that the largest number in the group of students in both questionnaires had "agree" responses (nine students each). Also, both means were neutral with a slight increase towards being positive (3.26, 3.32).

Table 4.12

Question 6.6

I think that utilizing a computer for my visual arts classes could...	Individual Responses	Questionnaires	
		Pre-	Post-
...help me to make art.	Strongly Disagree	2	2
	Disagree	4	3
	Neutral	9	6
	Agree	3	6
	Strongly Agree	1	2

The individual responses for question 6.6 (Table 4.12) showed that the largest number in the group of students began with "neutral" responses in the pre-questionnaire (nine students) and ended with a tie between a "neutral" and "agree" responses (six students each). Both means were neutral and increased over the term (2.79, 3.16), which implies that some students did change to more positive responses about computers assisting to them for make art.

Table 4.13

Question 7

	Answer	Questionnaires		Pre-Q. Mean	sd	Post-Q. Mean	sd	P_{2tail}
		Pre-	Post-					
If you were permitted to combine one or more of your favourite subjects with visual arts education, would you find your art classes a lot more interesting to do?	Yes	12	14	.63	.50	.74	.45	0.494
	No	7	5					

The answer to question 7 (Table 4.13) showed that most students in both questionnaires (12 and 14 students respectively) agreed with this statement and that this increased by two students by the end of the term. Although more students

changed to a "yes" response by the post-questionnaire, the P_{2tail} was 0.494, which was not significant.

Table 4.14

Question 8

	Choice No.	Pre-Q.	Post-Q.	Pre-Mean	sd	Post-Mean	sd	P_{2tail}
Which subjects would you combine you're your visual arts education?	1st	Woodworking (Bodily-Kinaesthetic)	Woodworking (Bodily-Kinaesthetic) English (Linguistic)	3.32	3.43	5.63	4.23	0.072
	2nd	English (Linguistic) Cooking (Bodily-Kinaesthetic)	Dance/Movement (Bodily-Kinaesthetic) Drama (Linguistic & Bodily-Kinaesthetic)	6.05	4.03	6.95	5.20	0.556
	3rd	Science (Naturalistic) History (Interpersonal)	Cooking (Bodily-Kinaesthetic) History (Interpersonal) Beliefs and Values (Existential)	6.06	3.73	8.78	5.24	0.129

The responses for question 8 (refer to Table 4.14) showed which subjects (or multiple intelligences) students wanted to incorporate into their visual arts education. I identified one of the main "intelligences" associated with each of these subjects, and wrote this intelligence in brackets after the subject. For example, for woodworking I wrote one of its main intelligences as being the bodily-kinaesthetic intelligence and for the English subject, as being the linguistic intelligence.

In both questionnaires, woodworking (bodily-kinaesthetic) was students' first choice and was joined in the post-questionnaire by English (linguistic). The second choice in the pre-questionnaire was a tie between English (linguistic) and cooking (bodily-kinaesthetic) whereas in the post-questionnaire it was dance/movement (bodily-kinaesthetic) and drama (linguistic and bodily-kinaesthetic). The third choice in the pre- questionnaire was science (naturalistic) and history (interpersonal intelligence) while in the post-questionnaire it was cooking (bodily-kinaesthetic), history (interpersonal) and beliefs and values (existential).

This showed that there were four re-occurring subjects in each questionnaire. These were woodworking (bodily-kinaesthetic), English (linguistic), cooking (bodily-kinaesthetic), and history (interpersonal). Science (naturalistic) was one subject found only in the pre-questionnaire. Finally, there were three subjects in the post-questionnaire that were not in the pre-questionnaire. These were dance/movement (bodily-kinaesthetic), drama (linguistic and bodily-kinaesthetic), and beliefs and values (existential).

Students are relying mostly on their preferred multiple intelligences (e.g., bodily-kinaesthetic) in selecting courses and/or in what courses they would like to combine with visual arts education. These are as follows:

(1) The bodily-kinaesthetic intelligence appeared six times (twice in the pre-questionnaire and four times in the post-questionnaire);

(2) The linguistic intelligence appeared three times (once in the pre-questionnaire and twice in the post-questionnaire);

(3) The interpersonal intelligence appeared twice (once in each questionnaire);

(4) The naturalistic intelligence showed up once in the pre-questionnaire; and

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(5) The existential intelligence also appeared once in the post-questionnaire.

The most re-occurring intelligence was the bodily-kinaesthetic intelligence, which suggests that these students may be inclined to prefer subjects where they are utilising their hands in some way such as in creating artworks, woodworking, or cooking.

Table 4.15

Question 9

	Answer	Pre-Q.	Post-Q.	Pre-Q. mean	sd	Post-Q. mean	sd	P_{2tail}
If there was a special page on your computer (e.g., via the Internet or Intranet) that showed you how others have made connections between visual arts and their favourite subjects, would you be interested in looking at these links?	Yes	10	9	.53	.51	.47	.51	0.667
	No	9	10					

For question 9 (Table 4.15), the majority of students in the pre-questionnaire (ten students) agreed with this statement, but by the post-questionnaire, the largest number in the group of students (nine students) no longer agreed with this statement. This showed a difference in response by one student when that particular student moved from a 'yes' response in the pre-questionnaire to the 'no' response in the post-questionnaire. The P_{2tail} was 0.667, which was not significant.

Question 10 was a two-part question about what value and opportunities students saw in linking their favourite subject with their visual arts classes.

Table 4.16

Question 10.1

If one of my favourite subjects (other than art) was linked with my visual arts classes in some way…	Individual Responses	Pre-Q.	Post-Q.	Pre-Mean	sd	Post-Mean	sd	P$_{2tail}$
…it would be of great value to me	Strongly Disagree	0	1	3.53	.84	3.47	.96	0.749
	Disagree	1	1					
	Neutral	10	7					
	Agree	5	8					
	Strongly Agree	3	2					

For question 10.1 (Table 4.16), the individual responses showed that most students in the pre-questionnaire began with a "neutral" response (ten students) and ended in the post-questionnaire with "agree" response (eight students). The pre-questionnaire mean was positive, but moved down slightly to a neutral response. (3.53, 3.47). The P$_{2tail}$ was 0.749, which was not significant.

Table 4.17

Question 10.2

If one of my favourite subjects (other than art) was linked with my visual arts classes in some way…	Individual Responses	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. mean	sd	P$_{2tail}$
…it would provide many opportunities for me such as helping me in my future career.	Strongly Disagree	1	1	3.42	.96	3.21	.98	0.520
	Disagree	1	4					
	Neutral	8	10					
	Agree	7	2					
	Strongly Agree	2	2					

The individual responses for question 10.2 (Table 4.17) showed that the greatest number in the group of students had "neutral" responses for both questionnaires (eight and ten students respectively). Both means were neutral with

a slight drop towards the negative response (3.42, 3.21). The P_{2tail} was 0.520, which was not significant.

Question 11 was sub-divided into 28 sub-questions about what were students' preferences for learning art. For these 28 questions a MANOVA was conducted (Table 4.18). These results showed the following: F=.824; df=1, 36; and a P_{2tail} =0.27, which indicates no significant difference, pre- and post-test in these items.

Table 4.18

Questions 11.1 to 11.28

Question Number	Pre-Q. Mean	sd	Post-Q. Mean	sd
11.1	3.21	1.03	3.42	.96
11.2	2.32	1.20	2.26	.87
11.3	1.68	.67	2.0	.94
11.4	2.42	.96	2.37	1.07
11.5	2.89	1.10	2.74	1.28
11.6	3.26	.73	2.74	.93
11.7	2.79	.85	2.74	.93
11.8	2.37	.83	2.32	.82
11.9	3.26	.99	3.11	.99
11.10	2.47	.96	2.58	.96
11.11	2.53	1.02	2.89	.94
11.12	2.63	1.01	2.63	.90
11.13	2.79	1.08	3.11	1.20
11.14	2.42	1.07	2.42	1.43
11.15	4.74	.45	4.84	.50
11.16	4.32	.67	4.37	.68
11.17	3.79	.63	4.0	.88
11.18	3.74	.87	4.05	.97
11.19	2.05	1.03	2.16	.76
11.20	2.16	.83	2.26	.99
11.21	2.26	.87	2.58	.90
11.22	2.21	.85	2.74	.99
11.23	2.32	1.11	2.68	1.11
11.24	3.21	1.18	3.26	1.10
11.25	2.42	1.07	2.47	1.07
11.26	2.26	1.05	2.32	1.00
11.27	2.53	1.07	2.26	.87
11.28	2.26	.93	2.16	.76

Table 4.19

Question 11.1

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...looking at	Strongly Disagree	0	0
the visual arts.	Disagree	6	5
	Neutral	5	2
	Agree	6	11
	Strongly Agree	2	1

The individual responses for question 11.1 (Table 4.19) showed that the greatest number in the group of students in the pre-questionnaire had a tie between the "agree" and "disagree" responses (six students each). However, by the post-questionnaire most students had an "agree" response (11 students). This showed that the "agree" responses increased by five students by the end of the term. Both means were neutral with a slight increase towards the positive response (3.21, 3.42). It appeared that most students liked looking at the visual arts.

Table 4.20

Question 11.2

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...reading	Strongly Disagree	5	4
about art and	Disagree	8	7
artists.	Neutral	3	7
	Agree	3	1
	Strongly Agree	0	0

The individual responses for question 11.2 (refer to Table 4.20) showed that the greatest number in the group of students in the pre-questionnaire began with "disagree" responses (eight students) and ended in the post-questionnaire with a tie situation between the "disagree" and "neutral" responses (seven students each).

Both means were negative (2.32, 2.26). It appeared that students did not like to read about art and artists but this situation improved slightly by the end of the term.

Table 4.21

Question 11.3

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...writing about art and artists.	Strongly Disagree	8	6
	Disagree	9	9
	Neutral	2	2
	Agree	0	2
	Strongly Agree	0	0

The individual responses for question 11.3 (Table 4.21) showed that the greatest number in the group of students in the both questionnaires had "disagree" responses (nine students each). Also, both means were negative with a move slightly upwards towards the positive by the post-questionnaire (1.68, 2.0). It appeared that students did not like to write about art and artists although two students did move towards the positive by the end of the term.

Table 4.22

Question 11.4

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...talking about art and artists.	Strongly Disagree	4	4
	Disagree	5	7
	Neutral	8	6
	Agree	2	1
	Strongly Agree	0	1

The individual responses for question 11.4 (Table 4.22) showed that the greatest number in the group of students in the pre-questionnaire began with a "neutral" response (eight students) and ended in the post-questionnaire with

"disagree" responses (seven students). Both means were negative (2.42, 2.37). It appeared that students did not like to talk about art and artists.

Table 4.23

Question 11.5

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...playing	Strongly Disagree	3	4
logical games	Disagree	3	5
or puzzles that	Neutral	6	5
make me think	Agree	7	3
more deeply	Strongly Agree	0	2
about artworks.			

The individual responses for question 11.5 (Table 4.23) showed that the greatest number in the group of students began in the pre- questionnaire with "agree" responses (seven students) and ended in the post-questionnaire with a tie between the "neutral" and "disagree" responses (five students each). Both means were neutral (2.89, 2.74). It appeared that students did not like to play logical games or puzzles that made them think more deeply about artworks.

Table 4.24

Question 11.6

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...listening to	Strongly Disagree	0	2
music that suits	Disagree	3	5
a particular	Neutral	8	9
artwork or	Agree	8	3
style.	Strongly Agree	0	0

The individual responses for question 11.6 (Table 4.24) showed that the greatest number in the group of students in the pre-questionnaire began with a tie between the "neutral" and "agree" responses (eight students each) and then ended

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in the post-questionnaire to having a "neutral" response (nine students). Both means was neutral with a slight decrease towards the negative response by the end of the term (3.26, 2.74). It appeared that students did not like to listen to music that complements a particular artists or artwork. In this case, the students may not have liked to listen to Ned Kelly ballads.

Table 4.25

Question 11.7

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...watching videos on art and/or artists.	Strongly Disagree	2	2
	Disagree	3	5
	Neutral	11	8
	Agree	3	4
	Strongly Agree	0	0

The individual responses for question 11.7 (Table 4.25) showed that the greatest number in the group of students in the pre- and post-questionnaires had a "neutral" response (11 and eight students respectively). This showed a decrease of three students. Both means were neutral (2.79, 2.74). It appeared that students were indifferent about watching videos on art and artists.

Table 4.26

Question 11.8

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...reading a	Strongly Disagree	2	3
biography or	Disagree	10	8
autobiography	Neutral	5	7
on an artist.	Agree	2	1
	Strongly Agree	0	0

The individual responses for question 11.8 (Table 4.26) showed that the greatest number in the group of students in both questionnaires had "disagree" responses (ten and eight students respectively), which showed a decrease of two student by the end of the term. Both means were negative and became slightly more negative by the end of the term (2.37, 2.32). It appeared that students did not like to read artists' biographies or autobiographies.

Table 4.27

Question 11.9

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	1	2
something	Disagree	3	2
about myself	Neutral	6	10
from studying	Agree	8	4
arts and artists.	Strongly Agree	1	1

The individual responses for question 11.9 (Table 4.27) showed that the greatest number in the group of students began with "agree" responses (eight students), but this changed to "neutral" responses (ten students). Both means were neutral (3.26, 3.11). It appeared that students were indifferent about learning something about themselves from studying art and artists.

Table 4.28

Question 11.10

I like…	Individual Responses	Questionnaires	
		Pre-	Post-
…classifying	Strongly Disagree	4	2
particular styles	Disagree	4	9
or periods in	Neutral	9	4
visual arts.	Agree	2	4
	Strongly Agree	0	0

The individual responses for question 11.10 (Table 4.28) showed that the greatest number in the group of students in the pre-questionnaire began with a "neutral" response (nine students) and by the post-questionnaire this dropped to a "disagree" response (nine students). The pre-questionnaire mean was negative but by the post-questionnaire the mean rose to being neutral (2.47, 2.58). It appeared that most students were did not like to classify particular styles or periods in art, although the positive statements began with two students and ended with four students.

Table 4.29

Question 11.11

I like…	Individual Responses	Questionnaires	
		Pre-	Post-
…recognising	Strongly Disagree	4	1
and naming	Disagree	4	6
artworks.	Neutral	8	6
	Agree	3	6
	Strongly Agree	·0	0

Question 11.11 (Table 4.29) showed that the greatest number in the group of students in the pre- questionnaire began with a "neutral" response (eight students) and then ended with a tie of "agree", "neutral", and "disagree" responses (six

students each). Both means were neutral (2.53, 2.89). It appeared that students were indifferent about recognising and naming artworks.

Table 4.30

Question 11.12

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...identifying the artist of particular artworks.	Strongly Disagree	4	2
	Disagree	2	6
	Neutral	10	8
	Agree	3	3
	Strongly Agree	0	0

The individual responses for question 11.12 (Table 4.30) showed that the greatest number in the group of students in both questionnaires had a "neutral" response (ten and eight students). Both means were neutral (2.63, 2.63). It appeared that students were indifferent about liking to identify the artist who created the artworks.

Table 4.31

Question 11.13

I like ...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning about some meaning in life from artworks.	Strongly Disagree	3	2
	Disagree	3	5
	Neutral	9	5
	Agree	3	5
	Strongly Agree	1	2

The individual responses for question 11.13 (Table 4.31) showed that the greatest number in the group of students began with "neutral" responses (nine students) and ended with a tie between the "agree", "neutral", and "disagree" responses (five students each). Both means were neutral (2.79, 3.11). It appeared

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that students were indifferent about learning about some meaning in life from artworks.

Table 4.32

Question 11.14

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	4	7
about some	Disagree	6	5
spiritual and/or	Neutral	7	3
religious	Agree	1	2
meanings in	Strongly Agree	1	2
artworks.			

The individual responses for question 11.14 (Table 4.32) showed that the greatest number in the group of students began with a "neutral" response (seven students) and ended with a "strongly disagree" response (seven students). Both means were negative and become even more negative by the end of the term (2.42, 1.43). It appeared that students did not like to learn about some spiritual and/or religious meanings in artoworks.

Table 4.33

Question 11.15

	Individual Responses	Questionnaires	
		Pre-	Post-
I like	Strongly Disagree	0	0
...making art.	Disagree	0	1
	Neutral	0	1
	Agree	5	2
	Strongly Agree	14	15

The individual responses for question 11.15 (Table 4.33) showed that most students began with "strongly agree" responses (14 students) and that this increased by one student (15 students) by the post-questionnaire. Both means

were extremely positive and increased by the end of the term (4.74, 4.84). Without a doubt, it appeared that the students like to make art.

Table 4.34

Question 11.16

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...creating	Strongly Disagree	0	0
original ideas	Disagree	0	0
to make	Neutral	2	2
artworks.	Agree	9	9
	Strongly Agree	8	8

The individual responses for question 11.16 (Table 4.34) showed that the greatest number in the group of students in both questionnaires had an "agree" response (nine students each). Also, both means were positive and became slightly more positive by the end of the term (4.32, 4.37). Without a doubt, it appeared that the students like to create original ideas to make art.

Table 4.35

Question 11.17

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...re-	Strongly Disagree	0	0
interpreting the	Disagree	0	1
ideas of others	Neutral	6	5
to make my	Agree	11	7
artworks.	Strongly Agree	2	6

The individual responses for question 11.17 (Table 4.35) showed that the greatest number in the group of students in both questionnaires had "agree" responses (11 and seven students). Although there was a decrease of four students in the "agree" category, these four students switched to a "strongly agree"

response. Both means were positive (3.79, 4.0) and increased by the end of the term. Without a doubt, it appeared that the students like to re-interpret the ideas of others to make artworks.

Table 4.36

Question 11.18

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning artistic skills to create artworks.	Strongly Disagree	0	1
	Disagree	1	0
	Neutral	8	2
	Agree	6	10
	Strongly Agree	4	6

The individual responses for question 11.18 (Table 4.36) showed that the greatest number in the group of students began with a "neutral" response (eight students) and ended with an "agree" response (ten students). Both means were positive and increased by the end of the term (3.74, 4.05). Without a doubt, it appeared that the students like to learn artistic skills to create artworks.

Table 4.37

Question 11.19

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning visual arts theory (studying artworks in depth and art history).	Strongly Disagree	8	3
	Disagree	5	11
	Neutral	5	3
	Agree	1	2
	Strongly Agree	0	0

The individual responses for question 11.19 (Table 4.37) showed that the greatest number in the group of students began with a "strongly disagree" response (eight students) and ended with a "disagree" response (11 students).

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Both responses were negative, but slightly less negative by the end of the term (2.05, 2.16). It appeared that the students do not like to learn visual arts theory (studying artworks in depth and art history), although this was slightly less negative by the end of the term.

Table 4.38

Question 11.20

I like…	Individual Responses	Questionnaires	
		Pre-	Post-
…researching	Strongly Disagree	5	4
information	Disagree	8	9
about art and	Neutral	6	2
artists.	Agree	0	4
	Strongly Agree	0	0

The individual responses for question 11.20 (Table 4.38) showed that the greatest number in the group of students in both the questionnaires had "disagree" responses (eight and nine students respectively). Both means were negative, but slightly less negative by the end of the term (2.16, 2.26). It appeared that most students do not like to research information about art and artists, although the positives went from zero to having four students by the end of the term.

Table 4.39

Question 11.21

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...describing	Strongly Disagree	4	2
visual arts.	Disagree	10	6
	Neutral	4	10
	Agree	1	0
	Strongly Agree	0	1

The individual responses for question 11.21 (Table 4.39) showed that most

students began with a "disagree" response (ten students) and ended with a

"neutral" response (ten students). The pre-questionnaire mean was negative (2.26,

2.58), but changed to being neutral by the end of the term. It appeared that

students did not at first like to describe art but this moved to them being

indifferent about it.

Table 4.40

Question 11.22

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...analysing	Strongly Disagree	4	2
visual arts (e.g.,	Disagree	8	5
what colours	Neutral	6	9
did the artist	Agree	1	2
use in one of	Strongly Agree	0	1
their artworks).			

The individual responses for question 11.22 (Table 4.40) showed that the

greatest number in the group of students began with a "disagree" response (eight

students) and ended with a "neutral" response (nine students). The pre-

questionnaire mean was negative, but changed to being neutral by the end of the

term (2.21, 2.74). It appeared that students did not at first like to analyse visual arts, but this moved to them being indifferent about it.

Table 4.41

Question 11.23

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...interpreting the meaning in visual arts (e.g., what do the colours mean in the artwork).	Strongly Disagree	5	3
	Disagree	6	5
	Neutral	6	7
	Agree	1	3
	Strongly Agree	1	1

The individual responses for question 11.23 (Table 4.41) showed that the greatest number in the group of students began with a tie between the "disagree" and "neutral" responses (six students each) and ended with a "neutral" response (seven students). The pre-questionnaire mean was negative, but then changed to a neutral response by the end of the term (2.32, 2.68). It appeared that students did not at first like interpreting the meaning in visual arts but this moved to them being indifferent about it.

Table 4.42

Question 11.24

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...judging visual arts.	Strongly Disagree	1	1
	Disagree	6	3
	Neutral	5	8
	Agree	4	4
	Strongly Agree	3	3

The individual responses for question 11.24 (Table 4.42) showed that the greatest number in the group of students in the pre-questionnaire had a "disagree"

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response (six students) that changed to a "neutral" response (eight students).

Although some students did change their minds from having negative responses to

then having neutral responses, both means were neutral (3.21, 3.26). It appeared

that students did not at first like judging artworks but this moved to them being

indifferent about it.

Table 4.43

Question 11.25

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	3	4
about the	Disagree	7	6
historical	Neutral	4	5
significance	Agree	5	4
of artworks.	Strongly Agree	0	0

The individual responses for question 11.25 (Table 4.43) showed that the

greatest number in the group of students in both questionnaires had "disagree"

responses (seven and six students respectively). Both means were negative (2.42,

2.47). It appeared that students did not like to learn about the historical

significance of artworks.

Table 4.44

Question 11.26

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	5	4
about the	Disagree	8	8
cultural	Neutral	3	4
significance of	Agree	3	3
artworks.	Strongly Agree	0	0

The individual responses for question 11.26 (Table 4.44) showed that the greatest number in the group of students in both questionnaires had a "disagree" response (eight students each). Both means were negative, but slightly less negative by the end of the term (2.26, 2.32). It appeared that students did not like to learn about the cultural significance of artworks.

Table 4.45

Question 11.27

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	4	4
about the social	Disagree	6	8
significance of	Neutral	5	6
artworks.	Agree	4	1
	Strongly Agree	0	0

The individual responses for question 11.27 (Table 4.45) showed that the greatest number in the group of students in both questionnaires had "disagree" responses (six and eight students respectively). The pre-questionnaire mean was neutral, but then changed to being negative by the end of the term (2.53, 2.26). It appeared that students did not like to learn about the social significance of artworks.

Table 4.46

Question 11.28

I like...	Individual Responses	Questionnaires	
		Pre-	Post-
...learning	Strongly Disagree	4	4
about the	Disagree	8	9
economic	Neutral	5	6
significance of	Agree	2	0
artworks.	Strongly Agree	0	0

The individual responses for question 11.28 (Table 4.46) showed that the

greatest number in the group of students in both questionnaires had "disagree"

responses (eight and nine students respectively). Also, both means were negative

(2.26, 2.16). It appeared that students did not like to learn about the economic

significance of artworks.

Question 12

Question 12 was sub-divided into two parts so as to find out students'

thoughts about making art.

Table 4.47

Question 12.1

Making visual art...	Individual Responses	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd	P_{2tail}
...has	Strongly Disagree	0	2	3.84	.89	3.84	1.17	1.00
great	Disagree	1	0					
value in	Neutral	6	3					
my life.	Agree	7	9					
	Strongly Agree	5	5					

The individual responses for question 12.1 (Table 4.47) showed that the

greatest number in the group of students had "agree" responses (seven and nine

students respectively). Both means were positive (3.84, 3.84) and the P_{2tail} was

1.00, which was not significant. It appears that the students believe that making

visual artworks has great value in their lives.

Table 4.48

Question 12.2

Making visual art...	Individual Responses	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd	P_{2tail}
...offers many opportunities in my life such as helping me to acquire skills for a job.	Strongly Disagree	2	2	3.21	1.08	3.05	1.27	0.68
	Disagree	1	6					
	Neutral	9	4					
	Agree	5	4					
	Strongly Agree	2	3					

The individual responses for question 12.2 (Table 4.48) showed that the

greatest number in the group of students began with a "neutral" response (nine

students) and ended with a "disagree" response (six students). Both means were

neutral (3.21, 3.05) and the P_{2tail} was 0.68, which was not significant. It appeared

that the students are indifferent about art making having employment

opportunities for them.

Table 4.49

Question 13.1

Learning visual arts theory...	Individual Responses	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd	P_{2tail}
...has great value in my life.	Strongly Disagree	1	4	2.63	.76	2.42	.90	.44
	Disagree	7	4					
	Neutral	9	10					
	Agree	2	1					
	Strongly Agree	0	0					

The individual responses for question 13.1 (Table 4.49) showed that the

greatest number in the group of students in both questionnaires had "neutral"

responses (nine and ten students respectively). The pre-questionnaire mean was neutral and then changed to being negative (2.63, 2.42). The P_{2tail} was 0.44, which was not significant. Students are indifferent about the fact that learning visual arts theory has value in their lives.

Table 4.50

Question 13.2

Learning visual arts theory...	Individual Responses	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd	P_{2tail}
...offers many opportunities in my life such as helping me to acquire skills for a job.	Strongly Disagree	4	5	2.47	1.07	2.37	1.16	.77
	Disagree	5	6					
	Neutral	8	5					
	Agree	1	2					
	Strongly Agree	1	1					

The individual responses for question 13.2 (Table 4.50) showed that the greatest number in the group of students began with "neutral" responses (eight students) and ended with "disagree" responses (six students). Both means were negative and even more negative by the end of the term (2.47, 2.37). The P_{2tail} was 0.77, which was not significant. The students do not see that learning visual arts theory provides work opportunities for them.

Question 14 was divided into two parts with five questions in each. The first part was to find out students' first to fifth preferences for learning visual arts theory in various social or non-social settings. The second part was to find out what percentage of that time (i.e., 0%, 25%, 50%, 75%, and 100%) in these various social or non-social settings the students wanted to learn visual arts theory via computers.

A MANOVA was conducted. The results showed the following: $F=0.169$; $df=1, 36$; and $P_{2tail}= 0.76$, which indicates no significant difference, pre- and post-test in these items (refer to Table 4.51).

Table 4.51

Questions 4.1 to 4.10 MANOVA results

Question Nos.	Pre-Q. mean	sd	Post-Q Mean	sd
14.1	3.68	1.73	3.63	1.61
14.2	2.84	1.30	2.63	1.16
14.3	3.11	.94	2.89	1.49
14.4	2.89	1.41	3.16	1.12
14.5	2.47	1.47	1.47	1.57
14.6	2.74	1.28	2.53	1.17
14.7	3.37	1.16	2.84	1.07
14.8	2.26	1.05	2.32	.89
14.9	2.42	.96	2.58	1.12
14.10	2.84	1.30	3.37	1.46

Table 4.52

Question 14.1

I would prefer to learn visual arts theory...	No.	Pre-Q.	Post-Q.	Pre-Q. Mean	Sd	Post-Q. Mean	Sd
...by myself.	1st	4	3	3.68	1.73	3.63	1.61
	2nd	1	2				
	3rd	1	5				
	4th	5	2				
	5th	8	7				

The individual responses for question 14.1 (Table 4.52) showed that the greatest number in the group of students in both questionnaires chose the fifth choice (eight and seven students respectively).

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Table 4.53

Question 14.2

I would prefer to learn visual arts theory...	Preference No.	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd
...in a small group only.	1st	2	3	2.84	1.30	2.63	1.16
	2nd	10	9				
	3rd	4	3				
	4th	2	2				
	5th	1	2				

The individual responses for question 14.12 (Table 4.53) showed that the greatest number in the group of students in both questionnaires chose the second choice (ten and nine students respectively).

Table 4.54

Question 14.3

I would prefer to learn visual arts theory...	Preference No.	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd
...from my art teacher only.	1st	1	1	3.11	.94	2.89	1.49
	2nd	3	4				
	3rd	6	3				
	4th	4	8				
	5th	5	3				

The individual responses for question 14.3 (Table 4.54) showed that the greatest number in the group of students in the pre-questionnaire began with the third choice (six students) and in the post-questionnaire changed to the fourth choice (eight students).

Table 4.55

Question 14.4

I would prefer to learn visual arts theory...	Preference No.	Pre-Q.	Post-Q.	Pre-Q. Mean	sd	Post-Q. Mean	sd
...from my VA teacher and myself.	1st	1	3	2.89	1.41	3.16	1.12
	2nd	1	2				
	3rd	8	5				
	4th	6	5				
	5th	3	4				

Question 14.4 (Table 4.55) showed that the greatest number in the group of students in the pre-questionnaire began with the third choice (eight students) and in the post-questionnaire changed to a tie between the fourth and fifth choice (five students each).

Table 4.56

Question 14.5

I would prefer to learn visual arts theory...	Preference No.	Questionnaires	
		Pre-	Post-
...from my teacher and a small group.	1st	11	9
	2nd	4	2
	3rd	0	3
	4th	2	2
	5th	2	3

Question 14.5 (Table 4.56) showed that the greatest number in the group of students in both the pre- and post-questionnaires chose the first choice (11 and nine students respectively).

Table 4.57

Question 14.6

Time utilising a computer for visual arts theory...	Preference No.	Number of Students in each questionnaire	Percentage of time	Questionnaires	
				Pre-	Post-
...by myself.			0%	0	1
			25%	1	2
	1	4-4	50%	2	0
			75%	0	1
			100%	1	0
			0%	0	0
			25%	1	2
	2	1-2	50%	0	0
			75%	0	0
			100%	0	0
			0%	0	2
			25%	1	0
	3	1-5	50%	0	3
			75%	0	0
			100%	0	0
			0%	0	0
			25%	1	1
	4	5-2	50%	2	0
			75%	1	0
			100%	1	1
			0%	3	0
			25%	2	4
	5	8-6	50%	2	1
			75%	0	0
			100%	1	1

Question 14.6 (Table 4.57) showed that the greatest number in the group of students chose the fifth choice in both the pre- and post-questionnaires (eight and six students respectively) for learning art theory by themselves.

In this fifth choice, the pre-questionnaire results showed that out of the majority of the eight students there were three students who wanted to work with computers 0% of the time. In the post-questionnaire, out of the majority of the six students there were four students who wanted to use computers 25% of the time.

Table 4.58

Question 14.6

Time utilising a computer for visual arts theory...	Percentage of time	Questionnaires	
		Pre-	Post-
... by myself.	0%	3	3
	25%	6	9
	50%	6	4
	75%	1	1
	100%	3	2

Also, question 14.6 (Table 4.58) showed that the greatest number in the group of students (six students each) in the pre-questionnaire preferred to work with computers by themselves for learning visual arts theory between 25% to 50% of the time. In the post-questionnaire, the greatest number in the group of students (nine students) chose 25% of the time.

Table 4.59

Question 14.7

Time utilising a computer for visual arts theory...	Preference No.	Number of students in each questionnaire	Percentage of time	Questionnaires Pre-	Post-
... in a group.			0%	0	0
			25%	0	1
	1	2-3	50%	1	0
			75%	1	2
			100%	0	0
			0%	1	2
			25%	1	3
	2	10-9	50%	4	1
			75%	2	3
			100%	2	0
			0%	1	0
			25%	0	0
	3	4-3	50%	0	2
			75%	2	1
			100%	1	0
			0%	0	0
			25%	0	1
	4	2-2	50%	1	1
			75%	1	0
			100%	0	0
			0%	0	0
			25%	0	1
	5	1-2	50%	1	0
			75%	0	1
			100%	0	0

Question 14.7 (Table 4.59) showed that the greatest number in the group of students preferred learning visual arts theory with computers in a group as their second choice for both the pre- and post-questionnaires (ten and nine students).

In this second preference, the pre-questionnaire results showed that the greatest number in the group of the ten students wanted to use computers 50% of the time (four students) whereas in the post-questionnaire, the greatest number in the group of the nine students wanted to use computers either 25% or 75% of the time (three students each).

Table 4.60

Question 14.7

Time utilising a computer for visual arts theory...	Percentage of time	Questionnaires	
		Pre-	Post-
... in a group.	0%	2	2
	25%	1	6
	50%	7	4
	75%	6	7
	100%	3	0

Also, question 14.7 (Table 4.60) showed that in the pre-questionnaire the greatest number in the group preferred to work with computers in a group for learning visual arts theory 50% of the time (seven students). In the post-questionnaire, the percentage rose when the greatest number in the group chose 75% of the time (seven students).

Table 4.61

Question 14.8

Time utilising a computer for visual arts theory...	Preference No.	Number of students in each questionnaire	Percentage of time	Questionnaires	
				Pre-	Post-
... with the visual arts teacher.	1	1-1	0%	0	0
			25%	1	1
			50%	0	0
			75%	0	0
			100%	0	0
	2	3-4	0%	1	1
			25%	2	2
			50%	0	1
			75%	0	0
			100%	0	0
	3	6-4	0%	1	0
			25%	2	1
			50%	2	3
			75%	0	0
			100%	1	0
	4	4-7	0%	1	2
			25%	1	4
			50%	1	0
			75%	1	1
			100%	0	0
	5	5-3	0%	1	0
			25%	3	2
			50%	1	0
			75%	0	1
			100%	0	0

Question 14.8 (Table 4.61) showed that the greatest number in the group of students in the pre-questionnaire wanted to use computers to learn visual arts theory with their visual arts teacher as their third preference (six students). However, in the post-questionnaire the majority of students chose the fourth preference (seven students).

In this third preference for the pre-questionnaire, the greatest number in the group of six students chose to work on computers either 25% or 50% of the time (two students each). For the fourth choice in the post-questionnaire, the greatest number in the group of seven students chose 25% (four students).

Table 4.62

Question 14.8

Time utilising a computer for visual arts theory...	Percentage of time	Questionnaires	
		Pre-	Post-
...with the visual arts teacher.	0%	4	3
	25%	9	10
	50%	4	4
	75%	1	2
	100%	1	0

Also, question 14.8 (Table 4.62) showed that the greatest number in the

group of students in both the pre- and post-questionnaires chose 25% of the time

(nine and ten students) to learn visual arts theory via computers with their visual

arts teacher.

Table 4.63

Question 14.9

Time utilising a computer for visual arts theory...	Preference No.	Number of students in each questionnaire	Percentage of time	Questionnaires	
				Pre-	Post-
..one-on-one with my art teacher and myself.	1	1-3	0%	0	1
			25%	0	1
			50%	1	1
			75%	0	0
			100%	0	0
	2	1-2	0%	0	0
			25%	0	2
			50%	1	0
			75%	0	0
			100%	0	0
	3	8-5	0%	0	0
			25%	3	2
			50%	5	2
			75%	0	0
			100%	0	1
	4	6-5	0%	3	0
			25%	2	2
			50%	0	2
			75%	0	1
			100%.	1	0
	5	3-4	0%	0	2
			25%	2	0
			50%	1	1
			75%	0	1
			100%	0	0

Question 14.9 (Table 4.63) showed that the greatest number in the group of students in the pre-questionnaire wanted to work one-on-one with their art teacher for learning art theory with computers as their third choice (eight students). In the post-questionnaire, this third choice was joined by the fourth choice (five students each).

In this third choice for the pre-questionnaire, most of the eight students wanted to use computers 50% of the time (five students). In the third and fourth choices of the post-questionnaire most of the students (five students each) both chose a tie between 25% (two students each) and 50% (two students each).

Table 4.64

Question 14.9

Time utilising a computer for visual arts theory...	Percentage of time	Questionnaires	
		Pre-	Post-
... one-on-one with my visual arts teacher and me.	0%	3	3
	25%	7	7
	50%	8	6
	75%	0	2
	100%	1	1

Also, question 14.9 (Table 4.64) showed in the pre-questionnaire that the percentage of time that the greatest number in the group of 19 students wanted to learn visual arts theory via computers one-on-one with their VA teacher 50% of the time (eight students) while in the post-questionnaire, the majority of students (seven students) wanted to learn in this way 25% of the time.

Table 4.65

Question 14.10

Time utilising a computer for visual arts theory...	Preference No.	Number of students in each questionnaire	Percentage of time	Questionnaires	
				Pre-	Post-
...with my visual arts teacher and a small group.	1		0%	2	1
			25%	1	1
		10-9	50%	3	1
			75%	4	5
			100%	0	1
	2		0%	0	0
			25%	2	0
		4 -2	50%	2	0
			75%	0	1
			100%	0	1
	3		0%	0	1
			25%	0	1
		0-2	50%	0	0
			75%	0	0
			100%	0	0
	4		0%	0	0
			25%	1	1
		2-3	50%	1	1
			75%	0	0
			100%	0	1
	5		0%	1	1
			25%	0	0
		3-3	50%	0	0
			75%	0	0
			100%	2	2

Question 14.10 (Table 4.65) showed that the greatest number in the group of students chose to learn art theory via computers with their art teacher and a small group as their first choice (ten and nine students).

With this first choice in both the pre- and post-questionnaires, the greatest number in the group of students wanted to use computers 75% of the time (four and five students).

Table 4.66

Question 14.10

Time utilising a computer for visual arts theory...	Percentage of time	Questionnaires	
		Pre-	Post-
...with my visual arts	0%	3	3
teacher and	25%	4	3
a small group.	50%	6	2
	75%	4	6
	100%	2	5

Also, question 14.10 (Table 4.66) showed the percentage of time that the greatest number in the group of students wanted to learn visual arts theory via computers with their visual arts teacher and a small group. In the pre-questionnaire, the greatest number in the group of students wanted to use computer 50% of the time (six students). In the post-questionnaire, this percentage rose when the greatest number in the group of students wanted to use computers 75% of the time (six students).

Summary of Questionnaires: Towards Answering the Research Questions

Students' pre- and post-questionnaire results are summarised in Table 4.67.

Following Table 4.67 are summaries of the questionnaire results as a step towards answering the primary research question 1.0 (effect) and sub-questions 1.1 (attitudes) and 1.4 (preferences) in relation to the three components of CLL (subject, learner, tool).

Table 4.67

Summary of Questions 1 to 14.10

Question No.	Question	Pre- and Post-Questionnaire Responses	Pre-	Post-	Overall attitudes
1	Computers (ICT) at home	yes	18	18	
2	Use ICT how often	every day	7	6	
3	www	1 to 3 x	13	12	
4	ICT used mainly for	www, PP	18	19	
5	ICT for visual arts education	yes	16	18	positive
6.1	ICT great value for helping me increase knowledge in this subject	Neutral, agree	8	10	positive
6.2	ICT opportunities: job	Neutral	8	9	neutral
6.3	ICT helps research visual arts theory	Agree	12	11	positive
6.4	ICT helps write visual arts theory	Agree	12	10	positive
6.5	ICT helps discuss visual arts theory	Agree	9	9	neutral
6.6	ICT helps me make visual arts	Neutral; Neutral/agree	9	6 each	positive
7	Combine subjects with visual arts	Yes	12	14	
8	Which subjects		1. Wood 2. Eng/ cook 3. Science/ History	1. Wood/Eng 2. Dance, Drama 3. Cooking, History, Beliefs & Values	
9	Special page on www showed different MIs with visual arts	yes, no	10	9	
10.1	Favourite subject with visual arts is of value to me	Neutral, agree	10	8	positive; neutral
10.2	Favourite subject & career opportunities	Neutral	8	10	neutral
11.1 to 11.28					
11.1	I like... ....looking at visual arts	Agree/disagree; agree	6 each	11	neutral
11.2	...reading about visual arts	Disagree; Disagree/neutral	8	7 each	negative
11.3	...writing about art and artists	Disagree	9	9	negative
11.4	...talking/writing about art/artists	Neutral; disagree	8	7	negative
11.5	...playing games and puzzles re: visual arts	Agree; Neutral/disagree	7	5 each	neutral
11.6	...listening to music re visual arts	Neutral/agree; Neutral	8 each	9	neutral
11.7	...watching videos on art/artists	Neutral	11	8	neutral
11.8	...reading a biography, autobiography re: art/artists	Disagree	10	8	negative
11.9	...learning about self re art	Agree; neutral	8	10	neutral +
11.10	...classifying art styles/periods	Neutral; disagree	9	9	negative; neutral
11.11	...recognising & naming artworks	Neutral; Ag/neutral/disagree	8	6 each	neutral
11.12	...identifying artist of artwork	Neutral	10	8	neutral
11.13	...learning meaning in life via the visual arts	Neutral; Agree/neutral/disagree	9	5 each	neutral
11.14	...learning religious/spiritual	Neutral; Strongly disagree	7	7	negative
11.15	...making visual arts	Strongly agree	14	15	Extremely positive

11.16	...creating original ideas to make visual arts	Agree	9	9	positive
11.17	...re-interpreting the ideas of others to make artworks	Agree	11	7	positive+
11.18	...learning artistic skills	Neutral; agree	8	10	positive+
11.19	...learning visual arts theory	Strongly disagree; Disagree	8	11	negative-
11.20	...researching info on art/artist	Disagree	8	9	negative-
11.21	...describing visual artworks	Disagree; Neutral	10	10	negative; neutral
11.22	...analysing visual artworks	Disagree; Neutral	8	9	negative-
11.23	...interpreting meaning of visual arts	Disagree	6	5	negative; neutral
11.24	...judging art	disagree; neutral	6	8	neutral
11.25	...learning historical significance	disagree	7	6	Negative; (less)
11.26	...cultural significance	disagree	8	8	Negative; (less)
11.27	...social significance	disagree	6	8	neutral; negative
11.28	...economic significance	disagree	8	9	negative (less)
12.1	Making art... ...value to me	agree	7	9	positive
12.2	...opportunities in my life such as skills for jobs	neutral; disagree	9	6	neutral
13.1	Learning art theory... ...has great value in my life	neutral	9	10	neutral; negative
13.2	...offers many opportunities	neutral disagree	8	6	negative
14.1	I would prefer to learn visual art theory... ..by myself	Fifth	8	7	
14.2	...in a small group	Second	10	9	
14.3	...art teacher only	Third; Fourth	6	8	
14.4	...one-on-one with art teacher	Third; Fourth/Fifth	8	5 each	
14.5	...art teacher & small group	First	11	9	
14.6	ICT/art theory time by myself	5th choice	8	6	25% 50%
14.7	ICT/art theory time in a group	2nd choice	10	9	50% 75%
14.8	ICT/art theory time with art teacher	3rd choice; 4th choice	6 -	- 7	25%
14.9	ICT/art theory time one-on-one with art teacher and myself	3rd choice; 4th choice	8 -	5 5	50% 75%
14.10	ICT/art theory time with art teacher and a small group	1st choice	10	9	50% 75%

With regard to CLL's subject (WA 4ALO) there was a total of 18 questions (questions 11.5 through to 13.2) that contributed towards answering the primary research 1.0 (effect) through sub-question 1.1 (attitude).

The student attitudes varied about the three components of CLL varied. Six of the 18 questions (questions 11. 5 to 11.8, 12.1 and 12.2) addressed CLL's subject with regards to the art practice Outcomes while the other 12 questions (questions 11.19 through to 11.28, 13.1 and 13.2) addressed CLL's subject in terms of the visual arts theory Outcomes.

It appeared that the students had a positive attitude towards the two visual arts practice Outcomes (AI, ASP). They also had a positive attitude towards making art and also about the value that they placed on making art. However, the students were not sure as to how making art (e.g.,, their paperclay masks) assisted them in future career opportunities as practising artists. In a question regarding careers (question 12.2), the results showed that the student began with having a neutral attitude and then changed to having a negative attitude about this.

Alternatively, the student began with a negative attitude and ended with a neutral attitude for the AR Outcome, whereas with the AS Outcome, they had a a negative attitude. Furthermore, they had a negative attitude about the idea of researching, learning, and career opportunities associated with visual arts theory. However, they had a neutral attitude about the values that they placed on learning visual arts theory.

These results are now examined in more detail. There were two questions (questions 11.16 and 11.17) that sought answers regarding attitude towards CLL's subject (AI). The result for the greatest number in the group of students are as follows:

(1) They had had "agree" responses (n=9 each, 47%) that they liked to create original ideas to create artworks; and

(2) They had had "agree" responses (n=11, 58% and n=7, 37%) had "agree" responses that they liked to re-interpret the ideas of others to make artworks.

There were four questions (questions 11.15, 11.18, 12.1, and 12.2) that sought answer towards ASP Outcome, and the results for the greatest number in the group of students are as follows:

(1) They had had "strongly agree" responses (n=14, %; and n=15, %) that they liked to make art.

(2) They began with had "neutral" responses (n=8, 42%) and ended with had "agree" responses (n=10, 52%) that they liked to learn artistic skills.

(3) They had had "agree" responses (n=7, 37%; and n=9, 47%) that making art had value to them.

(4) They began with "neutral" responses (n=9, 47%) and ended with "disagree" responses (n=6, 32%) that making art provides many opportunities for them such as assisting them to acquire skills for a job.

There were six questions (questions 11.19 to 11.24) regarding the Arts Response Outcome. It appeared that the greatest number in the group of students had a negative attitude that changed more to a neutral attitude regarding the various steps/stages of art criticism as follows:

(1) Art theory overall: The students did not like to learn visual arts theory. From the pre- to the post-questionnaire, most students went from having had "strongly disagree" responses (n=8, 42%) to a "disagree" response (n=11, 58%).

(2) Funding/Researching: The students did not like to research information about art and artists (n=8, 42% and n=10, 53%) and had "disagree" responses in both questionnaires.

(3) Describing: From the pre- to the post-questionnaire, the students began with a "disagree" response and ended with a "neutral" response (n=10 in each questionnaire, 53%).

(4)   Analysing: From the pre- to the post-questionnaire, the students began with a "disagree" response (n=8, 42%) and ended with a "neutral" response (n=9, 47%).

(5)   Interpreting: From the pre- to the post-questionnaire, the students began with a "neutral" or "disagree" response (n=6 each, 32%) and ended with a "neutral" response (n=7, 37%).

(6)   Judging: From the pre- to the post-questionnaire, the students began with a "disagree" response (n=6, 32%) and ended up with a "neutral" response (n=8, 42%).

There were five questions (questions 11.19 and 11.25 to 11.28) with regard to the AS Outcome. The results showed that the students had a negative attitude throughout the term relating to the historical, cultural, socio, and economic components of this Outcome as follows:

(1)   Art theory overall. The students did not like to learn about art theory. From the pre- to the post-questionnaire, they began with "strongly disagree" responses (n=8, 42%) and ended with "disagree" responses (n=11, 58%);

(2)   Historical: The students had "disagree" responses in both questionnaires (n=7, 37% and n=6, 32%);

(3)   Cultural: The students had "disagree" responses in both questionnaires (n=8 each, 42%);

(4)   Social: The students had "disagree" responses in both questionnaires (n=6, 32% and n=8, 42%); and

(5)   Economic: The students had "disagree" responses in both questionnaires (n=8, 42% and n=9, 47%).

With regard to CLL's learner (multiple intelligences), there were 14 questions (questions 11.1 to 13 and 11.15) that addressed these questions (effect, attitude).

First, it appeared that by the end of the term that CLL's learner (multiple intelligences) did not have an effect on students.

Second, it appeared that by the end of the term that the students had a positive attitude towards two intelligences (visual-spatial and bodily-kinaesthetic),

which are two intelligences most associated with the visual arts. There was also a neutral attitude towards three intelligences (musical, intrapersonal, naturalistic), and a negative attitude towards four intelligences (linguistic, logical-mathematical, interpersonal, and existential). The results are as follows:

(1) Visual-Spatial: Question 11.1 showed that the students (n=6 each, 32%) had "disagree" and "agree" responses. In the post-questionnaire the students (n=11, 58%) had "agree" responses.

(2) Bodily-Kinaesthetic: Question 11.15 showed that the students (n=14, 74% and n=15, 79%) had "strongly agree" responses.

(3) Musical: Question 11.6 showed that the students began with a "neutral" or "disagree" response (n=8 each, 42%) and ended with had a "neutral" response (n=9, 47%).

(4) Linguistics: Questions 11.2 to 11.4 showed that the students began with a "disagree" (question 11.2, n=8, 42%, question 11.3, n=9, 47%) or a "neutral" response (question 11.4, n=8, 42%). In the post-questionnaire, they ended with a "disagree" response (question 11.3, n=9, 47%), (question 11.4, n=7, 37%) and for question 11.2 the "disagree" response was in a tie situation with a "neutral" response (n=7 each, 37%).

(5) Logical-Mathematical: Question 11.5 showed that the students began with an "agree" response (n=7, 37%) and ended with a g had either a "neutral" or "disagree" response (n=5 each, 26%).

(6) Interpersonal: Question 11.8 showed that the students (n=10, 53% and n=8, 42%) had a "disagree" response.

(7) Intrapersonal: Question 11.9 showed that the students began with an "agree" response (n=8, 42%) and ended with a "neutral" response (n=10, 53%).

(8) Naturalistic: Questions 11.10 to 11.12 showed that the students had a "neutral" response (n=9, 47%, n=8, 42%, and n=10, 53%).

(9) Existential: Questions 11.13 and 14 showed that the students began with a "neutral" response (n=9, 47% and n=7, 37%). In the post-questionnaire they ended up with the following: for question 11.13 (n=5, 26%) they had a tie between "disagree", "neutral" and "agree" whereas in question 11.14, they had a "strongly disagree" (n=7, 37%).

The results were slightly different when the intelligences were considered in terms of subjects in relation to their visual arts education. The two most favoured

subjects were wood-working (bodily-kinaesthetic intelligences) and English (linguistic intelligences):

(1) Positive attitudes about combining their favourite subjects (relating to bodily-kinaesthetic, linguistic intelligences) with art throughout the term.

The results regarding other questions about students' favourite subjects in relation to their visual arts education are as follows:

(2) Positive attitudes about the value they placed on this throughout the term;

(3) A tie between the positive and negative attitudes that changed to negative attitudes about having a special page on the WWW showing how other people combined their favourite subject with art; and

(4) Positive attitudes that changed to negative attitudes about what opportunities existed for them in using computers for visual arts education.

Third and final, with regard to CLL's tool (computer technology), there were seven questions (questions 5 to 6.6) that contributed towards answering three research questions (effect, attitude, preferences).

First, it appeared that these questions collectively indicated that CLL's tool (computer technology) did have an effect on students.

Second, it appeared that by the end of the term that the students had positive attitudes towards computers for their visual arts education in terms of the art practice and art theory Outcomes. However, they were neutral about what career opportunities existed for them in working with computers for their visual arts education:

(1) ICT used for visual arts education (question 5): The greatest number in the group of students had a positive attitude about this in both questionnaires (n=16, 84%; and n=18, 95%);

(2) ICT helps students to value, exercise their knowledge, and have enhanced learning in visual arts education (question 6.1): The

greatest number in the group of students had a neutral attitude (n=8, 42%) that changed to a positive attitude (n=10, 53%);

(3) ICT and visual arts education provides job opportunities (question 6.2): The had a neutral attitude (n=8, 42% and n=9, 47% respectively);

(4) Researching visual arts theory (question 6.3): The students had a positive attitude about this in both questionnaires (n=12, 63%; and n=11, 58%);

(5) ICT assists students to write visual arts theory (question 6.4): The students had a positive attitude about this in both questionnaires (n=12, 63%; and n=10, 53%);

(6) ICT helps students to discuss art theory (question 6.5): The students had a positive attitude about this in both questionnaires (n=9 each, 47%); and

(7) ICT helped students to make art (question 6.6): The students had a neutral attitude (n=9, 47% in pre-questionnaire) that then changed to a tie between neutral and positive attitude, and (n=6 each, 32% in post-questionnaire).

Third, there were ten questions (questions 14.1 to 14.10) in the questionnaire that contributed towards answering the sub-question 1.4 (preferences). Students' first to last preferences for learning art theory with computers was to work in small groups in the presence of their art teacher and when learning visual arts theory, to use computers 75% of the time. The results are summarised in Table 4.68.

Table 4.68

Summary of Questions 14.5 to 14.10

First to fifth preference and the number of students who voted for this preference.		The five choices	Percentage of time using computers for visual arts theory for overall numbers of students	
Pre-	Post-		Pre-	Post-
1 (11 students)	1 (9 students)	Visual arts teacher and small group	25% & 50%	75%
2 (10 students)	2 (9 students)	A small group of students	50%	75%
3 (8 students)	4 & 5 (5 students each)	One-on-one with art teacher and myself	50%	25%
3 (6 students)	4 (8 students)	Visual Arts teacher (teacher-centered)	25%	25%
5 (8 students)	5 (7 students)	By myself only	25% and 50% (tie)	25%

First choice.

For their first choice, the greatest number in the group of students (n=11, 58% and n=9, 47%) wanted to learn within a small group or class situation in the presence of an visual arts teacher to assist them wherever they needed assistance. Overall, the pre-questionnaire results showed that the greatest number in the group of students wanted to use computers for visual arts theory learning either 25% or 50% of the time while in the post-questionnaire, the greatest number in the group of students now wanted to use computers 75% of the time.

Second choice.

For the second choice, the greatest number of students (n=10, 53% and n=9, 47%) wanted to learn visual arts theory in a small group. Overall, the pre-questionnaire results showed that the greatest number in the group of students wanted to use computers 50% of the time while in the post-questionnaire this rose to 75% of the time.

Third choice.

For the third choice, the majority of students wanted to learn visual arts theory one-on-one with their visual arts teacher. In the pre-questionnaire, there were eight students (n=8, 42%) who chose this as their third choice. In the post-questionnaire, there was a tie between the third and fourth choices (n=5 each, 26%). Overall, the pre-questionnaire results showed that the greatest number in the group of students wanted to use computers 50% of the time while in the post-questionnaire, the greatest number in the group of students now wanted to use computer 25% of the time.

Fourth choice.

For the fourth choice, the students wanted to learn visual arts theory in a teacher-centered situation. In the pre-questionnaire, there were six students (n=6, 32%) who chose this as their third preference. However, by the post-questionnaire, the greatest number in the group of students (n=8, 42%) now chose this as their fourth preference. Altogether, the pre-questionnaire results showed that the greatest number in the group of students wanted to use computers 25% of the time in both questionnaires.

Fifth choice.

The fifth and final choice was for students to learn visual arts theory by themselves. In the pre-questionnaire, there were eight students (n=8, 42%). However, in the post-questionnaire, there were now seven students (n=7, 37%). Overall, the pre-questionnaire results showed that the greatest number in the group of students wanted to use computers either 25% or 50% of the time. In the

post-questionnaire, the greatest number in the group of students now wanted to use computers 25% of the time.

Summary of Questionnaires

Chapter four provided the results of the pre- and post-questionnaires from the whole of the Year nine class (19 students). These sought answers towards the primary research question 1.0 (effect) through sub-questions 1.1 (attitude) and 1.4 (preferences).

The questionnaire findings were summarised as follows:

(1) CLL's subject (WA 4ALO - attitude): AI and ASP had an effect on students who had a positive attitude;

(2) CLL's subject (WA 4ALO – effect, attitude): The AR Outcome had an effect on students as they changed from a negative attitude to a neutral attitude.

(3) CLL's subject (WA 4ALO – effect, attitude): The AS Outcome did not have an effect on students as they had a negative attitude towards this throughout the term;

(4) CLL's learner (multiple intelligences - effect, attitude): Two of the intelligences (visual-spatial and bodily-kinaesthetic) had an effect on students as they showed a positive attitude towards these;

(5) CLL's learner (multiple intelligences - effect, attitude): Three of the intelligences (musical, intrapersonal, and naturalistic) did not have an effect upon students they had a neutral attitude by the end of term;

(6) CLL's learner (multiple intelligences - effect, attitude): Four of the intelligences (linguistic, logical-mathematical, interpersonal, and existential) did not have an effect upon students as they had a negative attitude towards these;

(7) CLL's tool (computer - effect, attitude): Computer technology had an effect upon students as they had a positive attitude towards this for both visual arts practice and theory; and,

(8) CLL's tool (computers - effect, preferences): A social constructivist environment that is student-centered and includes their peers and their visual arts teacher utilising computers 75% of the time has an effect upon students as it is their first preferences for learning visual arts theory.

CHAPTER FIVE

Interviews

Introduction

In this chapter the results will be presented of the pre- and post-interviews.

These questions contribute towards answering the primary research question 1.0

(effect) through sub-questions 1.1 (attitude) and 1.3 (knowledge).

The results came from ten students who were interviewed in groups of two

(refer to Appendix C for the interview questions) as the students did not want to

be interviewed by themselves. Therefore, I arranged with the five pairs of

students to interview them at different times during the first couple of weeks at

the beginning of the term and once again during the last couple of weeks at the

end of the term.

At each interview, the students were questioned about each of the three

components of CLL (subject, learner, and tool). More specifically, the questions

for each of CLL's three components were about the following:

(1) CLL's subject questions were about the pluses and minuses of
     learning visual arts theory as well as questions regarding Sidney
     Nolan's Ned Kelly paintings in relation to the WA 4ALO;

(2) CLL's learner questions were about utilising the multiple
     intelligences in their visual arts education and also about the multiple
     intelligence slides of the PowerPoint slideshow of Nolan's Kelly
     paintings; and

(3) CLL's tool questions were about utilising computers for visual arts
     education.

The only time that interviews could be held was during the students' lunch break as most of the students had other commitments before and after school. This meant that I only had approximately half an hour to conduct the interviews. I tape-recorded the students at each session and then at a later date I transcribed the recordings. These transcripts were then analysed using an analytic induction approach. For CLL's subject and learner, there were pre-existing themes. These were coded and categorised, and in some cases, new themes and patterns arose from this information. For CLL's tool, there were no pre-existing themes. I coded and categorised the transcribed data and then searched for themes or patterns emerging out of this information.

Each student was given a code so as not to disclose her real name. They were identified according to what group number they were in (e.g., a group one member was represented with a "1"). Then they were identified according to whether they were the first or second student in that group and so were given an "A" or a "B" code. For example, student 1A was the first student in the group one. Whereas student 3B was the second student in group three.

Furthermore, some students were identified according to whether they spoke in the first interview or the second interview. For this, a number 1 or 2 followed their identification code. For example, student 2A-1 was the first student in group 2 who spoke in the pre-interview. In another example, student 3A-2 was the first student in group 3 who spoke during the post-interview.

CLL's Subject

For the first part of the pre- and post-interviews, I asked the students questions about CLL's subject. In particular, the questions were to discover students' attitudes towards the pluses and minuses of learning visual arts theory.

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For the second part of the pre- and post-interviews, I asked the students questions about Sidney Nolan's Ned Kelly diptych in relation to the WA 4ALO.

Visual Arts theory pluses and minuses

The students' plus and minus responses about students learning visual arts theory were placed in either one of two pre-existing themes. These were called positive attitudes towards learning visual arts theory and negative attitudes towards learning visual arts theory.

Positive attitudes towards learning visual arts theory

The results of the positive attitudes of learning visual arts theory arose out of three main categories as follows:

(1) Learning;
(2) Interest; and
(3) Hands-on.

Learning.

The first main category was called learning. Most of the student comments were about learning visual arts with computer technology. As the students had so much to say about this, it was possible to sub-divide this information even further into three learning sub-categories:

(1) Background information;

(2) Knowledge; and

(3) Guidance and direction.

The first learning sub-category was called background information. By studying artworks, students commented that they learnt a considerable amount of background information about these artworks. This included information about

the elements and principles of artworks, who was the artist, what art techniques were used, and about a particular society or culture depicted in the subject matter or during the time that the artist made their art.

> *You can tell the difference between like what artists are using and what kind of artist's techniques* (1A-1).

> *It gives you a good background about the painting and about the society of the time.* (5A-1).

> *It give you background of paintings of an artist and so you know what they went through and why they kind of made it* (4B-2).

> *Sometimes you can learn the culture of somewhere because a painting like you can see how they live, what they do, what it looks like and that's a good thing* (3B-2).

> *Um, just gives an understanding of art history because paintings show us a lot of the past* (5B-1).

The second learning sub-category was called knowledge. Many students realised, perhaps for the first time, that they could exercise their knowledge by studying visual arts theory. Such knowledge in visual arts theory varied amongst the students. For example, some of the comments included the following: (1) that they could now recognise and talk about artworks; (2) that they now had a greater appreciation and respect for art; (3) that others would admire them for their acquired knowledge; and (4) that this knowledge could lead to careers in this direction.

> *You get um knowledge and that like you look at a picture and go 'oh that's a...' you know about art and people will go 'wow'* (2A-1).

> *You'll have greater knowledge and respect for art more and more...will be to study art theory or whatever for a living* (2B-1).

The third learning sub-category was called guidance and direction. Many students realised that learning about visual arts theory meant that it could assist them especially when it came time to create their own artworks. These students believed that by studying visual arts theory they were provided with guidance and direction in making their artworks.

> *Through learning art theory you can learn how to make your art better* (4A-2).

> *Um, you can learn more about how to paint them why you paint them and stuff like that* (4B-2).

> *If you had to do both of them, I would probably do theory first because you get to learn about what you're making and what would generally be done* (4B-1).

Interest.

The second main category was called interest. The students commented on how interesting it was to learn visual arts theory. One student in particular, found it fascinating that one could find out so much about the history associated with particular artworks. Other students also believed that studying visual arts theory could be interesting, but that this depended upon how appealing the artwork was to them in the first place.

> *At times it can be quite interesting to analyse a piece of artwork and see what history has gone into it and stuff* (4A-1).

> *[A plus] sometimes it's interesting. Depends on what type of painting it is. This one's interesting* (3A-2).

Hands-on.

The third main category was called hands-on, which really relates to visual arts making rather than theory. However, this has been included as it seemed quite important to students that they are hands-on rather than hands-off in learnig

visual arts theory and practice. It is possible to be hands-on with visual arts theory via computers, which allows students to be active learners rather than passive learners. Two students mentioned that they were the type of people who liked to create, especially with art. For them making art was something that they enjoyed more than anything.

> *I like making stuff [i.e., art]* (1A-1).

> *I'm a hands-on person so I really enjoy doing artwork* (4A-1).

Negative Attitudes towards Learning Visual Arts Theory

The second theme was called negative attitudes of learning visual arts theory. From this theme arose three main categories:

- (8) Boredom;
- (9) Time consumption; and
- (10) Information overload.

Boredom.

The first of the main categories for the negative themes was called boredom. Two groups of students spoke about boredom in the pre-interview while all groups spoke about this in the post-interview. Basically, the students said that they didn't want visual arts theory learning to be boring. The students wanted visual arts theory to grasp their attention from the very start, that it shouldn't be monotonous in that it focused just on one painting all the time, and that it shouldn't take too long to study.

> *If I'm not immediately captivated, it could be very boring* (4A-1).

> *Yeh, it can get tedious and boring [art theory]...not this but like art theory* (2A-2).

Yeh, it can be a bit boring and if you focus too much on one person, that can be...like it's better to have a wide diversity of subjects (4A-2).

Learning all the time and not doing any art can be a bit boring (4B-2).

It can sometimes be boring if you like learn all the time (5A-2).

Time consumption.

The second main category of the negative themes was called time consumption. The students commented that visual arts theory learning took too much time. This caused boredom and also meant that it took time away from making art.

It can sometimes be boring if you learn all the time (5A-2).

Maybe it takes too long or you have to study (2A-1).

It takes a lot of time (2B-1).

Learning all the time and not making any art (4A-2).

[It's] boring if you learn all the time (5A-2).

Information overload.

The third main category of the negative themes was called information overload. Some students thought that visual arts theory learning was far too in-depth and that it wasn't essential to have so much information.

You have to go into a lot of depth about something (2A-1).

Sometimes there is too much information and there's information you don't wasn't to know about it. They go on about it and that's not good for you (5B-2).

Preliminary steps to answering the research questions.

In attempting to reach answers towards the primary research question (effect) through sub-question 1.1 (attitude), it appeared that using computers for visual arts theory learning had both a positive and negative effect on the students. Furthermore, the students had both positive and negative attitudes about computers for visual arts theory.

The Western Australian Four Arts Learning Outcomes

The second part of the interviews regarding CLL's subject focused on questions regarding the PowerPoint slideshow of Nolan's Kelly paintings in relation to the WA 4ALO

Arts Ideas

For the pre- and post-interviews, the students were asked to name three or four circumstances that eventually led Sidney Nolan to come up with the idea of creating paintings about Ned Kelly. In both the pre- and post-interviews, groups 1, 3, and 5 did not respond to this question.

However, groups 2 and 4 were able to answer this question. Both of the group 2 students mentioned the connection to Nolan's grandfather and how the younger Nolan had seen the armour when it was located at the Melbourne Aquarium. In the post-interview, they also mentioned that Nolan's grandfather had been a policeman during the Kelly era, that Nolan's grandfather had told Sidney Nolan stories about Ned Kelly, and that these facts contributed to leading Sidney Nolan's long-time interest in this subject.

Likewise, one of the Group 4 students was able to answer this question. She made three statements being that it was a descendant of Nolan's that played a part in his interest in Ned Kelly, that this interest eventually led Nolan to creating the Ned Kelly series of paintings, and that it was his grandfather who was a policeman. In the post-interview, this same student further stated that Nolan's grandfather was a policeman during the time of Kelly's capture and that Nolan was interested in his family history and the connections between his grandfather and Ned Kelly.

Overall in both pre- and post-interviews, the same three students spoke and commented on Nolan's grandfather and the stories about his grandfather being a policeman during the capture of Ned Kelly.

This showed that these three out of the ten students had read the section in the PowerPoint Slideshow to do with Nolan's grandfather.

Preliminary steps to answering the research questions.

In attempting to reach answers towards the primary research question (effect) 1.0 through sub-question 1.3 (knowledge), it appeared that the AI Outcome in relation to Nolan's Kelly paintings did not have an effect on the students. Furthermore, the students did not sufficiently exercise their knowledge in this area during the interviews.

Arts Skills and Processes

For this part of the question relating to ASP Outcome, the students were asked to name the medium of Nolan's Kelly paintings. This information was available in a poster of the diptych and also on the PowerPoint slideshow of Nolan's Ned Kelly paintings. Initially only six students (n=6, 60%) could name

the paintings' medium, but by the post-interview this increased to nine students (n=9, 90%). Groups 1 and 3 did not know the painting medium in the pre-interview, but by the post-interview they knew that it was enamel on composition board. Groups 2, 4, and 5 knew the medium in both interviews.

Preliminary steps to answering the research questions.

In attempting to reach answers towards the primary research question 1.0 (effect) through sub-question 1.3 (knowledge), it appeared that the ASP Outcome in relation to Nolan's Kelly paintings did have an effect upon students. Furthermore, they had exercised and expanded their knowledge in this area by the end of the term.

Arts Responses

For the interviews, I asked the students questions about Nolan's Kelly paintings in relation to a combination of Feldman's (1987) and Ott's (1989) six steps and/or stages of art criticism. Therefore the students responded to questions relating to describing, analysing, interpreting, judging, funding, and disclosing. Of these, Feldman's four steps/stages include describing, analysing, interpreting, and judging. Ott's five steps/stages consist of Feldman's first three steps/stages (describing, analysing, and interpreting) as well as funding and disclosing.

There were several problems in conducting these interviews. First of all, this was the first time that these students had ever been interviewed about their responses to artworks. This meant that many of the students may have been rather shy about speaking to the researcher and, at the same time, being tape recorded. The idea of possibly giving an incorrect response may have caused many students some concern so they gave rather short and precise responses. Furthermore, these

interviews were held during the students' lunch break, which meant that the interviews had to be completed within a certain amount of time.

Describing.

Describing, which is a kind of inventory of an artwork, (Feldman, 1987; and Ott, 1989), was the first step or stage used in the interviews to examine Nolan's diptych called *Burning at Glenrowan* and *Siege at Glenrowan*.

Once the students described what they saw in this diptych, their inventory responses were sorted into three categories: the foreground, midground, and background.

The foreground of the diptych had at least four fundamental parts to it. First, there was a long horizontal row of six policemen in uniform who were facing towards the viewer. They had formed a barricade to keep the onlookers from entering the scene of the crime. However, Nolan made these policemen a bit whimsical in that they looked like a chorus line of dancers or the Keystone Cops from Charlie Chaplin's silent movies. Secondly, and at first glance, the fourth policeman from the right in this row of policemen appeared to be on horseback. Thirdly, on closer examination he was joined to the horse to become a centaur (half man and half horse). However, unlike a centaur, the policeman was attached back to front on the horse so that his face and the horse's tail were facing towards us. Fourthly, to the very far left-hand side of these paintings was what looked like the bottom part of a telegraph pole or a long thin tapering tree trunk. Behind this was the bottom section of Ned Kelly's black suit of armour attached to a pole rather than to his legs. This made Ned Kelly look as if he were an ice cream popsicle stick.

What the five groups said about the foreground is now provided. Group 1 gave a total of five comments (one comment in the pre-interview and three comments in the post-interview). In the pre-interview, only student 1A spoke and said that there were policemen standing in the front of these paintings. Also in the post-interview this student spoke about these policemen while Student 1B mentioned the direction that these policemen were facing, which was towards us rather than facing the burning hotel as the other policemen were doing in the midground. Also, this student mentioned that Ned Kelly was on a stick.

> *Yeh, all these [policemen] are facing the front whereas those two*
> *[policemen] are facing the fire. It just feels like they're not paying*
> *much attention like they're maybe looking around like for him*
> *[Ned Kelly] whereas those two are looking more into here*
> *[pointing to the fire] than these are* (1B-2).
>
> *There's Ned Kelly on a stick* (1B-2).

Group 3 gave a total of two comments (one comment in each interview). In the pre-interview, student 3A stated that there were soldiers in the foreground while in the post-interview the other student mentioned this row of policemen.

Group 4 gave a total of three comments (two comments in the pre-interview and one comment in the post-interview). In the pre-interview, only student 5A noticed the policemen and the horse. In the post-interview, this same student once again spoke about these policemen standing in the front row. On the other hand, groups 3 and 5 students did not say anything at all about the foreground.

Describing summary.   .

Overall, the describing step/stage and had an effect on the students as they exercised their knowledge and had enhanced learning in this area.

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The interviews showed that students were able to describe Nolan's Kelly paintings and especially the midground, which was where most of the action was taking place in this diptych. The describing results for the foreground are summarised in Table 5.1; the midground results are summarised in Table 5.2; and the background results are summarised in Table 5.3.

Foreground.

The least amount of comments was made about the foreground. There were nine comments altogether (four comments in the pre-interview and five comments in the post-interview).

Foreground summary.

Overall, it appeared that the foreground did not have an effect on students as they did not exercise their knowledge in this area.

The students made the least number of comments about the foreground about Ned Kelly's diptych.

Table 5.1

Foreground

Number	3 fundamental parts of the foreground	Pre-interviews	Post-interviews	Overall
1	Row of policemen	3	4	7
2	The Centaur: Half man Half horse	1	0	1
3	The half man (the policeman) depicted back to front on the centaur horse.	0	0	0
4	The bottom of the post and/or the bottom of Ned Kelly's suit of armour	0	1	1
	Sub-totals	4	5	9

Most of the comments were about the row of policemen. Only one student spoke about the horse, but did not notice or mention at all that this was a centaur, and only one student spoke about the post and/or the bottom section of Ned Kelly's suit of armour.

This table showed that there was a low level of description analysis in both the pre- and post-interview. Nevertheless, knowledge had been exercised and there was enhanced learning from the pre- to the post-interview by one comment.

Midground.

The midground was the middle section and the main scene of this diptych. This was the area where most of the action was taking place. Students could have named at least ten fundamental parts about the midground. This included:

(1) The burning hotel;

(2) The dead man lying inside the burning hotel;

(3) The three dead Kelly gang members that were slumped upright against the burning hotel's façade;

(4) Two of the gang's black suits of armour and helmets that appeared to be floating on their right side while the third Kelly gang member wore a white dress;

(5) The dead man lying on the ground outside of the burning hotel;

(6) A mother carrying her baby while fleeing the burning hotel;

(7) A little boy standing in the far distance between the hotel and the mother and child and watching everything that was happening;

(8) The three policemen to the far left of the hotel and the two policemen (one kneeling and the other with a gun in his hand) hiding behind a long and lean gum tree towards the front right side of the hotel;

(9) To the far left of these paintings was the middle part of this telegraph pole (or a long, thin and tapering tree trunk) and behind this pole and only on the right side of this pole was the main body of Ned Kelly's black suit of armour showing; and

(10) Other general statements about these paintings. For example, that these paintings were about Ned Kelly and his gang, that this was at Glenrowan, that this was when Ned and his gang were captured at Glenrowan, that they had committed a crime, or even that Ned Kelly was one of the most wanted men in Australia.

What the students spoke about in the interviews regarding the midground was summarised in Table 5.2. These findings are now discussed as follows.

Group 1 gave a total of 10 comments about the midground (two comments in the pre-interview and eight comments in the post-interview). In the pre-interview, student 1A said that there were many killings going on and that there were people [a mother and child] running away. In the post-interview, student 1A once again spoke about the killings and also that she could see fighting occurring, deaths, policemen, and Ned Kelly. The other students 1B said that these paintings were about Ned Kelly who was at Glenrowan, and that there was a big fire.

Group 2 made 19 comments altogether about the midground (15 comments in the pre-interview and four comments in the post-interview). Although the number of comments did not increase over the term, they did have a sufficient

number of comments to begin with and had the second highest number of comments overall out of the five groups.

In the pre-interview, student 2A spoke about Ned Kelly; when Ned went to Glenrowan; the hotel; the policemen chasing him; the people who were shot who were actually the gang members; and what appeared to be spirits of dead gang members, which were actually the gang's two suits of armours that appeared to be floating next to two of the gang members. Student 2B said that this was about Ned Kelly; bushrangers; a fire; innocent people getting hurt; the post and Ned Kelly hiding behind it; his friends; one gang member was wearing a white dress; and the dead person inside the hotel).

In the post-interview, only student 2B commented about the midground in that the burning hotel appeared hot, the fire, that the hotel was burning down and that lots of people were being killed.

Um it looks like it is hot and everything... (2B-2).

Group 3 made 16 comments about the midground (seven comments in the pre-interview and nine comments in the post-interview). In the pre-interview, student 3A said that these paintings were about Ned Kelly and his mates, that they committed a crime, that Ned was burning at Glenrowan, the guards were trying to catch him, and that there were two Ned Kelly suits in the fire and one on the pole. Student 3B mentioned the fire.

In the post-interview, student 3A mentioned the post, the police trying to catch Ned Kelly and his friends, and that the gang killed themselves in the fire. Student 3B mentioned the hotel, the fire, the gang, and Ned Kelly hiding behind

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that post, the family (the mother and child, and the dead person lying inside the hotel.

Group 4 made 14 comments altogether about the midground (seven comments in each interview). In the pre-interview, student 4A said that these paintings were about how Ned Kelly and his gang were captured, how there was a figure of Ned Kelly and also half figures of Ned Kelly (the two suits of armour next to the two gang members). Student 4B said that these paintings were Ned Kelly who was at the scene of the burning hotel, and that there were a lot of people running around.

In the post-interview, student 4A said that this was the siege at Glenrowan when the police captured Ned Kelly and his gang. Student 4B mentioned the burning hotel, Ned Kelly with a picture of his image, and the fire.

Finally, group 5 made 10 comments altogether about the midground (five comments in each interview). In the pre-interview, student 5A said that this was about Ned Kelly and the Australian outback. Student 5B said that there was a fire, shadows of the Ned Kelly mask, and the police who were coming to sort everything out.

In the post-interview, student 5A spoke about the Ned Kelly theme, the troops, the armour, the Australian outback, and that Ned Kelly was the most wanted person in Australia.

Midground summary.

Table 5.2

Midground

Number	10 fundamental parts of the midground	No. of Pre-interviews comments	No. of Post-interviews comments	Overall
1	General Statements	10	10	20
2	Hotel and/or fire	5	8	13
3	Post and/or with Ned Kelly hiding behind it	5	5	10
4	The police surrounding the hotel	4	3	7
5	The three gang members	3	4	7
6	The gang's two suits of armour and white dress	4	0	4
7	A mother and child	2	1	3
8	A dead civilian inside the hotel	1	1	2
9	A dead civilian outside the hotel	1	0	1
10	The little boy	0	0	0
	Sub-totals	35	32	67

Overall, it appeared that the midground had an effect on students as they exercised knowledge and had enhanced learning of this area. Table 5.2 showed the pre- and post-interview results for the midground. The students commented on nine parts of the midground, but missed out on speaking about the little boy. Also, there were three fewer comments made about the mid-ground from the pre- to the post-interview. However, the students made the most comments about the midground compared to their other comments regarding the foreground and the background.

The frequency of the comments made about each fundamental part of the midground is now presented in order of highest to lowest number of comments:

(1) 20 general statements about these paintings with ten comments in each interview;

(2) 13 comments about the burning hotel and/or the fire with five comments in the pre-interview and then an increase of three comments in the post-interview;

(3) Ten comments about the post and/or Ned Kelly hiding behind it with five comments in each;

(4) Seven comments about the policemen surrounding the hotel with four in the pre-interview and one less in the post-interview. There was also seven comments about the three dead gang members with three comments in the pre-interview and one more comment in the post-interview;

(5) Four comments about the gang's suit of armour and white dress (of which one of these was about the white dress) made in the pre-interview only;

(6) Three comments about the mother and child with two comments in the pre-interview and one less in the post-interview;

(7) Two comments about the dead civilian in the hotel with one comment in each interview;

(8) One comment about the civilian outside of the hotel in the pre-interview; and

(9) No comments at all about the little boy.

Background.

The last part of this diptych to be examined was the background. This was the top section of the paintings and there were at least seven subjects that the students could have talked about. These were as follows:

(1) General or overall comments that included blurred background, Australian bush/outback and other information about the background;

(2) The green grass that looked serene compared to the firey battlefield in the midground;

(3) The blue-grey coloured smoke that clouded the sky;

(4) The hill with bushes and abstract trees;

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(5)   What could have been Ned Kelly's horse hiding at the base of the hill;

(6)   The top part of the pole or a tapering tree trunk, of which Ned Kelly was hiding behind wearing his black square helmet; and

(7)   The rectangular slit on the left side of Ned's mask that acted like reflective sunglasses showing the burning hotel. Also, on the right hand side of the mask and to the right of the pole or tree trunk, the front of the mask seemed to have been opened but instead of revealing Ned Kelly, it showed the same fiery colours of the fire. This time these colours may have represented Ned's feelings. That is, that he was angry and quite heated up with the policemen and what they were doing.

What the students actually observed in the background and spoke about is now discussed.

Group 1 made a total of three comments in the post-interview only. Student 1A mentioned the smoke and sky while student 1B just mentioned the sky. They did not exercise their knowledge sufficiently or have enhanced learning about the background area of this diptych over the term.

Group 2 had a total of six comments (five comments in the pre-interview and one comment in the post-interview). Only one of the students of this group provided enough information about the background over the term. Student 2B spoke in both interviews. In the pre-interview, she mentioned the sky, the smoke, the hill, the bush, and the horse hiding in the bush. In the post-interview she commented about Ned Kelly being recognised by his distinctive mask.

> *Well up here [pointing to the bush and the hill] it's very abstract and like...so it kind of represents the bushland and the fire. Like there are things that are there [pointing to the horse]* (2B-1).

Group 3 had a total of six comments (three comments in each interview). Only student 3B spoke about the background and mentioned in the pre-interview that the background looked blurred, that the colours of the fire were the same

colours as those found in the rectangular slit of Ned Kelly's mask, and that the mask was partly hidden behind a pole. In the post-interview she mentioned the fire in the mask, the pole, and Ned Kelly's mask suit of armour.

Group 4 had a total of two comments in the post-interview only. This, I believe, was insufficient information provided about the background over the term. Furthermore, only student 4B spoke and mentioned the blue-grey sky and also the green grass.

Um, some green as well here and that's just used for grass (4B-2).

Group 5 had a total of two comments in the post-interview only. This, I believe, was also insufficient learning about the background over the term. Besides this, only student 5A spoke and said that these paintings showed the bush and the Australian outback.

Background summary.

The overall results showed the diptych's background had an effect on the students as they exercised their knowledge and had enhanced learning of this area from the pre- to the post-interview. The students provided 20 comments altogether (eight comments in the pre-interview and 12 comments in the post-interview). The frequency of comments from the highest to the lowest number are listed below and also summarised in Table 5.3.

(1) Seven comments about the sky and the smoke (two comments in the pre-interview and five comments in the post-interview.

(2) Four comments about the general or overall comments (two comments in each interview).

(3) Four comments about the pole and/or with the masked Ned Kelly hiding behind it (one comment in pre-interview and three comments in post-interview).

(4)   Two comments about the slit and opening in Ned Kelly's mask (one comment in each interview).

(5)   One comment about the green grass (post-interview).

(6)   One comment about the hill, bush, and abstract trees (pre-interview).

(7)   One comment about Ned Kelly's horse (pre-interview).

Table 5.3

Background

Number	Six fundamental parts of the background	Pre-interviews	Post-interviews	Overall
1	General/Overall: Blurred and Australian bush/outback, and other information.	2	2	4
2	Green grass.	0	1	1
3	Blue-grey sky or the smoke in the sky.	2	5	7
4	A hill with abstract trees and bushes	1	0	1
5	Ned Kelly's horse hiding in the bush at the base of the hill.	1	0	1
6	The top part of the pole and/or Ned Kelly in his black square helmet	1	3	4
7	The long rectangular slit in Ned Kelly's black square helmet that reflects the fire and reveals his angry feelings towards the police, what is happening at Glenrowan, and/or to society.	1	1	2
	Sub-totals	8	12	20

Analysing.

Analysing (Feldman, 1987; and Ott, 1989) was the second step or stage in critiquing this diptych. In this case, the students were asked to analyse only the colours in this diptych although it was also possible to analyse any of the elements of art such as colour, shape, line, and texture and/or principles of design such as balance, proportion, unity of design.

There were at least nine colours that the students pointed out in this diptych that are identified on the top row of Table 5.4.

Group 1 identified a total of seven colours. Of these colours, there were five colours that were repeated in each interview, one colour was identified in the pre-interview only, and another one colour mentioned only in the post-interview.

Student 1A spoke of 10 colours altogether (five in each interview). However, there were four colours that were repeated, which meant that she spoke of six different colours altogether. In the pre-interview, she spoke of the colours red, yellow, green, black and brown while in the post-interview she mentioned these same colours again except for green and then added orange. Student 1B spoke of two colours being one colour (orange) in the pre-interview and one colour (blue) in the post-interview. She did not repeat any colours.

Group 2 students identified five colours altogether. Of these, three colours were repeated in both interviews, while two colours were said in the post-interview only.

Student 2A made seven mentions of the colours altogether being three colours in the pre-interview (red, yellow, and oranges) and four colours in the post-interview (red and orange again with the addition of green and black). As there were two repeats of colour, this meant that she saw five colours altogether. Then, student 2B made three mentions altogether of the colours (red, yellow, and orange) and this was in the post-interview only.

Group 3 identified five colours altogether. That is, three colours were repeated in both interviews, and two colours in the pre-interview only.

Student 3A mentioned seven colours with three colours in the pre-interview (red, orange and black) and four colours in the post-interview (red, yellow, orange, and black). There were three colours repeated, which meant she saw four distinct colours altogether. On the other hand, student 3B made five mentions of

the colours altogether being two mentions of colour in the pre-interview (e.g., red and orange) and three mention of colours in the post-interview (e.g., red, orange, and green). Two of these colours were repeated, which meant she saw three distinct colours altogether.

Group 4 students identified eight colours altogether. That is, three colours were repeated in both interviews, one in the pre-interview only, and four in the post-interview only.

Student 4A made three mentions of the colours being in the post-interview only. These were of all different colours being white, green, and yellow. On the other hand, student 4B made 10 mentions of colours being four mentions of the colours in the pre-interview (red, yellow, orange, and black) and six mentions of the colours in the post-interview (red, yellow, orange, blue, grey, and brown). There were three colours that she repeated saying, which meant that she saw seven distinctive colours altogether.

Group 5 students identified four colours altogether. That is, three colours were repeated in both interviews while another colour was added in the post-interview.

Student 5A spoke of four colours being red, yellow, orange, and green. Student 5B spoke of three colours being red, yellow, and orange.

Table 5.4

Analysing

	Red		Yellow		Blue		Orange		Green		Black		Brown		White		Grey		Individual sub-totals
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	
1A	1	1	1	1			1	1			1	1	1	1					5-5
1B									1	1									1-1
2A	1	1	1				1	1		1		1							3-4
2B		1		1				1											0-3
3A	1	1		1			1	1			1	1							3-4
3B	1	1					1	1		1									2-3
4A				1						1						1			0-3
4B	1	1	1	1		1	1	1			1			1				1	4-6
5A		1		1		1		1											0-4
5B		1		1				1											0-3
Sub-totals	5-8		3-7		0-2		5-8		1-4		3-3		1-2		0-1		0-1		18-36

With regard to the analysis of the colours in this diptych, the number of

colours each individual student spoke about as well as each group spoke about

collectively is provided in Table 5.4. The highest to lowest number of colours that each student mentioned were as follows:

(1) Student 4B talked about seven colours;

(2) Student 1A spoke about six colours;

(3) Student 2A talked about five colours;

(4) Students 3A and 5A spoke about four colours each;

(5) Students 2B, 3B, 4A, and 5B mentioned three colours each; and

(6) Student 1B talked about two colours.

This table also showed that the number of comments doubled from the pre- to the post-interview. This meant that learning had increased, as students were able to see more colours and name more colours by the end of the term.

All students either provided the same number of comments or named more colours by the end of the term. There were two students who provided the same number of comments while the remaining eight students all increased the number of comments they made from the pre- to the post-interview. That is, by the end of the term, there were three students who made one more comment, one student made two more comments, three students made three more comments, and one student made four more comments.

Analysing summary.

Overall, the interviews regarding the analysing step/stage had an effect on all students (n=10, 100%) as they were able to exercise their knowledge in this area. They were able to identify colours used in Nolan's Kelly paintings.

Interpreting.

Interpreting (Feldman, 1987; and Ott, 1989) was the third step or stage in critiquing Nolan's diptych. For this particular research, the students were

required to interpret only the meaning of the colours in this diptych. These colours were identified as having concrete and/or abstract meanings attached to them.

The following information is divided into two parts. First the interpretation information tells what concrete and abstract meanings to colours each group provided. Secondly, the concrete and abstract meanings of nine single or combinations of colours were provided.

Group 1 provided one concrete and three abstract meanings to the fire colours. However, only student 1A spoke in both interviews. In the pre-interview, this student provided one abstract interpretation to the fire colour and said that the fire represented anger. In the post-interview, this student spoke of one concrete and two abstract statements in which she pointed out that the red colour represented the fire as well as anger. Furthermore, she added that the black colour meant death.

Group 2 gave four concrete and nine abstract meanings to the colours in these paintings. In the pre-interview, only student 2A spoke of one concrete and two abstract statements. She said that the colours were of the fire showing in the slit of Ned Kelly's helmet and also, that this represented how angry Ned felt, which was because of the policemen. In the post-interview, student 2A still made one concrete and two abstract statements while student 2B now spoke for the first time and gave two concrete and five abstract statements. Student 2A mentioned the same information as before, while student 2B spoke about the dark colours representing the smoke, that the black colour represented Ned's mask, how Ned was a square, harsh, and killed people, and finally, that Ned's mask showed how angry he was and that this fire represented the fire inside him.

*Ned Kelly standing behind the post and his helmet with that thing
in his eyes it's like the fire and anger in his eyes towards, I don't
know, the policemen or something* (2A-2).

Group 3 provided ten concrete and three abstract meanings about the colours
in these paintings. In the pre-interview, student 3A provided five concrete
statements. That is:

(1)   That the red and orange colours represented the fire and the
      burnings;

(2)   That the black colour was that of Ned Kelly's suit of armour;

(3)   That there was also black on two of the gang's suits of armour as
      shown in front of the hotel;

(4)   That those dressed in the civilian coloured clothes represented the
      ordinary and innocent people; and

(5)   That the dark clothed people were the uniformed policemen and Ned
      Kelly and his gang with two gang members lying beside their black
      suits of armour, while one had a white dress.

Also in the pre-interview, student 3B talked about one concrete and one
abstract statement. That is, that the orange and yellow colours were those of the
fire and that they represented anger.

In the post-interview student 3A provided three concrete and one abstract
statement. She once again mentioned those colours that represented the fire and
that this was bad. Furthermore, that the red, yellow and orange colours in Ned
Kelly's slit of his mask stood for what Ned was looking at, which this student said
was of Ned gazing out into the fire rather than to the sun. Finally, this student
mentioned that the green grass appeared happy compared to the rest of the
painting.

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On the other hand, student 3B provided one concrete and one abstract statement. She mentioned how the colours reminded her of the outback rather than the city and that the red colour meant hell.

> *At the moment for them it would be like hell cause they [were]*
> *burn[ing]...killing themselves really* (3B-2).

Group 4 provided two concrete and five abstract colour meanings. In the pre-interview, students 4A and 4B each said one concrete and one abstract statement. Student 4A said that there were dark colours where Ned Kelly so he must be bad. Student 4B mentioned that the reds, yellows and oranges represented the fire and also danger.

> *Like the fire represents danger and the danger of Ned Kelly* (4B-1).

In the post-interview, student 4A mentioned only one abstract statement and student 4B mentioned two abstract statements. Student 4A talked about the light and how it was quite weird looking while the other student 4B said how the fire colours represented havoc and chaos.

Group 5 provided four concrete and three abstract meanings to some of the colours. In the pre-interview, only student 5B spoke and mentioned one concrete statement about the earthy colours representing the Australian outback during the time of the bushrangers. By the post-interview, student 5A mentioned two concrete statements being that the same statement as before and adding the fire. Student G5B said one concrete and three abstract statements. That is, how some of the colours represented confusion, that the fiery colours inside Ned Kelly' slit of his mask reflected what Kelly was seeing s well as what he was feeling inside himself, being anger towards society.

> *The fire within...he might be angry with society* (5B-2).

It appears that the interpreting step/stage had an effect on students as they had exercised their knowledge and had enhanced learning of this area by the end of the term. Table 5.5 summarised the students' results of their concrete and abstract interpretative comments.

Table 5.5

Interpreting

Groups	Students	Concrete		Abstract		Total individual student comments made in the pre- and post-interviews	Total comments made by the paired groups in the pre- and post-interviews
		Pre	Post	Pre	Post		
1	1A	0	1	1	2	1-3	
	1B	0	0	0	0	0-0	1-3
2	2A	1	1	2	2	3-3	
	2B	0	2	0	5	0-7	3-10
3	3A	5	3	0	1	5-4	
	3B	1	1	1	1	2-2	7-6
4	4A	1	0	1	1	2-1	
	4B	1	0	1	2	2-2	4-3
5	5A	1	2	0	0	1-2	
	5B	0	1	0	3	0-4	1-6
Sub-totals		10	11	6	17	16-28	16-28

In the second part of interpreting this diptych, the focus was on the concrete and abstract meanings of nine colours. These colours are either single colours or combination of colours. These are as follows: (1) black; (2) red; (3) green; (4) the fire colours (red, yellow and orange); (5) the fire colours in Ned Kelly's mask;

(6) earthy colours (reds and yellows); (7) coloured clothes; (8) dark clothes; and

(9) light colours. These colours and their concrete and abstract meanings are

compiled in Table 5.6.

Table 5.6

Concrete and abstract meanings of nine colours in Nolan's diptych

No.	Colour	No. of Concrete comments	Concrete description	No. of Abstract comments	Abstract description
1	Black	2	Ned Kelly's suit of armour, the gang's suit of armour	4	Death Something bad Confusion Sins of Ned Kelly
2	Red	2	Fire Australian outback	2	Anger hell
3	Green	0		1	Happier looking than the midground & foreground
4	Fire colours: red, yellow, orange.	2	Fire Outback	5	Anger Something bad Danger Havoc Chaos
5	Fire colours in Ned Kelly's slit of his helmet	1	The fire being reflected back at Ned as he was looking at it	6	(about what Ned was feeling) the fire inside Ned anger frustration his anger with the policemen anger with what happened to the gang members anger with society
6	Earthy colours: red and yellow	2	Fire Australian outback	0	
7	Clothes: dark and coloured clothes	7	Primary people in diptych wore dark clothes; Secondary players are the gang members wearing civilian clothes (one in a white dress). Two of the gang members have the armour 'floating' next to them. Tertiary players are the civilians. That is, the mother and child, the little boy and the two dead men lying horizontally.	0	
8	Light colours	0		1 weird looking	

The numbers of concrete and abstract colours are now discussed from highest to lowest order.

First, there was a tie between groups 2 and 3 with each group mentioning 13 abstract and concrete interpretative statements. Group 2 had exercised their knowledge and had enhanced learning over the term and had a total of four concrete and nine abstract responses (one concrete and two abstract statements in the pre-interview and three concrete and seven abstract statements in the post-interview). Likewise, group 3 had exercised their knowledge and had enhanced learning with a total of nine concrete and four abstract statements (six concrete and one abstract statement in the pre-interview and three concrete and three abstract statements in the post-interview).

Second, group 4 also had exercised their knowledge and had enhanced learning over the term with a total of seven statements being two concrete and five abstract statements (one concrete and two abstract statements in the pre-interview and one concrete and three abstract statements in the post-interview).

Third, group 5 also had exercised their knowledge and had enhanced learning over the term with a total of six statements divided equally between the two types of statements (one concrete statement only while in the pre-interview and two concrete and three abstract statements in the post-interview).

Fourth, group 1 had exercised their knowledge and had enhanced learning over the term with a total of four statements being one concrete and three abstract statements (one abstract statement in the pre-interview and one concrete and two abstract statements in the post-interview).

Furthermore, the results showed what was the most re-occurring rating, which increased by one number from the pre- to the post-interview. In the pre-

interview, four students (40%) had the re-occurring rating of three whilst in the post-interview the same number of students now had a re-occurring rating of four.

Overall, the students were able to provide a fairly accurate interpretation of the colours depicted in Nolan's Kelly paintings. They were also able to identify concrete and abstract meanings of these colours.

Judging.

With judging (Feldman, 1987) the students were asked to judge the paintings by rating them between one and five. The lowest ranking was a one while the highest ranking was a five. The results were summarised in Table 5.7.

There were five students (50%) who increased their ratings throughout the term. That is:

    (1)   Student 5A increased their rating from a 4 to a 4.5;
    (2)   Student 2A increased their rating from a 3 to a 4.5;
    (3)   Student 2B increased their rating from a 3.5 to a 4;
    (4)   Student 3B increased their rating from a 3 to a 4; and
    (5)   Student 1B increased their rating from a 2 to a 3.

There were two students (20%) who decreased their ratings throughout the term. That is, student 4B dropped from a 4.5 to a 3 rating; and student 1A dropped from a 3 to a 2 rating.

There were three students (30%) who had the same rating throughout the term. That is, students 5B and 4B both had a 4 rating while student 3A had a 3 rating.

Table 5.7

Judging

Groups	Pre-Interview	Post-Interview
1A	3	2
1B	2	3
2A	3	4.5
2B	3.5	4
3A	3	3
3B	3	4
4A	4.5	3
4B	4	4
5A	4	4.5
5B	4	4

Judging summary.

Overall, all students were able to judge Nolan's Kelly paintings. This had an effect on them as they exercised their knowledge and had enhanced learning in this area. As they had rated this diptych higher by the end of the term, this demonstrated that they had gained a greater appreciation of this diptych.

Funding.

For funding step or stage (Ott, 1989) of critiquing this diptych, the students were asked to provide label information about Nolan's Kelly paintings. The labels accompanying this diptych were provided on the PowerPoint slideshow of Nolan's Kelly paintings' and also in a poster provided to the students during the

interviews. The students could have talked about at least four aspects of these labels. That is:

(1) The main name or both names of these artworks being *Burning at Glenrowan* and *Siege at Glenrowan*;

(2) The name of the artist being Sidney Nolan;

(3) The year that these artworks were made being 1946; and

(4) The medium used being enamel on composition board.

Group 1 had nothing to say in the pre-interview. However, in the post-interview, student 1A said the name of the artist was Sidney Nolan while student 1B named this artwork and the year that these paintings were completed.

Group 2 students began in the pre-interview by both saying the name of the artist. Furthermore, student 2A also named the year that these paintings were made. In the post-interview, student 2B could now name the medium and the year that these paintings were made.

Group 3 had one student who spoke in the pre-interview. Student 3A named the medium of these paintings. In the post-interview, both students spoke this time and they mentioned the name of this diptych. In addition, student 3A named the year that these paintings were made.

Group 4 students both spoke in the pre-interview. Student 4A said the year that these paintings were completed while student 4B named the artist. In the post-interview, student 4A could now name the main title of these paintings, the medium, and how these paintings came to be cut into two. Student 4B named the artist, medium and the year that these paintings were made.

Like group 3, group 5 had one student who spoke in the pre-interview. Student 5A announced the name of these artworks, the artist, the medium, and the

year that these paintings were made. By the post-interview, both students spoke

and they both mentioned the year these paintings were completed.

Table 5.8

Funding

Groups	Name of artwork		Name of artist		Year		Medium		Individuals' sub-totals
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre- & Post-
G1A	0	0	0	1	0	0	0	0	0-1
G1B	0	1	0	0	0	1	0	0	0-2
G2A	0	0	1	0	1	0	0	0	2-0
G2B	0	0	1	0	0	1	0	1	1-2
G3A	0	1	0	0	0	1	1	0	1-2
G3B	0	1	0	0	0	0	0	0	0-1
G4A	0	1	0	0	1	0	0	1	1-2
G4B	0	0	1	1	0	1	0	1	1-3
G5A	1	0	1	0	1	1	1	0	4-1
G5B	0	0	0	0	0	1	0	0	0-1
Subject sub-total	1	4	4	2	3	6	2	3	10-15

Table 5.8 showed that more students were able to talk about the label

information by the end of the term. That is, by the end of the term, two students

said less about the labels while the remaining eight students said more about the

labels. Overall, as there were more comments made in the post-interview,

students exercised their knowledge and had enhanced learning in funding this diptych.

Funding summary.

Overall, it appeared that the funding step/stage had an impact on the students as they demonstrated having exercised their knowledge and having enhanced learning by the end of the term in this area.

Disclosing.

For the disclosing step or stage (Ott, 1989) in critiquing this diptych, the students were asked to discuss what they would create if they were to re-interpret Sidney Nolan's paintings of Ned Kelly (refer to Table 5.9).

Both group 1 students spoke about this in the post-interview only. Student 1A said that she wanted to make a three-dimensional sculpture of Ned Kelly with bright colours that was predominately painted red. Student 1B wanted to make a painting.

Both group 2 students spoke in the pre-interview whereas in the post-interview only student 2A spoke. In the pre-interview both students wanted to make a painting and described the scenes that they would depict.

> *I'd have Ned Kelly in the front in his black stuff [armour] with the fire going and I'd have the bushrangers in the background and the fire and a couple of policemen (2A-1).*

> *Um, well I think I would have him in his armour and everything and different symbols and probably some of the people he hurt and robbed. But then like the bushrangers and Ned and his family. They were like a big part...yeh., like Ned and his family apposing the bushrangers. Yeh, and the people on the other side of the bushrangers (2B-1).*

In the post-interview, student 2A now preferred to make a Ned Kelly sculpture clad in his armour, rather than to make a painting. The reason for a shift from wanting to make a sculpture rather than painting could have been because she had been learning how to create a paperclay "hero or villain" mask during the term and had found the whole experience enjoyable.

Group 3 students spoke only in the post-interview and said that they would like to make a three-dimensional artwork such as a Ned Kelly mask.

> *I'd like to do a mask...like Ned Kelly's mask. Because everyone knows what the mask looks like and what it is. So I'd do something like that (3A-2).*

> *Um, I'd probably do the same...like a mask cause it would be the easiest thing to do to represent Ned Kelly cause everyone would know that [who he is] (3B-2).*

Group 4 students both spoke in both interviews. In the pre-interview, they explained that they wanted to make paintings. However, in the post-interview, student G4A decided that she wanted to make a three-dimensional sculpture whereas student G4B was still keen to make a painting.

> *Well I probably would do him [Ned Kelly] all in black like with no eyes showing sort of like this without the red and the yellow. And just standing alone with lots of possessions around him that he had stolen or lots of money or...just like maybe in a corn field (4A-1).*

> *Like with ...destruction and like anger and stuff like that (4B-1).*

> *I'd definitely make a sculpture...use glass. I'd use clay and glass...a bit weird (4A-2).*

> *I'd do a painting because it's easier to express things through drawing (4B-2).*

Group 5 had only one student speak in the pre-interview whereas in the

post-interview, both students had something to say. In the pre-interview, student

5A described what painting or drawing she would make. However, in the post-

interview, she made a three-dimensional artwork whereas student 5A made a

painting. Furthermore, both students talked about the medium they would use.

If it was the Ned Kelly theme, I'd have the helmet or something like that and the bush, like the bushrangers or something (5A-2).

Probably a sculpture out of metal and iron...something shiny (5A-2).

Probably a painting (5B-2).

Table 5.9

Disclosing

Groups	Two-Dimensional artworks		Three-dimensional artworks		Individual sub-totals
	Pre-interview	Post-Interview	Pre-interview	Post-Interview	
1A	0	0	0	1	0-1
1B	0	1	0	0	0-1
2A	1	0	0	1	1-1
2B	1	0	0	0	1-0
3A	0	0	0	1	0-1
G3B	0	0	0	1	0-1
G4A	1	0	0	1	1-1
G4B	1	1	0	0	1-1
G5A	1	0	0	1	1-1
G5B	0	1	0	0	0-1
Subject sub-totals	5	3	0	6	5-9

For the disclosing stage, the interviews showed that all students (100%) appeared to have exercised their knowledge and had enhanced learning about Nolan's Kelly paintings.

Initially the pre-interview results showed that there were five students (50%) who said that they would make two-dimensional artworks of Ned Kelly. They also said that this could be either a painting or a drawing, which was along the same lines as the scene depicted in Nolan's *Burning at Glenrowan* paintings.

The post-interview results showed that there were now nine students (90%) who responded. Of these students, three said that they would continue to make two-dimensional artworks while the other six students said that they would make a three-dimensional artwork of Ned Kelly. Because these students had been creating three-dimensional paper clay masks during the term and enjoying the experience, they now wanted to create three-dimensional art.

There were five patterns of movement from the pre-interview to the post-interview. These are now provided from highest to lowest number of students:

(1) There were three students who did not comment at firs, but later on they decided that they wanted to make a sculpture;

(2) There was a tie of two students each. That is, two students started with giving no comments, but later on decided that they wanted to make paintings. The other two students started with the idea of making paintings and then decided that they wanted to make sculptures; and

(3) There was another tie of one student each. That is, one student began with not saying anything and then moved on to wanting to make a painting. On the other hand, the other one student began and ended the term with wanting to make a painting in re-interpreting Nolan's Kelly paintings.

Furthermore, the students spoke about seven main subjects in talking about re-interpreting Nolan's Kelly paintings. These were identified as being the main

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character, symbolism, people, stolen possessions, location, feelings, and medium.
These were explained as follows:

Main character.

The students said that Ned Kelly would be the main character in their
artworks. Also, these students focused on the upper torso of Ned Kelly only. They
said that they would depict Ned Kelly in his mask or in his full armour.

Symbolism.

The students recognised that it was important to show Ned Kelly dressed in
his symbolic suite of armour. Also, that Ned Kelly would be dressed in black and
with no eyes showing.

People.

The students wanted to show Ned Kelly with other people. The students
identified these folk as being one of two kinds. That is, they could be either on
Ned's side such as bushrangers and his family or against him such as the
policemen, and those that Ned had hurt or robbed.

Stolen possessions.

Some of the students thought that Ned Kelly could be depicted with stolen
goods such as money.

Location.

Some students spoke about the location in which they would paint Ned
Kelly. This would be in the bush, near a fire, or even in a cornfield.

Feelings.

Finally, some students also highlighted that it was crucial to depict Ned Kelly's feelings, which would essentially be focusing on his anger. Those students who wanted to re-interpret Nolan's Kelly paintings in three-dimensional form such as sculptures spoke mainly about two subjects. These are now discussed:

Medium.

These students spoke about the medium for their sculptures. That is, that they would use a metal such as iron or something else that was shiny. There was also talk of combining two mediums together such as glass and clay.

Overall, it appeared that all students (n=10, 100%) were able to say how they could re-interpret Nolan's Kelly paintings into two-dimensional and three-dimensional form.

Disclosing summary.

The interviews sought answers towards the research questions (effect, knowledge) with the disclosing step/stage of the AR Outcome. It appeared that the disclosing step/stage had an effect on the students as they demonstrated having exercised their knowledge and enhanced learning in this area.

Preliminary steps to answering the research questions.

In attempting to reach answers towards the primary research question 1.0 (effect) through sub-question 1.3 (knowledge), it appeared that the AR Outcome in relation to Sidney Nolan's Ned Kelly diptych did have an effect on student. Furthermore, the students had exercised their knowledge and had enhanced learning of this area by the end of the term.

Arts in Society

In this section, the students were asked to recall information about the historical, cultural, and socio-economic backgrounds of Nolan's diptych paintings. Information regarding these three areas was available for students to read in a PowerPoint slideshow of Nolan's Kelly paintings. Furthermore, during the student interviews, they could have read some of this historical background information in a poster about Nolan's diptych.

The historical background information on this slideshow consisted of six items as follows: (1) one or both names of this diptych; (2) the name of the artist; (3) the year the artworks were completed; (4) the medium; (5) the narrative subject about Ned Kelly; and (6) how the original painting came to be cut in half to become a diptych. It should be noted at this point that the first four items are the same four items used in identifying the label information in the disclosing section. Nevertheless, these first four items are repeated again in this section along with the two last items.

The cultural background information on this PowerPoint slideshow of Nolan's Kelly paintings included the following: (1) what the black square represented in these paintings; and (2) the black square's significance in the context of art history, which relates to Malevich.

Finally, the socio-economic information on this PowerPoint slideshow of Nolan's Kelly paintings included the following: (1) the society at the time of Ned Kelly and/or the society at the time of Sidney Nolan; (2) the paintings' connection with John and Sunday Reed; and (3) society's perception of these paintings at the time that they were created.

Group 1 was able to say something about all three categories of AS. Beginning with the historical background of these paintings and in the pre-interview, student 1A said that this scene was about Ned Kelly at Glenrowan while student 1B said that these paintings were about Ned Kelly. In the post-interview, student 1A named the artist as being Sidney Nolan while student 1B named this artwork, the year that these paintings were made, and that these were two paintings because Nolan had cut the original painting in two.

Group 1 also commented about the cultural background of these paintings in the post-interview only. Both students said that the black square represented Ned Kelly in his mask.

Likewise, group 1 students commented about the socio-economic background of these paintings in the post-interview only. Student 1A mentioned that there were things happening in these paintings that were similar to what was also going on at the time that Nolan had created these paintings, which was true. Also, that these paintings were probably appreciated at the time that they were made, which was not true. On the other hand, student 1B said that she wasn't sure if these paintings were appreciated or not at the time.

Group 2 were able to comment on all three categories relating to AS. In terms of the historical background of these paintings, in the pre-interview both students mentioned the name of the artist and the story about Nolan cutting the original painting. Furthermore, student 2A also named the year that these paintings were produced.

> *There was something about a journalist said that it was too big.*
> *So Sidney Nolan decided it wasn't and he cut it in half to prove his*
> *point...[but then] he couldn't put it back together* (2B-1).

In the post-interview, student 2B could now name the medium and the year that these paintings were made. Also, both students mentioned that Nolan had cut the original painting into two parts.

Group 2 made two comments about the cultural background of these paintings, which were said in the post-interview only. Student 2B said that the black square represented Ned Kelly while student 2B said that it might have been the first time that someone had made a contemporary "abstract" paintings of Ned Kelly.

Group 2 also made their comments about the socio-economic background of these paintings in the post-interview only. That is, student 2A wasn't sure if Nolan's paintings were initially appreciated while student 2B believed that they might not have been appreciated at first, which was true. However, she went on to say she believed that later on in time that these paintings would have been appreciated because Nolan's artworks were such good paintings.

Group 3 students made only two comments regarding the historical and socio-economic categories of AS. With the historical category and in the pre-interview, student 3A was the only one to respond and mentioned the name of medium of these paintings. In the post-interview, both students spoke this time and they both said the name of this diptych. In addition, student 3A named the year.

There was only one student who spoke about the socio-economic background of these paintings' and that was in the pre-interview only. Student G3B mentioned these paintings association with Sunday Reed. That is, that Nolan had presented these paintings to Reed who many years later gave these as a gift to the National Gallery of Australia.

Group 4 students also spoke about the three categories described in the AS Outcome. For the historical background of these paintings and in the pre-interview, student 4A mentioned the year while student 4B named the artist and the splitting up of these paintings. In the post-interview, student 4A could now name the main title of these paintings, the medium, the story of these paintings, and how these paintings came to be cut into two. Student 4B named the artist, medium and the year that these paintings were made.

There was only one student in group 4 who gave one response about the cultural background of these paintings and that was in the post-interview only. Student G4A mentioned that the black square represented Ned Kelly's helmet, but that this was not the helmet's original colour.

Group 4 gave six responses for the socio-economic background of these paintings. In the pre-interview, student 4A mentioned information about the war having just ended and that there was a depression. Then, both students 4A and 4B mentioned that there was a connection between these paintings and Sunday Reed. However, the students differed about the reception of these paintings at the time of their execution. Student 4A believed that they weren't appreciated while student 4B believed that they probably were appreciated as these paintings showed an actual event that took place in this country. In the post-interview, student 4A once again mentioned the war and the depression.

> *It kind of reflected on something, which really did happen, and... it*
> *probably meant something to people, which it had affected* (4B-1).

Finally, group 5 commented on all three categories described in the AS Outcome. For the historical background of these paintings an in the pre-interview, student 5A announced the name of these artworks, the artist, the medium, the

year, and that these paintings had been cut in two. Student 5B also mentioned that these were two paintings. By the post-interview, students 5A and 5B both mentioned the year these paintings were completed and that these were two paintings.

Group 5 only made comments about the cultural background of these paintings in the post-interview only. Both students agreed that the black square represented the helmet that Ned Kelly wore and that it had become a myth.

Group 5 spoke about the socio-economic background of these paintings in both interviews. They agreed that these paintings were well received at the time of their making.

> *Yeh, I think it was because that's what they thought of Australia* (5B-2).

Overall historical background.

The historical background results are summarised in Table 5.10. There were 35 comments altogether (17 in pre-interview and 18 in post-interview). These results are now discussed in order of highest to lowest number of comments overall:

(1) There was a total of nine comments regarding the year that these paintings were made (three comments in the pre-interview and six comments in the post-interview);

(2) There were seven comments altogether regarding these paintings being cut into two (five comments in the pre-interview and two comments in the post-interview);

(3) There were six comments altogether regarding the name of the artist (four comments in the pre-interview and two comments in the post-interview);

(4) There was a tie with five comments altogether about naming the artwork (one comment in the pre-interview and four

comments in the post-interview) and the medium used (two comments in the pre-interview and three comments in the post-interview); and

(5) There were three comments altogether for the narrative (two comments in the pre-interview and one comment in the post-interview).

Table 5.10

Historical Background

Groups	Name of artwork		Name of artist		Year		Medium		Narrative		Diptych		Individual sub-totals
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
1A				1					1				1-1
1B		1				1			1			1	1-3
2A			1		1						1		3-0
2B			1			1		1			1		2-2
3A		1				1	1						1-2
3B		1											0-1
4A		1			1			1		1		1	1-4
4B			1	1		1		1			1		2-3
5A	1		1		1	1	1				1		5-1
5B						1					1		1-1
Subject Sub-totals	1	4	4	2	3	6	2	3	2	1	5	2	17-18

Overall cultural background.

The cultural background interviews are summarised in Table 5.11. As this table indicates, there were no comments in the pre-interview (even though label information was written underneath a post copy of these paintings available to students during the interview). On the other hand, during the post-interview there were seven comments made.

The results also showed that seven students had increased their learning by the end of the term. However, for the other three students (30%) it was not as evident if they had learnt or not as they did not say anything in the interviews even though they would have been given ample opportunity to do so. In the pre-interview, there were no students who commented on the cultural background of these paintings. However, in the post-interview there were now seven students (70%) who made one comment each.

Third, there were two cultural background matters that were examined in these paintings. There were seven comments altogether, which were made in the post-interview only. There were six students (60%) who made comments about what the black square represented in these paintings. Finally, there was one student (10%) who made one comment about the significance of the black square in the context of modern art.

Table 5.11

Cultural Background

Groups	What the black square means in the painting		What the black square means in the context of modern art		Individual sub-totals
	Pre-	Post-	Pre-	Post-	
1A	0	1			0-1
1B		1			0-1
2A		1			0-1
2B				1	0-1
3A					0-0
3B					0-0
4A		1			0-1
4B					0-0
5A		1			0-1
5B		1			0-1
Subject sub-totals	0	6	0	1	0-7

Overall socio-economic background.

The socio-economic background results are summarised in Table 5.12. As this table shows, first there were six comments made in each interview making it a total of 12 comments altogether.

Second, the results showed that there were eight students (80%) who increased their learning over the term. Six of these students went from having no comments at all to one comment each while the other two students started with more comments in the beginning (two and three comments each), but then didn't say anything in the post-interview. Nevertheless, in total, these two students said

more than any of the other students. There was one student who made one

comment in the pre-interview, but not in the post-interview. Finally, there was one

student who did not speak in either interview.

With regard to the three socio-economic background subjects of Nolan's

Kelly paintings, there were seven comments made about the appreciation and

value of these paintings at the time that they were made. Of these, two comments

were said in the pre-interview and five comments were mentioned in the post-

interview. Also, there was a total of three comments about Sunday Reed, which

were all made in the pre-interview. Finally, there were two comments made about

the society of Ned Kelly's time and/or Sidney Nolan's time and these were made

in each interview.

Table 5.12

Socio-Economic Background

Groups	The society		John and Sunday Reed		Appreciation & value of paintings at time of making		Individual sub-totals
	Pre-	Post-	Pre-	Post-	Pre-	Post-	
1A		1					0-1
1B						1	0-1
2A						1	0-1
2B						1	0-1
3A							0-0
3B			1				1-0
4A	1		1		1		3-0
4B			1		1		2-0
5A						1	0-1
5B						1	0-1
Subject Sub-totals	1	1	3	0	2	5	6-6

Arts in Society Outcome summary.

For the AS Outcome, there were 54 comments (23 and 31), made altogether which was an increase of eight comments over the term.

That is, 35 comments (17 and 18) about the historical background of Nolan's Kelly diptych seven comments about the cultural background (post-interview only); and 12 comments about the socio-economic background (six comments in each interview).

Preliminary steps to answering the research questions.

The interviews sought answers towards the primary research question 1.0 (effect) through the sub-question 1.3 (knowledge) in relation to the AS Outcome. It appeared that two of the three background areas of this Outcome did not have an effect on students. The cultural and socio-economic backgrounds (seven and 12 comments overall) of this Outcome did not have an effect on students as they did not exercise their knowledge sufficiently in these two areas. On the other hand, the historical background of this Outcome did have an effect on students as they had exercised their knowledge and had enhanced learning in this area (35 comments overall).

Overall Summary of the Interviews regarding CLL's Subject

Firstly, this section examined the pre- and post-interviews regarding what were the positives and negatives of learning visual arts theory. Secondly, how did CLL's subject relate to the WA 4ALO. This section also provided preliminary steps to seeking answers to the research questions.

What emerged out of this data was that there were two themes that were identified as being positive and negative attitudes of learning visual arts theory. From the positive attitudes arose three main categories (learning, interest, and hand-on). The learning category was further sub-divided into three more sections (background information, knowledge, guidance/direction). From the negative attitudes of learning visual arts theory, there also arose three main categories (boredom, time consuming, information overload).

The second part of CLL's subject interviews dealt with the WA 4 ALO in relation to Sidney Nolan's diptych paintings called *Burning at Glenrowan* and *Siege at Glenrowan*.

For the AI Outcome, only two of the five groups (groups 2 and 4) responded. Overall, the AI Outcome did not have an effect on students as they did not exercise their knowledge or have enhanced learning with this Outcome.

For the ASP Outcome, the students were asked to name the medium used for this diptych. This increased by 30% over the term (60% in the pre-interview to 90% in the post-interview). Overall, the students were effected by this question as they had exercised their knowledge and had enhanced learning in this area.

For the AR Outcome, the students were required to critique Nolan's Kelly paintings according to 6 steps or stages of art criticism (Feldman, 1987; and Ott, 1989). The only part that students commented very little on was the foreground of the diptych, but this was a minor part of the painting compared to the midground and focal point of the diptych studied. Nevertheless, this Outcome did have an effect on students as they had exercised their knowledge and had enhanced learning by the end of the term.

For the AS Outcome, the students were asked to discuss the historical, cultural, and socio-economic background of the diptych. The results for the historical background were 18 comments (nine each interview), for the cultural background there were seven comments (post-interview only). For the socio-economic background there were 12 comments (six comments each interview). Overall, one of the background areas of this Outcome (historical), but not the other two (cultural and socio-economic) had an effect on the students as they had exercised their knowledge and had enhanced learning in this area.

CLL's Learner

The five groups of students were interviewed about CLL's learner. This was in both the pre- and post-interviews. The students were asked the following questions:

(1) In the pre-interview, the students were asked to comment on which intelligences they thought were used frequently in visual arts education;

(2) In the post-interview, the students were asked to recall which of the multiple intelligence slides they remembered from the PowerPoint slide of Nolan's Kelly paintings.

In the pre-interview, the students were given a table to read that described how each of these intelligences could be utilised in visual arts education. For example, students could listen to a sample of a song by Mango Jam about Ned Kelly, which relates to the musical intelligence.

In the post-interview, the students were shown copies of the PowerPoint Slideshow of Nolan's Kelly paintings. They were then asked to recall which of these slides they remembered seeing and reading about when working with the PowerPoint slideshow during the term. The pre-interview results are provided in Table 5.13.

Table 5.13

The Multiple Intelligence Slides Pre- and Post-Interviews

Multiple Intelligences	Pre-Interview thoughts	Post-Interview Recall
Visual-Spatial	10	10
Bodily-Kinaesthetic	10	7
Musical	2	5
Linguistic	10	3
Logical-Mathematical	4	9
Interpersonal	10	7
Intrapersonal	10	3
Naturalistic	10	4
Existential	7	6

Visual-spatial intelligence.

The pre-interview results showed that all students (n=10, 100%) believed

that the visual-spatial intelligence was utilised frequently in visual arts education.

In the post-interview all students (100%) remembered the PowerPoint slide

regarding this intelligence about *Burning at Glenrowan* and *Siege at Glenrowan*.

Bodily-kinaesthetics.

The pre-interview results showed that all students (n=10, 100%) believed

that the bodily-kinaesthetics intelligence was used frequently in visual arts

education. The post-interview results showed that just under three-quarters of

these students (n=7, 70%) remembered looking at Nolan's Kelly PowerPoint slide

regarding this intelligence.

Musical intelligence.

The pre-interview results showed that less than a quarter of the students

(n=2, 20%) believed that the musical intelligence was used often in visual arts

education. However, in the post-interview half the students (n=5, 50%)

remembered looking at this PowerPoint slide that focused on the musical intelligence slide about Mango Jam's songs of Ned Kelly.

Linguistic intelligence.

The pre-interview results showed that all students (n=10, 100%) believed that the linguistic intelligence was used frequently in visual arts education. However, the post-interview results showed that just over one-quarter of the students (n=3, 30%) recalled looking at this PowerPoint slide to do with this intelligence in relation to Nolan's Kelly paintings.

Logical-mathematical intelligence.

The pre-interview results showed that just under half the students (n=4, 40%) acknowledged that the logical-mathematical intelligence was utilised in visual arts education. However, in the post-interview, almost all students (n=9, 90%) remembered looking at this logical-mathematical slide, which was a very easy mathematical game relating to Ned Kelly's armour.

Interpersonal intelligence.

The pre-interview results showed that all students (n=10, 100%) believed that the interpersonal intelligence was utilised frequently in visual arts education. However, in the post-interview just under three-quarters of the students (n=7, 70%) remembered the PowerPoint slide regarding this intelligence, which was a painting by Sidney Nolan in which he superimposed his image over Ned Kelly's masked image.

Intrapersonal intelligence.

The pre-interview results showed that all students (n=10, 100%) believed that the intrapersonal intelligence was utilised frequently in visual arts education. However, in the post-interview results showed that just over a quarter of the students (n=3, 30%) remembered the PowerPoint slideshow of Nolan's Kelly paintings.

Naturalistic intelligence.

The pre-interview results showed that all students (n=10, 100%) believed that the naturalistic intelligence was utilised frequently in visual arts education. However, the post-interview results showed that less than half the students (n=4, 40%) recalled the PowerPoint slide regarding this intelligence, which showed a flag of Australia and a map of the area around where Ned Kelly lived and also a flag of Ireland. When one double-clicked on this map with the computer mouse, it showed a map of Ireland accompanied by an explanation that this was where Ned Kelly as well as Sidney Nolan's ancestors originated from.

Existential intelligence.

The pre-interview results showed that just over three-quarters of the students (n=7, 70%) believed that the existential intelligence was utilised frequently in visual arts education. However, in the post-interview over half the students (n=6, 60%) remembered the PowerPoint slide regarding this intelligence, which was an existential intelligence PowerPoint slide relating to Nolan's Kelly paintings.

Summary of CLL's Learner

The five pairs of students were interviewed about CLL's learner. This focused on students' knowledge and recall of the multiple intelligences in relation to the PowerPoint slideshow of Nolan's Kelly paintings.

The pre-interview results showed that most students believed that there were seven intelligences that they thought were used frequently in visual arts education (visual-spatial, bodily-kinaesthetic, linguistic, interpersonal, intrapersonal, naturalistic, and existential intelligences). The results also showed what intelligences the students thought could be used in conjunction with visual arts education and are summarised as follows:

(1)   100% of students named six intelligences being visual-spatial, bodily-kinaesthetic, linguistic, interpersonal, intrapersonal, and naturalistic intelligences;

(2)   70% of students identified existential intelligence;

(3)   40% of students named logical-mathematical intelligence; and

(4)   20% of students named the musical intelligence.

On the other hand, the pre-interviews showed that most students did not believe the other two intelligences were used regularly in visual arts education (logical-mathematical and musical).

The post-interview results showed the following:

(1)   All students (100%) remembered the visual-spatial intelligence slide images of Ned Kelly;

(2)   Nine students (90%) remembered the logical-mathematical question answer game slide;

(3)   Seven students (70%) each remembered the bodily-kinaesthetic, interpersonal, and intrapersonal slides;

(4)   Six students (60%) remembered the existential intelligence slide;

(5)   Five students (50%) remembered the musical intelligence slide.

(6)   Four students (40%) remembered the naturalistic slides.

(7)   Three students (30%) remembered the linguistic

CLL's Tool

Finally, the five pairs of students participated in pre- and post-interviews

regarding CLL's tool (computer technology) in relation to visual arts education.

From the transcribed interviews arose three themes, ten categories, and two sub-

categories as follows:

The three themes, which arose out of the ten categories, were identified as

follows:

(1)   Comparisons
       -Books;
       -Teachers;
       -Worksheets; and
       -Artworks.

(2)   Convenience
       -Ease;
       -Speed;
       -Own Pace; and
       -Access.

(3)   Performance
       -Technical; and
       -Content.

There were also two sub-categories for each of the ten categories as follows:

(1)   For computers; and

(2)   Against computers.

Comparisons.

With the first theme called comparisons, the students judged the use of computers in these classes against other ways that they had learnt visual arts theory.

The first category was books and had a total of 12 responses altogether. Ten responses were for computers and two responses were against computers.

With the responses in support of computers, there were four responses in the pre-interview and six responses in the post-interview that were all in favour of computers over books. The students found that using computers was a much more satisfying way of learning and described computers as being good, more interesting than books, and better than books. The students also expressed the view that books required too much time for researching information, that they had little or limited information, and also that they usually had to go to the library to do a book search.

> *When you go into the Internet, you go further. With books, it is limited* (1A-2).

> *It's easy. You don't have to go through millions of books just to find information...you can type one thing and you can come up with all the things and go straight to the one you need* (3B-2).

With responses against computers, there was one remark made in each interview. One student said that it was easier to get what you want from books than computers while the other student said that they believed that books had much more information in them.

> *A minus is sometimes [computers] get really complicated and a book would be much easier to get exactly what you want* (2B-1).

Some of the books have more in-depth information (1A-2).

The second category was called teachers or more specifically a teacher-centered form of visual arts theory instruction. This had seven comments being five responses for computers and two responses against computers.

With those responses that were in favour of computers, there was one comment in the pre-interview and four comments in the post-interviews. The students said that a teacher-centered form of visual arts theory learning meant that they had to listen to the teacher speaking all the time, which to them seemed to be a passive form of learning. Also, that it took too long for the teacher to tell them what they could find out in half the time on a computer.

> *Sometimes like you tune out when teacher is saying something because you can't be bothered listening or not interested or something* (3A-2).

> *It's more interesting than a teacher standing in front and just talking to us because you can do lots of things with computers* (5A-1).

> *To just click on something and it shows you [whereas] with the teacher it can take half an hour* (5A-2).

The comments that were in support of teachers over computers were mentioned only in the pre-interviews. Student 3A remarked that they would prefer to learn visual arts theory during class discussions than with a computer. However, student 4B didn't seem to mind learning visual arts theory with a computer as long as a teacher was present to assist them wherever possible such as with any technical difficulties or questions as they arose.

> *I like being in the classroom and seeing it sort of first and um doing a class discussion, explaining it and stuff and...what each bit means* (3A-1).

> *I like a teacher [to be present while learning art theory via computers]* (4B-1).

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The third category was called worksheets. This had one comment, which was for computers.

Student 3A made this comment in the post-interview and discussed how much easier it was to edit their worksheets via computer rather than with hand-written worksheets.

> *Like you get given a worksheet, like you just think 'Oh, another worksheet!' and sort of throw it away. But with a computer [worksheet] it is always there so you can always look at it and if you forget something, you can go back to it* (3A-2).

Student 3A's comments showed a shift in her attitude towards computers as she initially resisted the idea of using computers for her visual arts theory lessons. However, after having used a computer throughout the term to assist her with her assignments, she came to realise the many benefits of working on an electronic worksheet rather than a hand-written worksheet.

The fourth and final category was called artworks. This had a total of two remarks in the pre-interview only being one remark for computers and one remark against computers. Student 3A said she preferred computers because she didn't have to go all the way to a gallery to see a painting. On the other hand, student 3B mentioned that she preferred to look at a real artwork or a poster.

> *You don't have to go all the way to the gallery just to see the painting* (3B-1).

> *No, I'd rather look at it like the real thing or in a poster* (3A-1).

Convenience.

The second theme that arose out of the interviews I called convenience. The students recognised that there were four ways that computers were convenient to them. These were made into four categories as follows:

(1) Ease;

(2) Speed;

(3) Own pace; and

(4) Access.

The first category was called ease. This had a total of 11 comments, being seven comments for computers and four comments against computers.

Four of these positive comments were made in the pre-interviews and three in the post-interviews. Student 1A believed that computers were easy to use because one could use them from many different locations. Then again, students 2A and 2B thought computers were easy to use because of the Internet, how it presents information, and how prompt it is in finding information.

It's easy to access at home or school (1A-1).

With the Internet sometimes you have summaries [or links] that you can click on and it's easier that way (2A-1).

A plus would be finding it easier [using computers for art theory learning] (2B-1).

You can have the picture and all the information on the one screen. It's really easy to find different things. You click the button and go into lots of depth (2B-1).

Well a plus is that you can see it all on the screen and you can easily get things whereas if it's just normal ways, you have to find everything and go to the library. Whereas it is all just there in front of you...it's really easy to access (2B-2).

*Well I reckon it's good with computers because um like you have
the Internet and its quick and easier and like it sort of [is]
interesting the way it's said. It's like written in words that you can
understand...it's really good* (3A-2).

So it's easier (A-2).

There were also comments to the contrary about ease of use of computers.
There were three comments in the pre-interview and one comment in the post-
interview. Three students acknowledged that the Internet was difficult to use and
more complicated to search for information than books.

*A minus is sometimes [computers] get really complicated and a
book would be much easier to get exactly what you want* (2B-1).

*A minus...sometimes it's hard to find things on the Internet and
stuff about exactly what you want* (5B-1).

I can't use the Internet much...I can't find what I want (1B-2).

Student G4A found it harder to work on a computer on her own. She
preferred to work with someone else by her side so that she could ask for their
assistance if necessary.

*If you don't understand something [with computers], there's really
nothing you can do about it* (4A-1).

The second category was called speed. This had a total of six comments
being four comments in the pre-interview in favour of computers and two
responses against computers being one comment made in each interview.

Those students that acknowledged how fast computers were and found this
to be a great advantage to them in finding information.

One plus is you can get what you want quickly (2B-1).

*I think another plus about the Internet is that you can find out a lot
of information about them quickly. It doesn't take very long and*

*then like straight away you have the information you want and like
that is really good* (3A-1).

It is quicker (4A-1).

*I think an advantage is that it is a quick way to find it doesn't take
long and that you don't have to do a lot to get it* (4B-1).

There were also two comments made about how time consuming computers

were. This was in reference to the Internet in that it provided too much

information at times and that it was not always appropriate information.

*Some of the information is not relevant so you have to go through
everything* (5A-1).

*Like you type something...like...you know and it comes up a
different thing comes up and you have to start all over again and it
takes a long time if you don't know what you're actually looking
for* (2A-2).

The third category was called own pace. This had a total of four comments

that all supported working with computers. One of these comments was in the

pre-interview and three comments in the post-interview.

In the pre-interview, students 4B said that they liked learning visual arts

theory with computers, as they like to work at their pace. In the post-interview,

three other students explained that learning at their own pace meant that they

could read information at their own speed, which meant that they then had a

greater chance of remembering what they had read.

You get to learn [art theory] at your own pace (4B-1).

*Yeh, I think it is [a] better [way of learning art theory via
computers] because you can read it for yourself. So you read
it, take it in and then you remember* (3A-2).

*Yeh, I like the interactive part where you can click on it and learn
at your own pace* (5B-2).

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The fourth and last category was called access. This had six comments altogether being four comments in the pre-interview and two comments in the post-interview. The students found that they could retrieve information from a computer at a number of different locations or even at times suitable to them. This meant that it was quite handy for them, as they didn't have to rely solely on going to a library to do library research or to visit an art gallery to see the real artworks.

> *You don't have to go all the way to the gallery just to see the painting* (3B-1).

> *Whereas if it's just normal, you have to find everything and go to the library. Whereas it is all just there in front of you...it's easy to access* (2B-2).

> *Like [computers are] there all the time so you can look it up at home or where you want to* (4A-2).

Performance.

The third and last theme was called performance. This theme arose out of two categories, which were called technical and content.

For the technical category, there were 11 comments altogether. That is, four comments "for computers" and seven comments "against computers". In the pre-interview, there were five comments made with one of these comments being "for computers". In the post-interview, there were six comments made with half of these comments being "for computers". This showed that there was two more 'for computers' and two more 'against' comments made by the post-interview.

The one common thing that some students liked about computers was that they could click on a button that would lead them to a vast amount of information.

> *You click the button and go into lots of depth* (2B-1).

> *To just click on something and it shows you...*(5A-2).

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*Yeh, I like the interactive part where you can click on it and learn
at your own pace* (5B-2).

As they were quite sceptical about how reliable some information was from

the Internet, they preferred to have information come from a reliable source rather

than an unknown source. For this reason, the students were more trusting of the

PowerPoint Slideshow Nolan's Kelly paintings and the Internet links chosen for

this program that this researcher had put together.

*So what if I put together a PowerPoint Slideshow? Would that
be alright?* (the researcher).
Yeh, cause you know about it (4B-2).

The rest of the comments were against computers. In particular, the students

said that computers could break down without much warning and, once again

mentioned that they did not trust all the information found on the Internet.

Furthermore, the students found that with the Internet that they could be denied

entry or that computers could shutdown or crash at anytime. Students found this

so much more frustrating than the interactions they have with books, teachers,

handwritten worksheets or artworks.

Sometimes the computer is down (1A-1).

*Downside could be if you don't understand something, there's
really nothing you can do about it* (4A-1).

*A minus... like I said 'you have an illegal operation and shutdown'
or you found false information* (4B-1).

A minus is that sometimes you can't get at the site you want
(3A-2).

A minus... computers can breakdown and crash (4A-2).

One of the main problems that concerned the students was the Internet.

Some students found that they did not always trust the Internet with the

information available on some web sites. This was because the students believed

that almost anyone could write on the Internet whatever they wanted to and that

there was no immediate way of knowing whether that information was correct or

not.

> *If you're doing your own search you could find something like*
> *people can write whatever they want on the Internet so you could*
> *find something that is false and you could believe it* (4B-1).

> *A minus is that not all information is correct. Sometimes they have*
> *the wrong information in it* (3A-1).

> *If you're doing your own search you could find something like*
> *people can write whatever they want on the Internet so you could*
> *find something that is false and you could believe it* (4B-1).

> *No regulations on the Internet so anyone could write anything they*
> *wanted* (4B-2).

The second and last category was called content. This had a total of 22

responses with all comments, but one comment in the post-interview being in

favour of computers. In the pre-interview, there were 10 comments and in the

post-interview, there were 12 comments.

In the pre-interview, there were six students who said that computers

increased their learning. The other four students suggested that the content of a

computer learning package such as the PowerPoint slideshow got rid of boredom,

that this wasn't the usual way of learning, that images and text were provided

together on the one screen, and that this was interesting way of learning.

> *Yes [it increases learning]* (2A-1 and 2B-1).

> *Yes [it increases learning] cause with the Internet you go further*
> (1B-2).

In the post-interview, the five comments were also that computers helped

students to increase their learning. The other six comments were that the content

of a learning package on a computer got rid of boredom, that it was friendlier, that it was still serious, but not as formal, and that they liked this PowerPoint slideshow of Nolan's Kelly paintings.

It's not as serious...it's still serious but not as formal (2A-2).

Furthermore, there was also one comment made against computers in the post-interview. Student 2B found it confusing to navigate the PowerPoint Slideshow because of its non-linear form of navigation.

Well up you kind or got lost when you went into the links and stuff.
There was like you had to go into one thing to get into the other
page and then you had to go into the link (2B-2).

Summary of CLL's Tool.

The five pairs of students were interviewed about CLL's tool (computer technology) in relation to visual arts education. From the transcribed interviews arose three themes (comparison, convenience, and performance). There were also ten categories (books, teachers, worksheets, and artworks, ease, speed, own pace, access, technical, and content). The comparison theme had four of these categories being books, teachers, worksheets, and artworks. The convenience theme also had another four of these categories being ease, speed, own pace, and access. Finally, the performance theme had the two of these categories being technical and content. All ten categories had a further two sub-categories being "for computers" and "against computers".

The comparison theme results showed that overall, that the majority of students' comments were "for computers" (number = 17) rather than "against computers" (number = 5) in learning visual arts theory as compared to the four categories being books, teachers, and worksheets, and artworks. However, with

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this last category, there was a tie (one comment "for computers" and one comment "against computers"), which may possibly have indicated that students' first preference was to learn visual arts theory directly from viewing real artworks.

The convenience theme results showed that the majority of the students' comments were "for computers" (7 comments) rather than "against computers" (4 comments) in terms of the four categories being ease, speed, own pace, and access.

The performance theme results showed that the overall student comments were "for computers" (25 comments) rather than "against computers" (8 comments) in terms of the two categories being "technical" and "content". However, most student comments were "against computers" in terms of "technical" (7 comments "against computers" compared to 4 comments "for computers"). Nevertheless, the majority of student comments were "for computers" in terms of "content" (21 comments "for computers" and one comment "against computers").

Therefore, apart from the students not liking "technical" problems associated with computers, students are "for computers" in learning visual arts theory, but would most likely prefer to learn theory from real artworks if this was possible.

Summary of Interviews

Chapter Five provided the results of the pre- and post-interviews from five pairs of students. These sought answers towards the primary research question 1.0 (effect) through sub-questions 1.1 (attitude) and 1.3 (knowledge).

The interview findings were summarised as follows.

(1) CLL's subject (effect, attitude): Visual art theory had a combination of both a positive and negative effect on students. It was a positive effect due to students' positive attitude towards learning, interest, hands-on, background information, knowledge, guidance/direction.

(2) CLL's subject (effect, attitude): On the other hand, visual art theory learning had a negative effect on students due to their negative attitude arising from boredom, time consumption, and information overload.

(3) CLL's subject (AI - effect, knowledge): AI did not have an effect on students as they did not exercise their knowledge in this area.

(4) CLL's subject (ASP - effect, knowledge): ASP had a positive effect upon students as they exercised their knowledge and had enhanced learning in this area.

(5) CLL's subject (AR - effect, knowledge): AR had a positive effect on students as they had exercised their knowledge and had enhanced learning in this area.

(6) CLL's subject (AS - effect, knowledge): The historical background (AS) had a positive effect on students as they had exercised their knowledge in this area. This was the complete opposite for the cultural or socio-economic backgrounds (AS).

(7) CLL's learner (MI - effect, knowledge): the seven intelligences slides (visual-spatial, logical-mathematical, bodily-kinaesthetic, interpersonal, intrapersonal, existential, and musical) of the Nolan-Ned Kelly PowerPoint slideshow were recalled in the post-interview. These had a positive effect as they had exercised their knowledge and had enhanced learning in these areas.

(8) CLL's learner (MI - effect, knowledge): The linguistics and naturalistic intelligences slides of the PowerPoint slideshow were not recalled in the post-interview. This had a negative effect as they did not exercise their knowledge sufficiently in this area.

(9) CLL's tool, (computers - effect, attitude): Three themes arose and ten categories: (1) Comparison (books, teachers, worksheets, artworks); (2) Convenience (ease, speed, own pace, access); and (3) Performance (technical, content). There were also two sub-categories ("for computers" and "against computers"). Computers had a positive effect on students as a result of students' positive attitude towards their "for computers" results (comparison, convenience, and performance-content).

(10) CLL's tool (convenience - effect, attitude): Computers in terms of convenience (ease, speed, own pace, access) had a negative effect on students' attitude.

CHAPTER SIX

Art Portfolios

Introduction

In this chapter, a report is provided of the nine students' art portfolios in relation to the three components of CLL (subject, learner, tool). The students worked on their art portfolios in class and whatever they did not complete, they completed at home or in their spare time at school. The art portfolios, which addressed the WA 4ALO reflected the work they had completed over term three. At the end of term, the Year 9 visual arts teacher collected the students' art portfolios and rated them according to the two visual arts practise Outcomes and the two visual arts theory Outcomes They were further graded according to the quality and quantity of their work. Once grades were assigned, I randomly selected nine art portfolios from the group of students that represented all grades given to the students. That is, three 'A', three 'B', and three 'C' grades. The 'A' grade students had the 'very high' marks; the 'B' grade students had 'high' marks; and, the 'C' grade students had the 'satisfactory' marks. Students' examples of artworks from their art portfolios are provided throughout this chapter as well as in Appendix D. Their results are provided in Table 6.1.

The three 'A' grade students are identified as students A1, A2, and A3. The three 'B' grade students are identified as students B1, B2, and B3. Finally, the three 'C' grade students are identified as students C1, C2, and C3.

The purpose of this chapter is to examine how the art portfolios addressed the three components of CLL (subject, learner, tool) and how they contributed to answering the primary research question 1.0 (effect) through sub-questions 1.2 (skills) and 1.3 (knowledge).

Table 6.1

Overall Results for Nine Students' Art Portfolios

Students	Arts Ideas	Arts Skills & Processes	Arts Responses	Arts in Society	Final Outcome	
Student A1	H	VH	H	VH	VH	(A)
Student A2	H	VH	VH	VH	VH	(A)
Student A3	VH	VH	VH	VH	VH	(A)
Student B1	S	VH	S	S	H	(B)
Student B2	H	VH	H	H	H	(B)
Student B3	S	H	S	H	H	(B)
Student C1	S	H	ND	H	S	(C)
Student C2	S	H	S	S	S	(C)
Student C3	S	H	ND	H	S	(C)

The combined results of these two art practice Outcomes (AI, ASP) were as

follows:

(1)   Six 'very high' marks;

(2)   Seven 'high' marks; and

(3)   Five 'satisfactory' marks.

The combined results of the two art theory Outcomes (AR, AS) are the

following:

(1)   Five 'very high' marks;

(2)   Six 'high' marks;

(3)   Five 'satisfactory' marks; and

(4)   Two 'not done' marks.

Collectively, the art portfolios grades showed that these students had higher

marks with the two visual arts practice Outcomes than with the two visual arts

theory Outcomes. All students (n=9, 100%) passed the two visual arts practice

Outcomes and one of the visual arts theory Outcomes (AS). However, there were

two students (C1 and C3) who did not pass the other visual arts theory Outcome (AR).

The three components of CLL are now discussed.

The First Component of CLL: Subject

In this study, CLL's subject refers to visual arts education in relation to the WA 4ALO. Each Outcomes is now presented in terms of what the visual arts teacher requested that the students do in addressing each Outcome followed by what the actually did. For convenience, I begin with the 'A' grade student followed by the 'B' and 'C' grade students.

Arts Ideas

The students were required to complete four step-by-step exercises in addressing the AI Outcome (refer to Table 1.1. This involves creating original ideas, interpreting ideas, exploring arts ideas, developing arts ideas, and presenting arts ideas (Curriculum Council of WA, 1998).

These four step-by-step exercises are listed below. Accompanying this in parentheses is how each of these addresses various criteria of the AI Outcomes:

(1) Paper collage: Using real or fictitious images of heroes and villains found on the WWW, books, magazines, and photographs (exploring, developing, and presenting ideas). These were printed out with a colour printer;

(2) Graphite pencil drawings: These drawings were of heroes and villains that they found on the WWW and elsewhere (exploring, developing, and presenting ideas);

(3) Self-portrait graphite pencil drawing: If the students wanted to, they could have made their self-portrait as a hero or villain. The students were given a set of guidelines on how to draw correct proportions of a human face and also to transfer some of this learning where appropriate to their masks. These self-portraits are described in more

detail in the section in this chapter called 'Intrapersonal' (exploring, developing, and presenting ideas); and

(4)   Blueprint drawing: This graphite pencil drawing is a culmination of the other three exercises that would become the blueprint for their paperclay mask (exploring, developing, interpreting, creating new ideas, and presenting ideas).

The student responses addressing the AI Outcome are documented in Appendix D.

These students began these step-by-step exercises by using the WWW for exploring ideas of heroes and villains. They then interpreted these images into paper collages. They also created other graphite pencil drawings of various facial features of different heroes and villains that they had found from the WWW. Then they developed and created original ideas out of all these collages and drawings and presented them as a blueprint drawing for their paperclay masks.

By working on these step-by-step exercises, the students were allowed to continually develop, build, explore, choose, and interpret ideas for a paperclay mask. Likewise, the WWW provided access a range of images of heroes and villains and also allowed for student-centered learning, which empowered them in constructing knowledge for themselves about heroes and villains.

What each of the nine students accomplished in addressing the AI Outcome is now discussed.

'A' grade students.

Student A1 provided quality work and completion in all four exercises (collages, pencil drawings, self portrait, and blueprint). First, she made two paper collages instead of just one paper collage as was the minimum requirement. These were inspired by cartoon images found on the WWW. Second, she made a

number of graphite pencil drawings of different eyes, noses, chins, teeth and ears from cartoon villains found on the WWW. Third, she created her self-portrait. Fourth, from these paper collages and drawings, she created a final blueprint pencil drawing for her paperclay mask, which resembled the paper collage and was also inspired by Ned Kelly. Along with this blueprint drawing were instructions and details of what colours would be used on the mask that covered its eyes, as well as the hair, eyebrows, lips, nose, chin, and the colour of the skin.

Figure 6.1 Student A1's paper collage

Student A2 also showed quality work, but only completed three exercises (collages, pencil drawings, and self portrait). First she made a paper collage out of cartoon villain images that she found on the WWW. Second, she made some villainous pencil drawings from images found on the WWW and in a magazine. From the WWW she drew such fictitious characters as egghead, iron man, and megalomaniac, whereas from the magazine she made a sketch of a real villain identified as being Christopher Skase. Third, she made her self-portrait. Fourth, she did not complete the fourth exercise for her art portfolios, but instead she used

her first exercise (the paper collage) as her "blueprint". Nevertheless, this paper collage "blueprint" had a strong resemblance to her paperclay mask especially with the general shape of the face, the placement of the one large eye on the forehead, and the two small ears on either side of the top of the head.

There were also some differences between the paper collage "blueprint" and her mask. This paper collage had a green complexion whereas the paperclay mask had a purple complexion. Also the collage had two snakes coming out of the top of the head while her paperclay mask excluded these.

Figure 6.2 Student A2's paper collage

Student A3 also showed quality work and completion in all four exercises (collages, pencil drawings, self portrait, and blueprint). Unlike the other students, her first exercise was a pencil drawing collage instead of a paper collage. This was made out of different facial parts found on the WWW. This drawing collage included hair, eyes, eyebrows, ears, nose, lips, and moustache. Second, she made an extensive number of pencil drawings. Third, she drew her self-portrait as well

as other drawings of Princess Diana, Dracula, one of Picasso's cubist females, a

fairy, and a wooden mask from Africa. Fourth, she made her final blueprint

drawing that was assembled from selected facial parts of her other drawings.
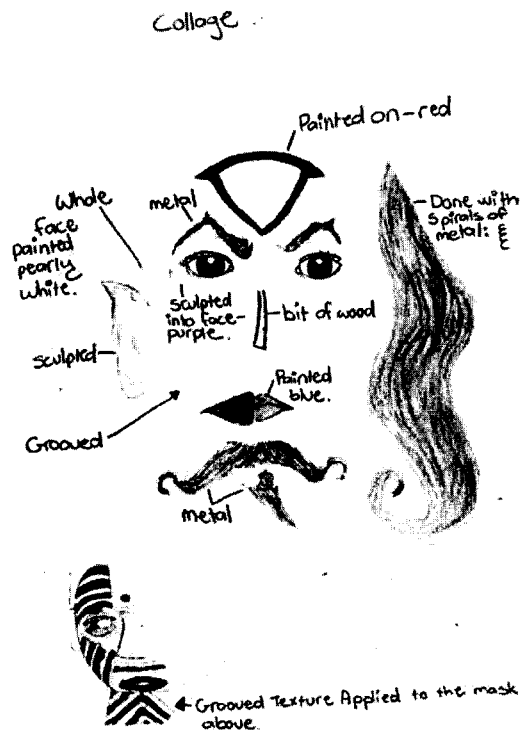
Figure 6.3 Student A3's pencil drawing collage

'A' grade summary.

Two 'A' grade students (A1, A3) showed quality work and completion in all

four exercises (collages, pencil drawings, self portrait, and blueprint) while

student A3 showed quality work and completion in the first three exercises, but

not the fourth exercise being the blueprint.

However, student A1 was the only 'A' grade student to follow the four step-

by-step exercises as instructed as well as having made an extra two paper

collages. Student A2 did not make a blueprint drawing, but used her paper collage

as a "blueprint" for her mask. Student A3 created a collage, but this was a

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drawing collage rather than a paper collage. Nevertheless, the AI step-by-step exercises assisted all three students to work on ideas that culminated into a paperclay mask.

'B' grade students.

Student B1 showed an average amount of quality in her work as well as having completed all four exercises (collages, pencil drawings, self portrait, blueprint). First, she found ideas for her paper collage from several fictitious cartoon characters from the WWW. Second, she made a real hero sketch of Mother Theresa and other graphite drawings from the WWW including two fictitious and villainous like characters called man-bull and boogieman. Third, she created her self-portrait. Fourth, she produced a blueprint drawing that resembled her paper collage that originally came from images found on the WWW.

Figure 6.4 Student B1's paper collage and pencil drawing

Student B2 also showed an average amount of quality in her work as well as having completed all four exercises (collages, pencil drawings, self portrait, blueprint). First, she found ideas for her mask from cartoon images found on the WWW. She then cut and pasted seven parts of these images together to make a paper collage of a heroic, fantasy-like person. This character had a very elaborate white headpiece that had white feathers, a large eye, and three seals on it. On the face, she pasted a mask shape over the eyes. Second, she made some other graphite drawings from images found on the WWW, which included Frankenstein's head, and an unidentified nose and mouth. Third, she created her self-portrait. Fourth, she made two blueprint pencil drawings that showed a natural progression from her paper collage. The first was a graphite pencil drawing while the second one was further developed into a larger sized coloured drawing.

Figure 6.5 Student B2's blueprint coloured pencil drawing

Student B3 did not create any of these exercises for her art portfolios prior to creating her paperclay mask.

'B' grade summary.

Two 'B' grade students (B1, B2) showed an average amount of quality in their work and completed all four exercises (collages, pencil drawings, self portrait, and blueprint). Student B3 showed no quality in her work as she did not complete any exercises for her art portfolios.

The first two students made blueprints that showed a natural progression from their research on the WWW and their paper collages. Furthermore, student B2 made a second blueprint in colour.

'C' grade students.

Student C1 did not do any of the four exercises (collages, pencil drawings, self portrait, and blueprint) as instructed by the visual arts teacher. Alternatively, she printed out a hard copy of Medusa that she found on the WWW for inclusion into her art portfolio. This acted as her "blueprint" for creating her paperclay mask.

Student C2 also did not do any of these exercises for her art portfolio.

On the other hand, student C3 had poor quality of work compared to the 'A' and 'B' grade students, but did complete all four exercises (collages, pencil drawings, self portrait, and blueprint). First, she assembled a paper collage out of her hero identified as being Madeleine Albright. Second, she made a drawing of another hero she found on the WWW, which had a good resemblance to Martin Luther King. Third, she created a self-portrait of herself as a villain. Fourth, she made a coloured blueprint drawing, but it did not progress from any of the other three exercises, but it did resemble her paperclay mask. This was a peanut shaped

face painted orange that she named "Superman". However, this character did not

even resemble "Superman" at all.
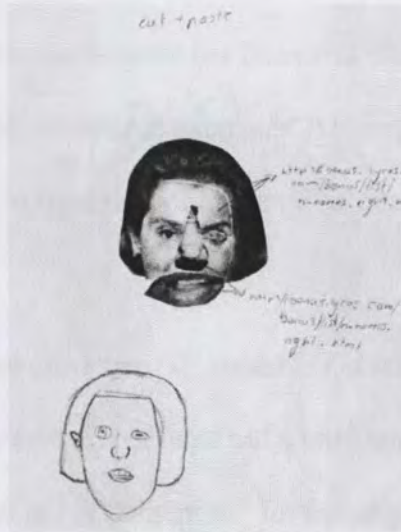
Figure 6.6 Student C3's paper collage (Madeleine Albright)

Figure 6.7 Student C3's blueprint coloured pencil drawing of "Superman"

'C' grade summary.

Only one 'C' grade student (C3) was able to complete all four exercises. However, she had poor quality work compared to the 'A' and 'B' grade students. Although student C3 was the only student to do a self-portrait of herself as a villain, she may have lost marks because her blueprint was not a natural progression from any of her other three exercises. Although her blueprint was called "Superman," it was in the shape of a orange coloured peanut with a face drawn on it.

On the other hand, the other two 'C' students did not attempt any of the four exercises. Alternatively students C1 printed out a hard copy of Medusa from the WWW and used this image as her "blueprint" for making her paperclay mask.

Arts Ideas summary.

Irrespective of the work quality, five students completed all four arts ideas exercises (A1, A3, B1, B2, C3). There was one student who completed three exercises (A2) and the remaining three students did not complete any exercises at all (B3, C1, C2).

In addition to these four exercises, student A1 made two extra paper collages while B2 made one extra blueprint drawings in colour. The other students differed as follows:

(1)   Student A2 doubled up her paper collage as a blueprint;

(2)   Student A3 made a drawing collage rather than paper collage;

(3)   Student C1 used an image of Medusa directly from the WWW for her "blueprint" instead of creating a blueprint drawing; and

(4)   Student C3 made a colour blueprint drawing that did not appear to be a natural progression from any of her other three exercises. However, this blueprint drawing had a strong resemblance to her paperclay mask in colour (orange) and shape (a peanut shape).

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Finally, two students (students A1 and B2) used the idea of the mask from studying Nolan's Ned Kelly paintings.

Arts Skills and Processes

For the ASP Outcome, the students were required to create a three-dimensional paperclay mask of a hero or villain. This addressed the ASP Outcome shown in Table 1.1 that considers the skills, techniques, and processes, using arts conventions, and using and adapting technologies in the arts (Curriculum Council of WA, 1998).

What the students were required to do for this and how it related to the criteria for the ASP Outcomes included the following:

(1) Rolling clay into a slab (skills, techniques, and processes);

(2) Translate the blueprint drawing from the arts ideas exercises to create the same shape face for a newspaper mould (skills and techniques);

(3) Laying the slabs of clay over the mould (skills, techniques, and processes);

(4) Joining clay pieces together with slip over the clay mask guided by the blueprint (skills, techniques, and processes);

(5) Bisque firing their masks aided by the visual arts teacher (processes);

(6) Mixing colours together to paint their masks, (skills, techniques, and processes); and

(7) With the teacher or researcher, used auxiliary equipment such as a digital camera to photograph their masks for inclusion into their art portfolios (technologies).

Up to this time, the students were working on four two-dimensional AI exercises (collages, pencil drawings, and self-portrait culminating into a blueprint drawing). Their final blueprint drawing was then used as a guide to create their

three-dimensional paperclay masks (refer to Appendix D for the mask images). What the students accomplished with their paperclay masks is now described.

'A' grade students.

Student A1 created a villainous mask called "Cat Burglar". This mask was the end result from first working on her paper collage, drawings, self portrait, and blueprint drawing. This mask also showed that it was inspired by Nolan's Ned Kelly paintings. Not surprisingly to me, she won a $200 first prize for a mask competition held at the Western Australian Museum, which was judged for its aesthetic qualities in combination with an Australian subject, which in this case was inspired by Ned Kelly.

Her paperclay mask had a long oval shape that had a base coat of olive green painted and then overlayed with a clear high gloss. Starting at the top of the head, there were several rows of blue cone shapes that represented hair. In the front row there were small cone shapes that became progressively larger towards the back row. The eyes were covered with a thin and long black mask that was inspired by Ned Kelly's mask. The two eye slits in the mask were actually two rectangular shaped holes that resembled two small televisions sets or computer screens. However, there were no eyes showing behind this mask. This showed that the student was inspired by Nolan's Ned Kelly paintings as Nolan did not show Ned Kelly's eyes behind the mask either. The mask's nose and mouth were like those of a human being's features except the nose was painted olive green like the background and the mouth was painted purple.

Figure 6.8 Student A1's paperclay mask called it "Cat Burglar".

Student A2 created a villainous mask called "Cyclops", which she developed from her paper collage as she did not create a blueprint drawing. It was a good name to give her mask as it only had one eye in it just like the Greek mythological character of Cyclops. Her paperclay mask was painted a deep purple in the background while at the top of the mask and to either side of the baldhead, were two small horn-shaped ears in the exact position as the ears in her paper collage. Just under the forehead and towards the middle, was one large oval shaped eye in a deep socket. The pupil was white with a red triangular iris. Then just under the eye socket was a very large irregular shaped mouth that covered the bottom half the face just like in her paper collage. The inside of the mouth was black and had two crooked white teeth at the top and on either side of the mouth. There were also three teeth at the bottom of the mouth with one tooth on the left side and the other two teeth on the right side.

Figure 6.9 Student A2's paperclay mask called "Cyclops"

Student A3 created a hero mask called "The Imprecise", which had been partly adapted from her drawing collage. The background colour of the completed mask was a pearly pink colour. The ears of this mask were a light pink colour, including a medium sized drooping tear-shapes that extended from the top of the baldhead down to approximately the middle area of the nose. Just under the forehead were two eyebrows, which were made of small rolled sausage "v" shapes. The eyebrows, which were the same shape as what was in her drawing collage, were painted the same colour as the pearly pink background. Underneath the eyebrows were the eyes, which were surrounded by two black coloured sausage shapes joined together at each corner. In the centre of these were the eyes, which were the most realistic human eyes made in this class. The pupils were like those in the collage and were painted light brown with black irises. There was also a nose, which was one long, thin rectangular shape just like in the collages, and just under this was a rather large, but very feminine looking smiling mouth. This had well shaped lips that were painted red with the top row showing white teeth.

Figure 6.10 Student A3's paperclay mask called "The Imprecise"

<u>**'A' grade summary.**</u>

All 'A' grade students created paperclay masks being two villainous and one hero masks. Student A1 was the only "A" grade student (and one of two students overall) who created a mask that was developed out of both her paper collage and blueprint drawings, and also was inspired by Nolan's interpretation of Ned Kelly's mask. She completed all four of the step-by-step AI exercises and her mask was also inspired by Nolan's interpretation of the Ned Kelly mask. On the other hand students A2 and A3 made masks that were developed out of their paper collages only.

<u>**'B' grade students.**</u>

Student B1 made a villainous mask called "Rhys", which was developed from her paper collage and final blueprint drawing. The mask's background was bright green with a high gloss finish. There were two small dog-shaped ears to either side of the baldhead just like her paper collage. She added an earring to one of the ears.

Just under the forehead were the eyes, which were the same round marble shape as the collage. Following the layout in her collage, the eyes were placed much closer together than a human's eyes are usually located. These were made out of two medium sized purple balls for the pupils and placed in the middle of the pupils were two small orange balls for the irises. The orange colour was similar to the colour that surrounded the eyes in her paper collage. Above the eyes were the eyelids, which were each made out of a small black sausage shapes. On either side of the eyes were a series of four lines extending outwards to the sides of the mask similar to what was found in the paper collage and drawing. Then, just under the eyes was a round marble shaped and bright blue nose with a silver coloured ring pierced in the middle of the nostrils at the base of the nose. Next was a large opened mouth with teeth displayed. The lips were made out of one long continuous and round black sausage shape. The mouth was open wide like her collage and had a white background with four yellow teeth at the top and the same at the bottom of the mouth. These teeth were balls of circles rather than resembling those in her collage, which were more triangular in shape and green.

Figure 6.11 Student B1's paperclay mask called "Rhys"

Student B2 made a heroic mask called "Spunky Monkey", which was a natural progression from her paper collage, blueprint drawing, and also inspired by Nolan's interpretation of the Ned Kelly mask. The mask was very striking in colour and design. The background of the oval shaped mask was bright orange. The hair was made out of two rows of triangular shapes that were bent and curved slightly. These were inspired by the rows of white feathers in her paper collage and blueprint drawing. The hair showed good use of repetitions of shapes and colour. Covering the eyes was an elongated mask that had been inspired by having viewed the Ned Kelly mask.

Figure 6.12 Student B2's paperclay mask called "Spunkey Monkey"

However, it did not exactly resemble Ned Kelly's mask as it was a long narrow red mask that came to points at either end. However unlike student A1's mask that did not show the eyes from behind the mask, this mask did show the eyes. This consisted of two yellow and oval shaped pupils with a black dot irises painted in the middle just like the blueprint drawing. The nose looked like a tie that was painted yellow with black polka dots. Underneath this was a tightly closed lipped mouth that was painted in red and white vertical stripes with the top lip being considerably smaller than the bottom lip.

Student B3 made a villainous mask that was also called "Villain". This student did not make any paper collages or blueprint drawing prior to making her paperclay mask. However, the mask was very well crafted and designed. The background was painted a dark green colour with a high gloss finish. The head of the mask was bald, but had a zigzag shape slash cut into the forehead. This was the only mask that had slashes cut through it. The crescent shaped ears began at the same level as eyes and extended up towards the top of either side of the head. The ears were dark green while the inner part of the ear was a lighter green colour. The eyes were also crescent shaped and resembled cat's eyes in that they appeared to glow in the dark. The pupils were painted yellow while the irises were made of three black shapes in that there is one dot of black colour in the middle and two curved shapes on each side of the dots. The mask's lips were made out of two simple sausage shapes that were attached at the corners. They were also painted the same light green colour of the inner part of the ear and were about the same size as a human being's mouth.

Figure 6.13 Student B3's paperclay mask called "Villain"

'B' grade summary.

All 'B' grade students created paperclay masks, which consisted of two villain masks and one hero mask. Two 'B' grade students (B1, B2) were able to progress from their two-dimensional AI exercises to their three-dimensional paperclay masks. The other student (B3) did not work on any of the four AI exercises (refer to Appendix D on the 'B' grade mask images).

Student B2 was one of two students overall to have created a mask that was developed out of her paper collage, blueprint drawings, and also to have been inspired by Nolan's interpretation of the Ned Kelly mask. On the other hand student B1 created a mask that was developed out of her paper collage and blueprint, but did not have any sign of learning about Ned Kelly. Finally, student B3 did not attempt to create any of the four AI exercises.

'C' grade students.

Student C1 made a villainous mask called "Mixed Emotions". This student did not make any paper collages or blueprint drawing prior to making her mask. However, the mask did resemble the image of Medusa that she had found on the WWW and included this image into her art portfolio for the Arts in Society worksheet. The mask's background was painted a grey colour and had an oval shape just like the black and white image of Medusa she found on the WWW. The hair was made out of one long black curly sausage shapes just like her WWW image of Medusa. The eyebrows were made out of two black triangles with the top points of these two triangles painted red. The eyes were closer together than those of a human being's eyes. They were made out of two small red balls with a hole pierced in the middle of each. Surrounding the eyes were the upper and lower eyelids, which were made out of two grey sausage shapes joined into an

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oval. Just under the eyes was a long and slightly flattened triangular shaped nose just like her WWW image of Medusa. It also had two holes pieced at its base to indicate the nostrils, just like her WWW image of Medusa. Underneath this was the rather plain and small mouth. It was made out of two small red sausage shapes that were joined together, but with a small opening in the middle.

Figure 6.14 Student C1's paperclay mask called "Mixed Emotions"

Student C2 did not name her villainous mask nor did she provide any paper collages or blueprint drawings prior to making her paperclay mask. Nevertheless, her mask was very striking with a very strong design element to it. The shape of the mask and the wide open mouth had more in common with Edvard Munch's *The Scream* (a screaming character) rather than of Nolan's Ned Kelly paintings. This mask had a black background while at the top of the sloping head, the hair was made of seven strands of curled copper wire that were standing upright as if it had been electrocuted. Beneath the forehead and to the right side was one eyebrow. This was painted purple and made out of six small 'v' shapes joined together in a curve to resemble a human being's concave shaped eyebrow. Underneath the eyebrow were two deeply dug out eye sockets in which were two

small ping-pong shaped white eyeballs with no irises painted on them. The left

eyeball was glued directly to the eye socket while the right eyeball was attached at

one end to a piece of long curled copper wire, while the other end of the wire was

attached to the eye socket. This made the eyeball move around, making it the

only kinetic mask in the class. The nose was made out of one long sausage shape

line that was painted black. It began near the left side of the eye socket and curved

down to the nostril where it once again curved horizontally to give the end of the

nose where the two nostrils are located. Underneath this was a very well crafted

red-lipped mouth. It was open with four fangs at the top and three fangs at the

bottom of the mouth.

Figure 6.15 Student C2's paperclay mask (no name)

Student C3 made a superhero mask called "Superman," but it did not

resemble the superhero Superman or seem to develop out of her paper collage or

pencil drawings. However, it did resemble her blueprint, which resembled a

peanut and appeared to have been made after she had completed her mask. This

was evident as it looked very much like her mask, but not her paper collage or

other drawings. Her mask was not painted as neatly as some of the other masks were and required more effort and attention to it. For example, the mask required more coats of paint. The mask was painted orange and had a peanut shaped face with four 'S' shaped curls for hair and another two 'S' shaped curls for eyebrows with small marble sized eyes. There were also two flat semi-circular ears, two small black balls for eyes placed in sockets, one medium shaped yellow ball for a nose, and two long sausage shapes joined together to produce a smiling mouth.

Figure 6.16 Student C3's paperclay mask called "Superman"

'C' grade summary.

Altogether, the 'C' grade students created two villainous masks and one hero (superhero) mask. None of the three 'C' grade students made masks that resembled their paper collages even though one of these students actually made a paper collage (refer to Appendix D for 'C' grade mask images).

Furthermore, none of the students made their masks from their blueprint drawings although one student had made a blueprint drawing. One student's mask resembled a Medusa image she had taken from the WWW, but she did not go through the steps of making a paper collage or blueprint drawing prior to making

her mask. None of the students' masks reflected or showed any signs of learning about Nolan's Ned Kelly paintings.

Two of the 'C' grade students (C1, C2) did not work on the two-dimensional exercises prior to making their mask. However, student C3 created a paper collage and a blueprint drawing, but her paper collage (Madeleine Albright) and pencil drawings (Martin Luther King and a villainous self portrait) had no links to her peanut shaped blueprint drawing or peanut shaped "Superman" paperclay mask. Furthermore, her blueprint colour drawing appeared to have been made after her mask was made, as it had a strong resemblance to the mask shape of a peanut and showed no sign of progression from any of her other three AI exercises.

Arts Skills and Process summary.

All nine students (100%) completed their paperclay masks in addressing the ASP Outcome. There were six villainous masks, two hero masks (one being a superhero) and one combination hero-villain. There were three students (B3, C1, C2) who did not attempt any of the four AI exercises before creating their masks. There was also another student (C3), who did create some of these AI exercises, but did not refer to them for her mask.

Furthermore, there were five students (A1, A2, A3, B1, B2) who used their four AI Exercises as a guide in making their paperclay masks. There was one student (C3) who did the exercises, but did not use this for her mask. Then there were two students (C1, C2) who did not do any of the exercises at all prior to their masks. However C1 found an image of Medusa and borrowed this as a "blueprint" for her mask and which showed a strong resemblance from the image to her mask.

Also, there were two students (AI, B2) who were inspired by Nolan's Ned Kelly paintings in making their paperclay masks. One of these masks was portrayed as a hero while the other mask was portrayed as a villain.

Finally, there was one 'A' grade student (A1), who was inspired by Nolan's interpretation of the Ned Kelly mask.

Arts Responses

The AR Outcome relates to responding, reflecting, and evaluating arts works, experiences, and practices. The students were required to do a written critique of their paperclay masks. This was to be completed in a computer generated AR workbook. I had a written a number of questions on each slideshow page for the students to word process the answers in the spaces provided. As well, the students were required to insert any images of their paperclay masks and other images as required. A hardcopy of their workbook was then printed out for inclusion into the students' art portfolios.

The students critiqued their paperclay masks according to Feldman's (1970) and Ott's (1989) stages and/or steps of art criticism. The following steps or stages relate to the paperclay masks as follows:

(1) Describing what they saw in their masks overall and in terms of the top, middle, and bottom sections of their masks;

(2) Analysing the colours in their masks;

(3) Interpreting what the concrete and/or abstract meanings of the colours are in their masks;

(4) Judging their masks from one (the lowest mark) to five (the highest mark);

(5) Funding their masks, which is label information and background information about the artists; and

(6) Disclosing their masks, which in this case reflects what heroes and/or villains students were inspired by from researching the WWW and other sources that led to the creation of their masks.

As many students do not usually like to learn visual arts theory as much as visual arts practice, I tried to make this AR workbook as simple and as interesting for them to do as was possible. For example, in judging their masks, all the students were required to do was to select between one and five stars in judging their mask (or someone else's mask). If they thought it was a poor mask, they could give the mask one star. If they thought it was an excellent mask, they could give the mask five stars. These Year 9 students were not asked to write statements about why they judged their masks accordingly as this is the best way for these Year 9 students to address the judging step/stage. Writing why they judged their mask (or someone else's mask) accordingly could be something that they could be introduced in Year 10.

In all cases, the students were computer scaffolded in critiquing their masks as there were questions to guide students in the PowerPoint slideshow AR workbook template. Also, the students were shown how a critique was performed during the examples given in the PowerPoint slideshow of Sidney Nolan's Ned Kelly diptych paintings.

The students' AR workbook was actually a PowerPoint slideshow template. This included nine slides with instructions written on each as to what the students needed to write and/or insert images in critiquing their masks. These slides are as follows:

(1) The first slide was an introductory slide about this electronic workbook and included a place for students to write their name;

(2) The second slide was a table of contents in which the students could double click on the underlined words (or links) to take them directly to a particular slide;

(3) The third slide allowed for students to insert an image of their completed mask;

(4) The fourth slide was about describing the mask;

(5) The fifth slide had to do with analysing and interpreting the mask;

(6) The sixth slide dealt with judging the mask;

(7) The seventh slide was on the first part of funding, which was writing a label for their masks;

(8) The eighth slide dealt with the second part of funding, which was background information about themselves as an artist with photo included; and

(9) The ninth slide dealt with the disclosing stage about what heroes and/or villains from the WWW and other sources inspired their mask.

Slides one to three were preliminary slides only and will not be further discussed. Slides four to nine will now be discussed in terms of what each student wrote about each of the art criticism steps or stages.

'A' grade students.

Student A1 completed all sections in critiquing her mask. For the fourth slide, student A1 described her mask in terms of the mask overall, as well as the top, middle, and bottom sections:

> [Overall] *My mask is an olive-green face with strong, dark coloured features and a band across the eyes. My mask has the appearance of a villain and has acquired a strong evil-looking feeling.*
>
> [Top] *The hair of my mask comprises of purple/blue spikes with turquoise tips.* [Middle] *The eyes of my mask are silver and bronze and have a black band across them. I have also used inverted eyebrows. The nose is very long and skinny.* [Bottom] *The chin on my piece is round and the lips are maroon, pointed and closed.*
> (Student A1).

For the fifth slide on analysing and interpreting, she noted that six colours were used in her mask, which was meant to be interpreted as being evil colours:

> *I have used dark colours in my mask such as maroon, black, olive and dark purple/blue. The prominent colours in my mask are the olive skin colour and the black band.*
>
> *The dark colours symbolise an evil character. The olive colour is often associated with villains as is the black colour* (Student A1).

For the sixth slide on judging, she asked another student to judge her work. This person gave her four out of five stars.

For the seventh slide (being the first part of funding), student A1 wrote label information for her mask and also named her mask as the "Cat Burglar".

For the eighth slide (being the second part of funding), she wrote that she enjoyed her art classes.

> *I have developed a keen interest in art and I enjoy creating and analysing pieces of work* (Student A1).

Finally, for ninth slide (on disclosing), she provided information about what heroes and/or villains inspired her mask. This information came from searching the WWW for heroes and villains as part of the requirements in addressing the AI Outcome.

> *"The Leader" – Megalomaniac Types. I was inspired by his evil green colour and skinny, long, demon-like nose. "Doctor Doom"- Megalomaniac Types. I was inspired by his mysterious, menacing eyes, which are half-hidden behind his mask* (Student A1).

This student also wrote the following information about her mask:

> *I based my mask on the idea of creating a modern Australian super hero and tried to link this to Ned Kelly. I used*

paperclay and acrylic paint
(Student A1).
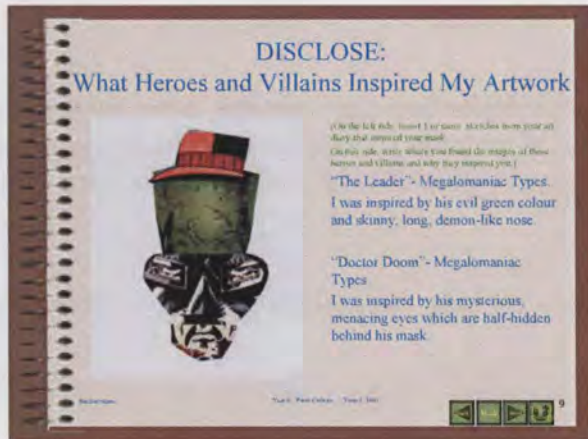
Figure 6.17 Student A1's disclosing slide

Student A2 completed all sections in critiquing her mask. She began the

fourth slide by describing her mask. Similar to student A1, she was able to do this

because the PowerPoint workbook template had questions to guide her and also,

because she had viewed the PowerPoint slideshow of Nolan's Ned Kelly

paintings.

> [Overall] *The mask I have made was created to show the image of*
> *a villain. It is a large, oval shaped mask with exaggerated ears,*
> *eyes and mouth. It is painted with a combination of dark to light*
> *purples...*
>
> [Top] *The two ears have been exaggerated as one of the*
> *characteristics of a villain. They stick out from the top of the*
> *skull, which is bald. The ears are made out of] a triangle of*
> *clay...*[Middle] *The eye is oval shaped piece of clay, which*
> *lays in a sunken eye socket. The iris and pupil have been*
> *layered on to make them stand out.* [Bottom] *The mouth here*
> *has been exaggerated and has thick lips, which are joined as*
> *one piece with no gaps. The teeth are placed randomly to*
> *give the effect of a toothless villain*
> (Student A2).

In the fifth slide about analysing and interpreting, she spoke about five colours in her mask, and then proceeded to interpret these colours as meaning that they were evil.

> *A combination of greys, purples, reds and whites have been mixed*
> *to give a variety of different purples...I used these colours to give*
> *the mask an evil look to support its villainous features*
> (Student A2).

For the sixth slide on judging, student A2 rated her own mask. She rated her mask with four stars.

For the seventh slide being the first part of funding, she provided label information and called her mask 'Cyclops', which she named from having studied heroes and villains on the WWW.

For the eighth slide (being the second part of funding), she wrote that she enjoyed making art. She was able to do this as questions in the PowerPoint workbook template guided her.

> *What I enjoy most about art is making the pieces of artwork*
> (Student A2).

Finally, for the ninth slide on disclosing, she wrote that her ideas for making the mask came from the WWW and Intranet, which she had to do in addressing the AI Outcome.

> *I used the Internet to get ideas for my mask. Here are the*
> *three I got my ideas from: (1) intranet: Avenges Villains,*
> *Egghead; (2) Intranet: Megalomaniac, The Leader 1965,*
> *1988, 1990; and (3) Iron Man, Villains, Blizzard*
> (Student A2).

This student also wrote the following information about her mask that was included in a mask competition at the Western Australian Museum:

In class we looked at the work of Sidney Nolan where he portrayed Ned Kelly in his metallic mask. Using photos of Christopher Skase and research I did on the Net, I created the Cyclops style mask. I think it portrays a villain well (Student A2).
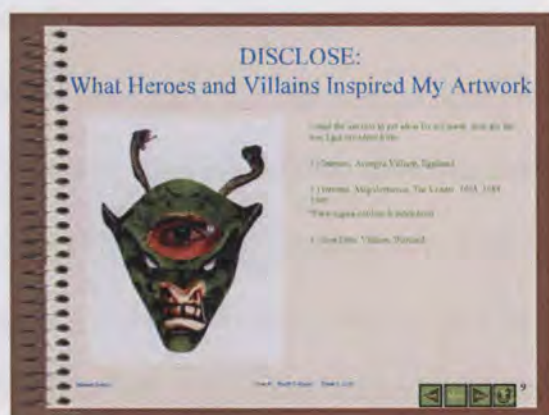
Figure 6.18 Student A2's disclosing slide

Student A3 completed all sections in critiquing her mask. She began the fourth slide by describing her mask overall and then in terms of the top, middle, and bottom sections.

[Overall] *The mask has a weird shape, it is not human but it does have human characteristics such as the nose, mouth and eyebrows. The eyes are freakish because they have holes in the very centre giving the mask a life like aura. The mask has pointed ears and a single fang.*

[Top] *The mask has a "knob" forehead.* [Middle] *There are 2 pointed ears. The eyebrows are evilly arched and the eyeballs have a hole in them. The eyeballs are held in a black 'lining'.* [Bottom] *The mouth is open showing one single fang. The lips are bow shaped and the chin is quite ordinary* (Student A3).

In the fifth slide on analysing and interpreting, she wrote down seven colours that were used in her mask and then interpreted these as being non-traditional villainous colours, which were meant to frighten you.

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*Pink, silver, black, red, white, yellow, and green...I wanted to use
different colours as apposed to the usual black and reds used for
villains. The colours are meant to be shocking and want to make
you look at the mask again*
(Student A3).

For the sixth slide on judging, this student, just like student A2, rated her

own mask and gave it three stars. For the seventh slide on the first part of

funding, student A3 wrote label information about her mask and named it "The

Imprecise". For the eighth slide on the second part of funding, she wrote how

much she liked to draw and also liked her work to be a bit of a mystery, especially

when analysing it. Therefore, it probably had multiple interpretations rather than

one simple meaning. Also she mentioned that she loved colour and fantasy.

*I really like to draw and I thought that creating a mask would be
something new and different. Also, I like to confuse people
through my artwork....I don't want anybody to see the simple
answer when analysing it. I don't want people to say 'she made
this because...' I want my artwork to be original and confusing.*

*I also really love colour and that is one of the reasons why I used
the really bright colours for my mask. I like anything that is
classified as fantasy*
(Student A3).

Finally, for the ninth slide on disclosing, she wrote that her ideas for making

the mask came from the WWW.

Figure 6.19 Student A3's funding slide

'A' grade summary.

All 'A' grade students addressed the AR Outcome by writing responses and inserting images of their work in all six slides (slides 4 to 9). For this they received two 'very high' and one 'high' marks.

'B' grade students.

Student B1 missed writing about two questions regarding interpretation and the second part of the funding slide. For the fourth slide on describing, student B1 described her mask overall and that it resembled Shrek. Also she described the top, middle and bottom sections of her mask.

> [Overall] *It's just a green face that looks like Shrek.* [Top] *It has horns with an earring.* [Middle] *It has a big blue nose and stripes down his face.* [Bottom] *It has a big mouth with yellow teeth*
> (Student B1).

For the fifth slide on analysing and interpreting, she mentioned that there were six colours in her mask. However, she did not interpret their meaning. Instead she wrote that the colours did not mean anything, which did not answer the question.

> *Green, yellow, black, white, blue, and purple*
> (Student B1).

For the sixth slide on judging, she rated her mask with two stars. For the seventh slide being the first part of funding, she wrote the label information for her mask and named it "Rhys". She was able to do this because of the questions guiding her in the PowerPoint workbook template and as a result of having viewed the PowerPoint slideshow of Nolan's Ned Kelly paintings. For the eighth slide being the second part of funding, she wrote that she didn't like art because

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she wasn't good at it and had little experience in it. She did not write about what interested her in art for the second part of the funding stage.

> *Well, I don't really like art much because I'm not too good at it and because I haven never really done it*
> (Student B1).

Finally, for ninth slide on disclosing, she named her mask and showed drawings of some of her heroes and villains, which included a man-bull for the horns and boogie man for the face. She also included a graphite pencil drawing of Mother Teresa.

Figure 6.20 Student B1's disclosing slide

Student B2 missed writing about two questions in the slides regarding describing (mask overall) and the second part of funding (interests in art). She missed one part of a question in slide eight regarding the funding stage as to what her interests were in art, but did provide background information about herself.

For the fourth slide on describing, student B2 gave details of her mask overall and then in terms of the three sections of the mask.

> [Overall] *My artwork is a bright colourful mask. It is based on the idea of being a hero. Some of it's features have been influenced by other heroes and villains.* [Top] *The hair is*

*made of 2 layers. The bottom being composed of long green
spikey hair, and the top smaller blue curved spikey hair.
[Middle] The eyes were made up of 3 levels. The bottom
layers were red and influenced by a villain. The top layer is
the pupils and I have put a hole through so it gives it a
mysterious feeling. The nose is a diamond shape with purple
dots on it. [Bottom] The lips are red, which are closed with
green stripes. My mask's chin is pointy and human like*
(Student B2).

For the fifth slide on analysing and interpreting, she noted six colours and

interpreted these as being bright colours reflecting a happy, fun type of hero.

*Blue, red, yellow, green, orange and purple…The colours mean
that it is a happy, fun hero who is shown through the bright
colours and patterns*
(Student B2).

For the sixth slide on judging, this student judged her own mask. She gave

it the highest rating of five. For the seventh slide being the first part of funding,

this student wrote label information about this mask and named it "Spunky

Monkey". For the eighth slide on the second part of funding, she gave some

background information about herself, but nothing about her interests in art. For

the ninth slide on disclosing, she wrote about what inspired her mask.

*I looked at cartoon characters and how heroes were portrayed. In
class we learnt about Sidney Nolan based on ideas for his
paintings and the Kelly gang. I've based my mask on comic strips*
(Student B3).

Figure 6.21 Student B2's disclosing slide

Student B3 missed writing about one question regarding the second part of the funding stage (interests in art).

For the fourth slide on describing, student B3 described her mask in terms of the top, middle, and bottom, but did not describe her mask overall.

> [Top] *It has large ears and cracks in its head.* [Middle] *It has big bright eyes and a small long nose.* [Bottom] *It has small lips and small chin but overall, it has a big face*
> (Student B3).

For the fifth slide on analysing and interpreting, she noted four colours, which meant that they were frightening and grim.

> *Yellow, light green, dark green, and black...Scary, they are meant to make my artwork look dark and gloomy*
> (Student B3).

For the sixth slide on judging, this student rated her own mask like student B2 did. She gave it four stars. For the seventh slide being the first part of funding, she provided label information about her mask and named it 'villain'. For the eighth slide on the second part of funding, she gave some background information about herself, but nothing about her interests in art. She was able to do most of this because of the questions guiding her in the PowerPoint workbook template and as a result of having viewed the PowerPoint slideshow of Nolan's Ned Kelly paintings. Finally, for ninth slide on disclosing, she did not write anything in these slides, but did write something about her mask for the WA Museum mask competition.

> *We looked at the PowerPoint demonstration of Sidney Nolan's work. His grandfather was a policeman who told Sidney Nolan stories about the Kelly era. We then looked at how masks were used by other cultures in Australia. I made this out of paperclay using a slab over a mould*
> (Student B3).

Figure 6.22 Student B3's disclosing slide

'B' grade summary.

All 'B' grades students missed answering either one or two questions about either describing (mask overall), interpretation (meaning of colours used in mask) and/or the second part of funding (interests in art). For this, they received three 'satisfactory' marks in addressing the AR Outcome.

Unlike the 'A' grade students, all 'B' grade students missed writing one or two answers to questions required in the slides. Student B1 did not interpret the meaning of the colours of her mask or write what interested her about art. Student B2 did not describe her mask overall or write about her interests in art. Student B3 did not write about what interested her in art for the second part of the funding stage.

'C' grade students.

Student C1 missed answering one question regarding background information about herself in the eighth slide (second part of the funding step/stage).

For the fourth slide on describing, she started by writing about her mask overall and then according to the three different sections of the mask.

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[Overall] *My mask has a browny/silver complexion, with brown hair. The artwork has red pupil, lips and tips of the eyebrows. [Top] Brown, Medusa inspired hair. The hair is curling around over and under other bits of hair. [Middle] Brown eyebrows with red tips. Red pupils and a long, strong nose. [Bottom] Bright red lips with an indefinite chin. The skin has a browny/silver complexion*
(Student C1).

For the fifth slide on analysing and interpreting, this student noted four colours that reflected evil, danger, and mixed emotions. Like the 'A' grade students, this student was able to identify and interpret the colours as questions guided her in the PowerPoint workbook template and she had viewed how this could be done in the PowerPoint slideshow of Nolan's Kelly paintings.

Red, black, silver, and brown...Red [means] villainous, devil like and used to stand out. Silver and brown for complexion [so as] to show a mixture of emotions. Black to show anonymity and danger
(Student C1).

For the sixth slide on judging, she rated her own mask with three stars. For the seventh slide on the first part of funding, the student wrote label information about her mask and named it "Mixed Emotions". For the eighth slide of the second part of funding, she then proceeded to talk about her interests in art, but not about herself.

I like art because it is challenging and gives you a new perspective on life (Student C1).

Finally, for the ninth slide on disclosing, she had images of a villain who was found on the WWW and the other image was a photo of her father identified as a hero.

Medusa – Villain, Devil – Villain, and, Dad - Hero (Student C1).

Student C2 missed two questions in the eighth slide (second part of funding and the disclosing step/stage).

Like student C1, student C2 began describing her mask overall and in terms of the three different sections of the mask.

> [Overall] *My mask is shaped like a teardrop, has a large open mouth with pointy white teeth, and [an] eyeball out of its socket, curly looking nose and copper wire hair.* [Top] *The top has copper wire hair, one white eye hanging out of the socket from wire, has only one purple eyebrow on its left eye.* [Middle] *the middle has the mask's nose, which is very curvy and is painted black.* [Bottom] *It has a huge opening mouth with big red lips and white pointy teeth*
> (Student C2).

For the fifth slide on analysing and interpreting, she noted four colours that reflected a villainous mask. That is, she used black for the face of the mask as this was interpreted to be a villain or evil.

> *Red, dark purple, black, and white* (Student C2).
>
> *I tried to use very few colours and I tried to also use dark colours and white to make the things that were painted that colour stand out. I painted the 'skin' of the mask black because it was supposed to be a villain and villains are evil* (Student C2).

Then, for sixth slide on judging, this student rated her own mask. She gave her mask four stars. For the seventh slide being the first part of funding, she wrote label information for her mask and called it "Villain". However, for the eighth slide being the second part of funding, she did not write any information about herself or her interest in art. Likewise, for the ninth slide on disclosing, she did not write anything about what heroes or villains inspired her mask.
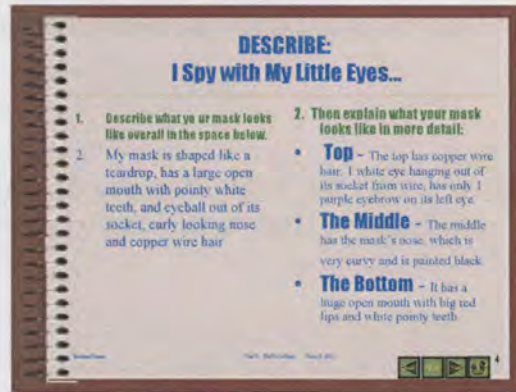
Figure 6.23 Student C2's describing slide

Student C3 missed one question regarding the ninth slide (disclosing). For describing, she mentioned her mask overall and in terms of the three different sections of the mask.

> [Overall] *My artwork has a very bright face and it stands out because of the colours. It has the colours of orange and red in it.* [Top] *it has curly hair that is orang and it also has bright eyebrows that are the same shape as the hair.* [Middle] *It has a red circular nose that stands out.* [Bottom] *It has a very smiley mouth that is orange*
> (Student C3).

For the fifth slide on analysing and interpreting, she noted two colours and interpreted these bright colours to mean that they reflected a hero.

> *Red and orange…It is a hero because they are bright colours*
> (Student C3).

For the sixth slide on judging, this student rated her own mask. She gave her mask the highest rating of five stars. For the seventh slide on the first part of funding, this student provided label information for her mask and named it 'Superman' even though it did not resemble this superhero. For the eighth slide on the second part of funding, she provided background information about herself

and wrote how much she enjoyed art and how much she has improved from the beginning of the term.

> *I enjoy art as I find it interesting and fun. Art is a challenge to me as I'm not very good at it but I'm improving quickly* (Student C3).

Finally, for the ninth slide on disclosing, she wrote that she didn't really have a specific hero or villain. However, this was not true as she had named her mask after the superhero "Superman".
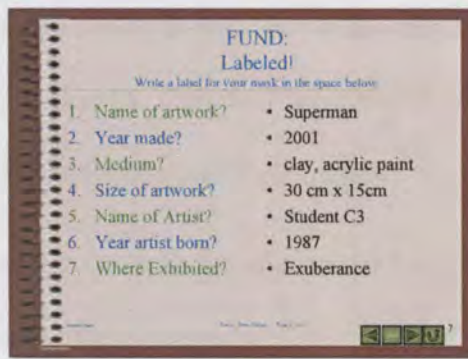
Figure 6.24 Student C3's funding slide

'C' grade summary.

One 'C' grade student (C1) missed one question in the slides while the other two students (C2, C3) missed two questions each in the slides. These questions were on the second part of funding and the disclosing step/stage. For this, they received one 'satisfactory' mark and two 'not done' marks in addressing the AR Outcome.

Arts Responses summary.

The three 'A' grade students answered all questions. The 'B' grade and 'C' grade students missed at least one or two questions each. These questions were

with regard to describing (mask overall), interpreting (meaning of colours used in mask), the second part of funding (interests in art), and the disclosing step/stage (false information provided about the students' hero or villain).

All students (n=9, 100%) described the top, middle, and bottom parts of their paperclay masks. Also, there were eight students (88%) who wrote about their masks overall.

All students (n=9,100%) analysed their paperclay masks in terms of the colours. The 'A' and 'B' grade students used more colours in their masks ('A's used four to seven colours and the 'B's used four to six colours) than the 'C' grade students (two to four colours). This may have been because they were spending more time to paint in details with their masks.

Eight of the nine students (n=8, 88%) interpreted the meaning of the colours, while the other one student wrote that the colours of her mask did not mean anything, which was not true. This resulted in six villains, two heroes (one superhero), and one combination of a hero-villain mask. The 'A' grades students had two villains and one combination villain-hero mask; the 'B' grade students had two villains and one hero masks, and the 'C' grade students had two villains and one hero (superhero) masks.

All nine students (100%) judged their paperclay mask (or someone else's mask).

Eight of the nine students (88%) provided funding information by writing label information and writing about their interest in art.

Seven students (77%) worked on the disclosing step/stage in which they had to mention which heroes or villains inspired their work. Five of these students wrote about the heroes or villains who inspired their artworks while two of these

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students included pictures or drawings only of these heroes and villains. One student (C2) did not address this at all while another student (C3) provided information to the contrary as she said that she was not inspired by any hero or villain for her mask, but then called her mask "Superman".

Arts in Society

For the AS Outcome, the students were required to write a one-page Microsoft Word document worksheet to address the AS Outcome that consisted of historical, cultural, and socio-economic background information. This document was to be based on the hero or villain who inspired their paperclay mask. Furthermore, this was to be a graphically designed exercise.

The students were not provided with any questions or sub-headings ahead of time to guide them in this exercise. However, they had viewed how the AS Outcome was used in the PowerPoint slideshow of Nolan's Ned Kelly paintings in addressing the historical, cultural, and socio-economic backgrounds of the artist and/or paintings. This served as computer scaffolding.

'A' grade students.

Two of the three 'A' grade students (A1, A2) completed this document by the due date. Student A1 began her worksheet by inserting a green border on her Word document and used WordArt to create a heading. She also included two images that she found from the WWW, which were of "The Leader" and "Doctor Doom". Finally she wrote information about theses two characters in a bright green font.

This student described "The Leader" as having been exposed to gamma radiation that led him to believing he was the leader of the world. This meant that

whatever animal he touched, he could control their minds. He nearly caused World War III when he destroyed many famous monuments, landmarks, and vehicles. With "Doctor Doom" this student wrote what his real name was and that he wore an iron mask to hide his scars. This was more of a writing exercise (linguistic intelligence) than addressing any noteworthy historical, cultural, and socio-economic background information about these characters in advance for the AS Outcome.
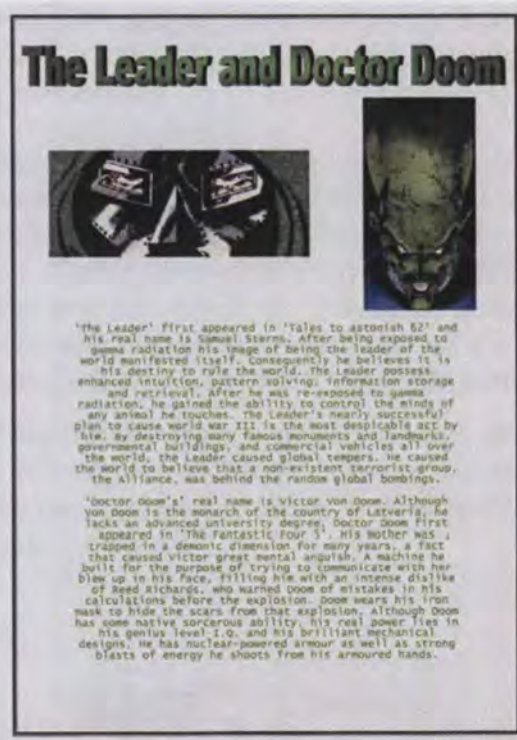
Figure 6.25 Student A1's AS slide

Student A2 completed her worksheet on time with three images (paper collage, Cyclops mask, and student C3's Superman mask). This was a writing exercise (linguistic) rather than addressing the AS background information about these characters. She wrote about her mask and then went on to talk about Cyclops's relationship to student C3's Superman.

Student A2 wrote that her Cyclops mask was like the Cyclops in Greek mythology that had only one eye in the middle of his forehead. She described that

her Cyclops lived in New York and his biggest rival was Superman who were always fighting with each other. This student described Cyclops as having very strong teeth that could bite through locks, window, and doors. Finally, she wrote that Superman believed that Cyclops had been killed by a chainsaw, but he was actually hiding in an underground chamber waiting for the next chance to terminate the world.

> *Cyclops is a creature that has been constructed by a combination of three different villains/images gathered from the Intranet and books. As my villain is a completely new and fictitious character, he must have his own history.*
>
> *Cyclops is an evil villain that lives in a secret underground chamber in the middle of New York. His arch enemy is Superman, shown at the bottom right of the page. The two are always fighting against each other, Cyclops for world destruction and Superman who always tries to stop him. Cyclop[s]'s teeth are strong enough to bite through any locks, windows or doors and his x-ray vision eyes are always on the look out for any trouble that can be done.*
>
> *If you have read Superman's story you will probably think that Cyclops is dead, killed by the chainsaw, but in actual fact he is in hiding in his great underground chamber, waiting for the next chance to terminate the world!*
> (Student A2).

Figure 6.26 Student A2's AS slide

Student A3 did not complete the AS Word worksheet by the due date.

'B' grade students.

None of the three 'B' grade students completed their worksheets by the due date.

'C' grade students.

Two for the three 'C' grade students (students C1 and C3) completed their worksheets by the due date.

Student C1 was one of the 'C' grade students who completed her worksheet by the due date. In my opinion, this was one of the best presentations of all the worksheets that were handed in on time. This worksheet showed a picture of Medusa and behind this image in the background was a wavy shaped green marble band. It also had a WordArt heading, a border, and text in a light green coloured font.

This student wrote about Medusa who was from Greek mythology. She wrote about some of the historical background information about Medusa, but not about the cultural or socio-economic backgrounds. She wrote about Medusa's parents and that she was one of three sisters. Also, that Medusa and the God Poseidon had a son called Pegasus, who was a winged horse. Like her sisters, Medusa was a fierce dragon-like creature covered in gold scales and snake hair. She went on to say that if anyone glanced at Medusa they would turn to stone. However, it was Perseus who eventually killed Medusa by cutting off her head. Altogether, she wrote eight sentences about Medusa that included the following.

> *Perseus, a foolish young man, killed Medusa by cutting off*
> *her head. She had a son, Pegasus, a winged horse, by the*
> *god Poseidon*
> (Student C1).

Medusa

In Greek Mythology, Medusa was one of three Gorgon sisters. She was the only mortal one. She was the daughter of the sea god Phorcys and his wife, Ceto. Her and her sisters were fierce dragon-like creatures, covered with gold scales and had snakes for hair. If they glanced at anyone, the person would turn to stone. They lived on the farthest side of the western ocean. Perseus, a foolish young man, killed Medusa by cutting off her head. She had a son, Pegasus, a winged horse, by the god Poseidon.

Figure 6.27 Student C1's AS slide

Student C2 did not complete the AS Word document by the due date.

Student C3 also completed her worksheet by the due date. She wrote about her superhero "Superman" mask, but this did not resemble Superman as we know of him. Rather the mask resembled an orange colour peanut with a face painted on it. What she wrote was more like a writing exercise (linguistic intelligence) rather than a way of addressing the AS Outcome. She wrote that her "Superman" character lived in New York city.

As mentioned earlier, student C3 wrote her worksheet together with student A2. She compared her mask in relation to student A2's Cyclops mask. This is what student C2 wrote.

Superman is the greatest hero of them all. He is a huge tough super guy. He is so great nobody can beat him. One day while he was out travelling through the forest he

ran into some trouble! Cyclops the most evil, awful villain of all was causing the trouble. Superman came to the scene and the rescue. Cyclops was being cruel and trying to cut down all the trees so the humans would die and the villains would rule the world! Superman soon put a halt to this and chopped Cyclops into many pieces with the chainsaw Cyclops was using! Cyclops died instantly and Superman went on being the greatest super hero of them all. This is the story above has inspired me to do my mask on a hero or superhero. Superman was my superhero! (Student C3).

Figure 6.28 Student C3's AS slide

<u>Arts in Society summary.</u>

There were only four students (A1, A2, C1, C3) who completed the AS worksheets by the due date. Two of these students (A2, C3) worked together on this by writing stories about the relationship between this hero (i.e., superhero Superman) and villain (i.e., Cyclops). The other students were given an extension of time, but were not examined any further in this study.

The Second Component of CLL: Learner

In this section, CLL's learners are a target group of learners (i.e., Year 9 visual arts students) and how they learn, which in this case is examined through their multiple intelligences. There were nine students who had their art portfolios examined for evidence of using their multiple intelligences in either a hands-on or minds-on way. These students represented three 'A', three 'B', and three 'C' grades.

During the term, these students had the opportunity to view the PowerPoint slideshow of Nolan's Ned Kelly paintings. This slideshow included at least nine multiple intelligence slides. Each of these slides focussed on one of the intelligences and demonstrated how it was possible to re-interpret the subject of Ned Kelly according to individual intelligences. For example, the author Peter Carey used his linguistic intelligence to write a book about Ned Kelly while the musical group *Mango Jam* used their musical intelligence to sing ballads about Ned Kelly. How these intelligences appeared to be used for their art portfolios is now discussed further.

Each of these intelligences is now discussed with regard to the 'A', 'B', and 'C' grade students.

Visual-Spatial

The students appeared to have used their visual-spatial intelligence to address all of the WA 4ALO as follows:

This intelligence was utilised with all Outcomes as follows:

    (1)   The students looked at images of heroes and villains on the WWW as well as in books.

(2) The students then looked at some of these images to draw. They created two-dimensional artworks Such as paper collages and pencil drawings.

(3) The students looked at their two-dimensional drawings and translated them into three-dimensional images such as the paperclay masks.

(4) The students used their aesthetic perception to critique artworks and also viewed a PowerPoint slideshow of Nolan's Kelly paintings. They received two 'very high', two 'high', three 'satisfactory' and two 'not done' grades (AR); and

(5) The students used their aesthetic perception to graphically design and present their AS worksheets.

The two arts practice Outcomes (AI, ASP) were used with this intelligence. The following section describes what each of the nine student accomplished with these two Outcomes in relation to the visual-spatial intelligence. For the visual arts theory Outcomes, all the students used this intelligence for the AR Outcome, while only four students used this intelligence for the AS Outcome.

'A' grade students.

All three 'A' grade students appeared to have used their visual-spatial intelligence to address the two visual arts practice Outcomes. For example:

(1) Student A1 found fictitious images from the WWW as well as a photograph of her 'hero' grandfather. This student ended up making a fictitious hero mask.

(2) Student A2 found fictitious images from the WWW and an image of Christopher Skase from a magazine. Her mask ended up being a fictitious villain.

(3) Student A3 found fictitious and "real" images from the WWW that included Dracula and Princess Diana and also looked at images of African masks from books. Her mask appeared to be of a rather friendly hero.

'B' grade students.

Only two of these 'B' grade students used their visual-spatial intelligence to address the AI Outcomes, but all three students used this intelligence to address the ASP Outcome. For example:

(1) Student B1 found fictitious images from the WWW as well as a real hero image of Mother Teresa. She then made a villainous mask.

(2) Student B2 found fictitious hero and villain images from the WWW and a real hero image of a female model in a magazine. Her hero mask had more human characteristics than what the other students had with their masks.

(3) Student B3 did not look at images of heroes and villains on the WWW or elsewhere. However, she ended up making a fictitious villain.

'C' grade students.

Only two of these 'C' grade students appeared to use their visual-spatial intelligence to address the AI Outcomes, but all three students used this intelligence to address the ASP Outcome.

(1) Student C1 found an image on the WWW of Medusa. Likewise, her villainous mask resembled Medusa.

(2) There was no sign that student C2 looked at any images from the WWW, books, or photographs. Nevertheless, her mask showed a fictitious villain.

(3) Student C3 looked at real hero images from the WWW that included Martin Luther King and Madeleine Albright. Her mask was a fictitious super hero called Superman.

Visual-spatial summary.

All nine students (100%) appeared to have used their visual-spatial intelligence to address three Outcomes (AI, ASP, AR). There were between six (66%) and eight students (88%) who addressed the AI Outcome by creating four two-dimensional paper collages and pencil drawing exercises (three 'A' grade,

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two 'B' grade, and two 'C' grade students). All nine students (100%) addressed the ASP and AR Outcome, and only four students (44%) initially attempted to address the AS Outcome with this intelligence.

Bodily-Kinaesthetic

All students (n=9, 100%) appeared to have used their bodily-kinaesthetic intelligence to address all Outcomes in a creative way with the two arts practice Outcomes (AI, ASP) as well as in a mechanical sense to word process documents. For AI, the students used their hands to create four exercises that included paper collages and pencil drawings. For ASP, the students used their hands to create paperclay masks. All students used their hands in a mechanical sense to word process information relating to the AR Outcome. Finally, only four students (44%) used their hands in a mechanical sense to achieve the AS Outcome.

The collages (AI exercise one) and paperclay masks (ASP exercise) are discussed further in this section while the pencil drawings (AI exercises 2, 3, and 4) are discussed further in the following sections entitled 'Interpersonal' and 'Intrapersonal' intelligences.

'A' grade students.

All 'A' grade students appeared to have used their bodily-kinaesthetic intelligence to address the two visual arts practice Outcomes (AI, ASP).

(1) Student A1 made two paper collages. Both collages contributed to her paperclay mask in that she used the same colours as one of the collages and a similar face to the other collage.

(2) Student A2 did the best paper collage in the class. She cut and pasted together five different parts from different fictitious heroes and/or villains to create her collage. Furthermore, this collage looked very much like her final paperclay mask particularly the shape of the mask, the one eye in the forehead, the aggressive looking mouth, and the small ears. Where this mask differed from

her collage was is in the colour in that it was green while the mask was painted purple.

(3)   Student A3 did not assemble a paper collage as the other students had done. Instead, she made a pencil drawing montage of different facial features from various characters. Furthermore, there was only a little resemblance between her drawing collage and her paperclay mask.

'B' grade students.

Two 'B' grade students appeared to have used their bodily-kinaesthetic intelligences to address the AI Outcomes while all three students appeared to use this intelligence to address the ASP Outcomes. For example:

(1)   Student B1 created a rather attractive paper collage that had four parts of fictitious heroes and/or villains. This collage clearly resembled her paperclay mask especially in the shape of the face, the small ears at the top of the head, the big round eyes, the lines on either side of the eyes, and the large mouth with the upper and lower rows of teeth showing.

(2)   Student B2 cut and pasted together seven parts of different fictitious heroes and/or villains for her paper collage. This had some similarities to her completed paperclay mask especially with the shape of the band surrounding the eye area and the repetitive rows of triangles for hair.

(3)   Student B3 did not create a paper collage, but did produce a dark green mask with glow-in-the-dark bright yellow eyes.

'C' grade students.

Only one 'C' grade student appeared to have used the bodily-kinaesthetic intelligence to address the AI Outcomes while all three students appeared to have used this intelligence to address the ASP Outcomes. For example:

(1)   Student C1 did not create any paper collages, but it was evident from the rolled coils of hair on her mask that this was inspired from her WWW image she had of Medusa.

(2)   Student C2 also did not create any paper collages, but she did produced one of the best designed and crafted masks that resembled the artist Edvard Munch's screaming character.

(3) Student C3 cut and pasted together four parts of heroes and/or villains for her collage with the main image being that of Madeleine Albright. This collage did not resemble her paperclay mask nor did it resemble the name that she gave her mask, which was Superman.

Bodily-kinaesthetic summary.

The students used this intelligence to address the Outcomes:

(1) AI Outcome (between n=6, 66% and n=8, 88%);

(2) ASP Outcome (n=9, 100%);

(3) AR Outcome (n=9, 100%); and

(4) AS (n=4, 44% initially and n=9, 100% with an extension of time).

Musical

The students did not demonstrate their musical intelligence in a hands-on manner to address their art portfolios. That is, they did not sing, play a musical instrument, compose, or show any musical appreciation to complement their paperclay mask. However, they did use their musical intelligence in a minds-on manner in terms of rhythm and pattern in the process towards the production of creating their paperclay masks.

Linguistic

Most students (n=7, 77%) used their linguistic intelligence to address the AR Outcomes and four students initially (n=4, 44%) addressed the AS Outcome by the deadline. For this, they wrote a critique following the steps/stages of art criticism in their AR PowerPoint workbook templates as well as working on their AS Word processed worksheets. How each of the nine students addressed this is now discussed.

'A' grade students.

All three 'A' grade students used their linguistic intelligence to address the AR Outcome. However, only two students used this intelligence to address the AS Outcome.

The three 'A' grade students completed all sections of their AR workbooks especially with describing, analysing, interpreting, funding, and disclosing their masks. Some examples of their writings are as follows:

> [Overall] *The mask I have made was created to show the image of a villain. It is a large, oval shaped mask with exaggerated ears, eyes and mouth. It is painted with a combination of dark to light purples*
> (Student A2)
>
> [Middle] *The eyes of the mask are silver and bronze and have a black band across them. I have also used inverted eyebrows. The nose is long and skinny*
> (Student A1).
>
> [Bottom] *The mouth is open showing one single fang. The lips are bow shaped and the chin is quite ordinary*
> (Student A3)

For the AS worksheets, only two students (students A1 and A2) completed this by the due date. Student A1 wrote about two fictitious characters, ("The Leader"' and "Doctor Doom") that inspired her mask. Student A2 wrote about her villain mask called Cyclops and this characters relationship to student C1's superhero mask called Superman.

'B' grade students.

All three 'B' grade students appeared to have used the linguistic intelligences to address the AR Outcome, but none of these students addressed the AS Outcome by the due date.

Most of the information they wrote was regarding describing, analysing, interpreting, funding, and disclosing. This was less detailed than what the 'A' grade students had accomplished. Some examples of their writings are as follows:

> [Top] *Top has horns with an earring*
> (Student B1).

> [Middle] *It has bright eyes and a small long nose*
> (Student B3).

> [Bottom] *The lips are red, which are closed with green stripes.*
> *My mask's chin is pointy and human like*
> (Student B2).

'C' grade students.

All three 'C' grade students appeared to have used their linguistic intelligence to address the AR Outcome while only two students used this intelligence to address the AS Outcome.

The students varied in how much they wrote in these AR PowerPoint workbook templates. Student C1 wrote considerably well overall. Student C2 also wrote well for the describing, analysing and interpreting slides, but wrote very little for the funding slide and nothing at all for the disclosing slide. Student C3 wrote about as much as the 'B' grade students did, but wrote more for the funding stage and considerably less for the disclosing stage. Examples of what the students wrote include the following:

> [Top] *Brown, Medusa inspired hair. The hair is curling*
> *around over and under other bits of hair*
> (Student C1).

> [Middle] *The middle has the mask's nose, which is very curvy*
> *and is painted black*
> (Student C2).

[Bottom] *It has a very smiley mouth that is orange* (Student C3).

For the AS worksheets, students C1 and C3 both completed their AS worksheets. Student C1 focused on her mask, the source for which was Medusa. This student created a graphically designed page and inserted an image of Medusa in it. She also wrote some historical background information about her. Student C3 wrote about her hero mask, which she called Superman. She wrote about Superman in relation to student A2's villainous mask called Cyclops.

Linguistic Summary.

The students used their linguistic intelligence to address the two visual arts theory Outcomes (AR, AS). That is, seven students addressed the AR Outcome while there were only four students who initially addressed the AS Outcome by the deadline.

It appeared that most students were able to write the first few art criticism steps or stages in the AR PowerPoint workbook templates. However, it was much harder for two 'C' grade students to write the funding and disclosing stages of art criticism.

It also seemed that the four students who worked on the AS worksheet preferred to write on either cartoon like characters (such as 'The Leader', 'Dr. Doom, and Superman) or Greek mythological characters (such as Cyclops and Medusa), rather than any real human being heroes or villains.

Logical-Mathematical

There was no real hands-on evidence to show that the students used their logical-mathematical intelligence for their art portfolios. However, they did use

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this intelligence in a minds-on way in terms of problem solving that resulted in the solution being the production of their paperclay masks.

Interpersonal

The students used their interpersonal intelligence to address the two visual arts practice Outcomes (AI, ASP) and one visual arts theory Outcome (AS). Six students (66%) exercised their knowledge with this intelligence to meet the AI Outcome while four students initially (44%) exercised their knowledge with this intelligence by the deadline to meet the AS Outcome while other students completed this with an extension of time. For this, they researched information via the WWW and books about heroes and villains, which they then re-interpreted into paper collages and also wrote about a hero or villain who inspired their mask. For this the nine students receive one 'very high', three 'high', and five 'satisfactory' marks. What each of the nine students did with this intelligence in relation to the Outcomes is now discussed.

'A' grade students.

All three 'A' grade students appeared to have used their interpersonal intelligences to address the visual arts practice Outcomes (AI, AS) and one visual arts theory Outcome (AS).

For example, the three 'A' grade students researched information from the WWW and other sources (books, magazines, and photographs) for human beings and/or fictitious heroes and villains. All three students found fictitious characters on the WWW (e.g., Dracula), while one of these students found a real hero character of Princess Diana. From other sources such as magazines, one student found a villainous image of Christopher Skase. From a book another student

found an African image. From a photograph the third student found a hero image of her grandfather.

In the end, all three 'A' grade students created fictitious masks. The student who had found a heroic image of Princess Diana and Dracula made a heroic mask. The other student, who had a villainous image of Christopher Skase, also made a villainous mask. The student who had an image of her grandfather made villainous mask.

For the AS Outcome in relation to the interpersonal intelligence, Students A1 wrote on a fictitious character called "The Leader" and "Doctor Doom" while student A2 wrote on a superhero called "Superman".

<u>'B' grade students.</u>

Although only two 'B' grade students appeared to have used the interpersonal intelligences to address the AI Outcome, all three students appeared to have used this intelligence to address the ASP Outcome. None of the 'B' students addressed the AS Outcome.

Overall, two students looked at the WWW for real or fictitious hero or villain characters. The first student looked only at fictitious characters on the WWW, but also looked in a magazine for a hero character of a young female model. On the other hand, the other student looked at both real and fictitious characters on the WWW, of which the hero image was of Mother Teresa.

In the end, the three students created fictitious masks. However, the student who looked at fictitious and real heroes and villains on the WWW created a mask that was a villain. The other student who looked at an image of a female model

created a hero mask. Finally, the third student who did not look at the WWW or any other sources created a villainous mask.

'C' grade students.

Two 'C' grade students appeared to have used the interpersonal intelligences to address the AI Outcome while all three students used this intelligence to address the ASP Outcome. Two students used this intelligence to address the AS Outcome.

All in all, two students used the WWW only to find hero and villain images. One of these students looked at fictitious characters of Medusa on the WWW, while the other student looked at real characters. The third student did not look at the WWW at all.

In the end, these 'C' grade students made fictitious characters like the other 'A' and 'B' grade students. The student, who found the real images of heroes on the WWW such as Martin Luther King and Madeleine Albright, made a super-hero Superman mask, while the other two students made villainous masks. Of these villainous masks, one was inspired directly from an image of Medusa from the WWW, while the other mask looked like it was inspired by another artist's (Edvard Munch) screaming character.

For the AS Outcome, student C1 wrote on a Greek mythological character called Medusa while student C3 wrote on a superhero called Superman.

Interpersonal summary.

All nine students (100%) appeared to have had used their interpersonal intelligence to address the two visual arts practice Outcomes (AI, ASP) and one visual arts theory Outcome (AS). That is, seven students addressed the AI

Outcome (three 'A' grade, two 'B' grade, and two 'C' grade students); all nine

students (100%) addressed the ASP Outcome; and four students (44%) addressed

the AS Outcome (two 'A' and two 'C' grade students).

Intrapersonal

With this intelligence, the students created a two-dimensional graphite

pencil self-portrait of themselves (AI exercise 3), which they could portray as a

hero or villain if they wished to. To assist them with this, the students were given

a handout on how to draw correct facial proportions and to transfer some of this

learning to their masks if the students felt it was appropriate.

What each student did for this is now discussed.

'A' grade students.

(1) Student A1's self-portrait was a mirror image of herself. It had a similar shaped face to her own face shape and her hair was shown to be tied back in a ponytail as she usually wore it. This was a contour line drawing that needed some shading around the eyes and nose to give it greater depth.

(2) Student A2 had the finest self-portrait in the class. It was the most realistic looking drawing and was a good resemblance to her. Unlike most of the other self-portraits that were drawn upright and rather stiff looking, this self-portrait was depicted on an angle and outlined in a soft pencil line especially around the chin. She had shading on her face particularly between the nose and eyes to show depth and also around the back area of the cheeks so that the cheekbones advanced forward. The eyes and the lips were more realistic than the two other students in this category. The hair was free flowing and not outlined with a heavily drawn line. The face had depth especially around the eyes.

(3) Student A3 also created a self-portrait that resembled her. This self-portrait showed that she had the same shaped face as her own with long hair that was completely shaded in to show that she had dark hair. However, although the whole face was shaded there was little contrast to give it a much stronger definition and depth. Furthermore, this face was facing directly at the viewer. Although this student made a good attempt at drawing her eyes, they were rather unrealistic looking and glaring eyes while the lips were heavily outlined. Finally, the face was softly shaded all over, but

not in a way that showed depth in the face like what student A2 had done. However, student A3 did several other drawings throughout the term, which included a sketch of Dracula. This showed an incredible amount of progress and development with her drawing over the term. This Dracula drawing showed good use of light and dark shading on Dracula's face, which gave this face a three-dimensional look while the eyes were much more realistic than in her self-portrait.

'B' grade students.

(1)   Student B1 did not spend much time on her self-portrait as the 'A' grade students. She created a rather flat looking oval shaped face with a few lines scribbled in for her hair. The eyes were far too large in proportion to the rest of the face and were shaded too dark, stood out too much in relation to the rest of the face, and had the full circle of the pupils showing. On the other hand, the neck was too small in relation to the rest of the face as the lines on either side of neck began at the chin. All the lines were sketched very quickly.

(2)   Student B2 had a much more carefully drawn self-portrait than what student B1 had achieved. She made a well-proportioned self-portrait that was on a slant and had a fairly good resemblance to her. The eyes and eyebrows were drawn much darker than usually, but she managed to make these a focal point rather than a distraction. Furthermore, this student drew two curved lines to show the cheeks together with some soft shading. This gave her face depth and a three-dimensional look.

(3)   Student B3 did not draw her self-portrait.

'C' grade students.

(1)   Student C1 did not draw a self-portrait;

(2)   Student C2 did not draw a self-portrait; and

(3)   Student C3 made a rather stiff-looking self-portrait that had a heavily outlined shape, but no shading to the face or hair. Nevertheless, it still resembled her in how she parted her hair as well as the general shape of her face. The lips were too small and out of proportion to the rest of the face. However, there was also another pencil self-portrait called the 'villain in me'. This was the only self-portrait in which the student indicated that she had made a self-portrait of herself as a hero or villain. However, this self-portrait showed no further signs that she had developed her drawing skills over the term.

Intrapersonal summary.

Only six students (n=6, 66%) used their intrapersonal intelligence to complete their self-portraits (AI exercise 3) as part of the AI Outcome. These six students consisted of three 'A' grade, two 'B' grade, and one 'C' grade students. All nine students received one 'very high', three 'high', and five 'satisfactory' marks.

(1) All the 'A' grade students made their self-portraits that had a strong resemblance to themselves;

(2) The two 'B' grade students also made their self-portraits, but they were less developed than the 'A' grade students in that they did not resemble these students as much and were rather flat, two-dimensional drawings; and

(3) One 'C' grade student who created her self-portrait with a resemblance to herself, but this portrait looked like it had been hastily done in a short amount of time compared to the other students' self-portraits. However, this was the only student who indicated that this was a self-portrait of herself as a villain.

Naturalistic

All students (n=9, 100%) appeared to have used their naturalistic intelligence to address the two visual arts practice Outcomes (AI, ASP). For AI, the students identified and classified real and/or fictitious characters as heroes and/or villains. There grades for the AI Outcome was one 'very high', three 'high', and five 'satisfactory' marks.

For ASP, the students also created and classified their paperclay masks as heroes or villains, which totalled two heroes, six villains and one combination hero-villain mask. The students' grades for the ASP Outcome were five 'very high' and four 'high' grades.

Existential

All students used their existential intelligence by producing a hero and/or villain mask. Also, they used this intelligence to gain a spiritual understanding and/or aesthetic experience about Nolan's Kelly paintings. Likewise, this existential intelligence was catered for in the theme for this visual arts education lessons being 'Heroes and Villains". For this, the students researched heroes and villains. They also created two-dimensional collages (AI exercise 1) and drawings and three-dimensional heroes and/or villains paperclay masks (ASP exercise). Then they critiqued their hero or villain mask.

The Third Component of CLL: Tool

In this case the CLL's tool is computer technology and was examined in relation to the nine students' art portfolios. These students' art portfolios were studied to see what computer technology was used in learning. The results showed that there were three main computer tools used (WWW, PowerPoint Slideshows, and Word) and two types of auxiliary equipment (a colour printer/photocopier, digital cameras) that was used with the assistance of the teacher and researcher.

The following is organised into headings according to these five different computer tools being WWW, PowerPoint Slideshows, Word Documents, Auxiliary Equipment: Digital Camera, and Auxiliary Equipment: Colour Photocopier/Printer. These are now discussed in relation to the 'A', 'B', and 'C' grade students.

WWW

Only the six 'A' and 'B' grade students used the WWW to address the AI Outcome. They searched for images and information about real or fictitious heroes and villains. Of these students, one student searched for human beings (Madeleine Albright and Martin Luther King. Three students chose fictitious characters only (comic characters and superheroes). Two students chose real and fictitious characters (Mother Theresa, Princess Diana, a grandfather, a father, Dracula, and the Boogie man). One student chose a character from Greek mythology (Medusa). Finally, two students did not show any sign of using the WWW in their art portfolios at all.

PowerPoint Slideshows

All nine students were able to use a PowerPoint slideshow template that acted as their AR workbooks. In this, they critiqued their paperclay masks with the aid of computer scaffolding. In these workbooks was a series of slides that coincided with Feldman's (1970) four step/stages (describing, analysing, interpreting, and judging) and Ott's (1989) five steps or stages of art criticism (describing, analysing, interpreting, funding, and disclosing).

The students critiqued their masks according to the instructions provided on each slide. For example, in the describing slide, the students were instructed to critique their mask overall and in terms of the top, middle, and bottom parts of their masks. Along with their written responses, they were also asked to insert an image of their completed masks.

The 'A' grade students succeeded in writing answers for each of the six stages/steps of art criticism. The 'B' and 'C' grade students all missed one or two questions relating to these six step/stages.

Word Documents

The students worked on the AS Word worksheets to address the AS Outcome. Only four students (44%) (A1, A2, C1, C3) initially completed the AS worksheet on time. Unlike the AR workbook in which students were provided instructions as to what they were required to do with each PowerPoint slide, this time they were not guided step by step and to what they were required to write. Therefore, the students were left to their own creative endeavours to do this and so it became more of a story and graphic design exercise. For this, the four students basically wrote a story about a hero or villain, but did not address the

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historical, cultural, and socio-economic backgrounds of their hero or villain who had inspired their mask. In some cases, this was quite difficult as most students used fictitious characters. However, for the graphic design of their Word document, the students excelled in this area. They used WordArt headings, coloured borders, inserted hero or villain images, and wrote in coloured font and font sizes about one of the heroes or villains who contributed to their mask.

Auxiliary Equipment: Digital Camera

The visual arts teacher and researcher assisted all the students to photograph their collages, masks, and a picture of themselves. The photographs were taken with a digital camera and then these images were downloaded onto a computer. All the students were then given copies of their images, which they used for their AR PowerPoint workbooks and their AS Word worksheets.

Auxiliary Equipment: Colour Printer/photocopier.

All the students used the colour printer/photocopier at least once during the term. The students used the colour printer/photocopier to print out images of heroes and villains so as to re-assemble them into paper collages in achieving the AI Outcome. They also used the colour printer/photocopier to print out a copy of their PowerPoint AR workbooks and for the AS Word worksheets.

Summary of CLL's tool.

The students were able to use computers without any major difficulties. They all used the WWW and PowerPoint slideshow. However, only four students used the Word documents to achieve the AS Outcome due to a rather short term, which left little extra time for teacher or computer scaffolding. There were also

two types of computer-related auxiliary equipment (digital camera and colour printer/photocopier) that the students used during the term. The students had access to a digital camera with assistance provided from their visual arts teacher and from the researcher of this study. All the students were able to use the printer/copier that was linked to their computer and experienced no difficulties with this at all.

Towards the research questions – Arts Ideas – CLL's Subject.

The AI Outcome is now discussed to examine how it contributed towards answering three research questions (effect, skills, knowledge).

First, it appeared that the AI Outcome had an effect on students in meeting as was evident in their art portfolios in terms of the development of skills and knowledge in this area.

Second, that the students were able to use and develop three skills (creative, computer, multiple intelligences) to create four two-dimensional exercises (collages, pencil drawings, self-portrait, and blueprint) that led to the creation of a paperclay mask. These three skills were:

(1) Creative skills (AI Exercise one - collages: 55% students;
     AI Exercise two – pencil drawings: 66% of students; AI Exercise
     three – self-portrait: 66% of students; and AI Exercise four -
     blueprint: 44% of students);

(2) Computer skills with the WWW: (55% of students); and

(3) Multiple Intelligence skills – nine intelligences (all students,
     especially those who completed the four AI exercises).

Please note that the four two-dimensional exercises were examined under the AI Outcome, whereas the three-dimensional art works (i.e., the paperclay masks) were examined under the ASP Outcome.

Third, that the majority of the students had exercised their knowledge and had enhanced learning with the AI Outcome as demonstrated in their art portfolios and grades. They were able to initiate and develop, interpret, create and present ideas leading to the creation of their hero or villain paperclay mask. All students passed with this Outcome as reflected in their AI grades:

(1) One ' very high' mark (one 'A' grade student);

(2) Three 'high' marks (two 'A' grade and one 'B' grade student); and

(3) Five 'satisfactory' marks (two 'B' grade and three 'C' grade students).

Towards the research questions - Arts Skills and Process – CLL's Subject.

The students' art portfolios showed that all students (n=9,100%) were able to develop two types of skills (creative and multiple intelligent) in making their paperclay masks. It was possible for all students (n=9, 100%) to use both types of skills with the addition of teacher scaffolding, which was conducted in the art studio prior to any learning of new art skills for the paperclay masks. They learnt to make the following: (1) a mould for their mask; (2) shape the clay over the mask; (3) roll the clay; (4) score the clay; (5) bisque fire the clay; (6) mix colours to paint the mask; (7) paint the mask; and (8) exhibit the masks.

Third, it appeared that all students had exercised their knowledge and had enhanced learning with this Outcome as all students passed this as reflected in their ASP grades:

(1) Five 'very high' marks (all the 'A' grade and two 'B' students); and

(2) Four 'high' marks (one 'B' and three 'C' students).

Towards the research questions – Arts Responses– CLL's Subject.

The students' art portfolios showed that all students (n=9, 100%) used three types of skills (computer, critical, multiple intelligences). This was possible mainly because the students had computer scaffolding. All students (n=9, 100%) used their computer skills to critique their paperclay masks on a PowerPoint slideshow designed especially for this purpose. The number of students who used their critical skills is as follows: (1) describing, analysing, and judging (n=9 each, 100%); (2) interpreting (n=8, 88%); (3) funding (Part A, n=9, 100% and Part B, n= 6, 66%); and (4) disclosing (n=7, 77%).

Most students (n=7, 77%) exercised their knowledge and had enhanced learning in critiquing their masks. Seven out of nine students passed the AR Outcome as their grades showed:

(1) Two 'very high' marks (two 'A' grade students);

(2) One 'high' mark (an 'A' grade student);

(3) Four 'satisfactory' marks (three 'A' grade students and one 'C' grade student); and

(4) Two 'not done' marks (two 'C' grade students).

Towards the research questions - Arts in Society - CLL's Subject.

Students had the opportunity to develop four types of skills (computer, multiple intelligence, background research, and graphic design) in writing a one page Word document about a hero or villain who inspired their paperclay mask. However, they developed three skills (computer, multiple intelligence, graphic design), but not the background skills of the AS Outcome. Initially only four students (n=4, 44%) used these three skills (computer, multiple intelligent, and graphic design), while only one of these four students (C1) developed her historic

background skills about Medusa. No students developed the other two parts of the background skills (cultural and socio-economic) relating to this Outcome. Most students had difficulty finishing due to a lack of time due to a rather short term. This and no computer or teacher scaffolding resulted in a story writing exercise and graphic design exercise. Of the four students who completed on time, two students worked together on this and wrote a story about the relationships of their opposing characters of which one was a super hero (Superman) and the other was a villain (Cyclops).

No students had sufficiently exercised their knowledge with regard to this Outcome. Only four students (44%) initially had exercised their knowledge to do with their computer and graphic design skills more so than exercising knowledge related to the background skills of the AS Outcome. However, the grades reflect an extension of time. Therefore, all students passed as their final grades reflect:

(1) Three 'very high' marks (all 'A' grade students);

(2) Four 'high' marks (two 'B' and two 'C' grade students).; and

(3) Two 'satisfactory' marks (one 'B' and one 'C' grade students).

Towards the research questions – Multiple Intelligences - CLL's learner.

Students used all their multiple intelligent skills. That is, seven intelligences in a hands-on manner (visual-spatial, bodily-kinaesthetics, linguistics, interpersonal, intrapersonal, naturalistic, existential) and two intelligences in a minds-on manner (musical, logical-mathematical). Where they had the most difficulty was with the linguistic intelligence in terms of the three background skills of the AS Outcome. The students were able to write very good stories about the heroes and villains who inspired their paperclay masks, but they did not write

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relate this to the historical, cultural, and socio-economic way except in one case where student C3 provided some historical background information on Medusa.

Students had exercised their knowledge and had enhanced learning over the term with all these intelligences even if the linguistic intelligence did not address the three background criteria of the AS Outcome.

Towards the research questions – Computers - CLL's tool.

The use of computers in the art portfolios is now discussed in terms of three research questions (effect, skills, knowledge).

Computer technology had an effect on students for their visual arts education in terms of skills and knowledge.

All students developed the computer skills (WWW, PowerPoint slideshows, Word) and auxiliary equipment (digital camera, colour photocopier/printer) that were required for this course.

It appeared that the students had exercised their knowledge and had enhanced learning with computers.

Towards the research questions – Overall CLL – Art portfolios.

The students had the opportunity to develop and use six types of skills overall for CLL (creative, critical, computer, multiple intelligent, background, and graphic design). For CLL's subject, the students used all six skills, but did not master the background skills for the AS Outcome. For CLL's learner they used all nine multiple intelligent skills in a hands-on (visual-spatial, bodily-kinaesthetics, linguistics, interpersonal, intrapersonal, naturalistic, and existential) and minds-on way (musical and logical-mathematical). Finally, for CLL's tool they used their

computer skills consisting of three types (WWW, PowerPoint slideshows, Word) and two types of auxiliary equipment related to computers (digital camera, colour printer/photocopier).

For sub-question 1.3 (knowledge), it appeared that the students had exercised their knowledge with CLL's subject relating to the first three Outcomes (AI, ASP, and AR), but not with the fourth Outcome (AS). They also had exercised their knowledge with CLL's learner and tool.

Summary of Art Portfolios

Chapter Six provided nine students' results from their of the art portfolios. These sought answers towards the primary research question 1.0 (effect) through sub-question 1.3 (knowledge).

The art portfolios findings are summarised as follows:

(1)   CLL's subject (AI – effect, knowledge): Five (55%) of nine students completed the four AI exercises. AI had an effect on students as they had exercised their knowledge and enhanced learning in this area;

(2)   CLL's subject (ASP - effect, knowledge): All nine students (100%) completed the paperclay mask. ASP had an effect on students as they had exercised their knowledge and enhanced learning in this area;

(3)   CLL's subject (AR - effect, knowledge): All 'A' grade students answered all the questions for the Outcome while the 'B' and 'C' grade students missed at least one or two questions. Therefore, AR had an effect on students as they had exercised their knowledge and enhanced learning in this area;

(4)   CLL's subject (AS - effect, knowledge): Four students (44%) (A1, A2, C1, C3), completed the AS Word document, but did not achieve this Outcome as they did not master the background skills. Only one student (C3) answered a question regarding the historical background of Medusa. Therefore, AS did not have an effect on students as they did not exercise their knowledge sufficiently in this area;

(5)   CLL's learner (MI - effect, knowledge): The students used all nine intelligences in a hands-on or minds-on manner. In terms of using this intelligence in a hands-on manner, all students used six intelligences (visual-spatial, bodily-kinaesthetics, linguistic, interpersonal, naturalistic, and existential) while six students used their intrapersonal intelligence. In terms of a minds-on manner, all

students used the other two intelligences (musical and logical-mathematical). Therefore, the multiple intelligences had an effect on students as they exercised their knowledge in this area; and

(6)   CLL's tool (computers – effect, knowledge): Students used three types of computer skills (WWW, PowerPoint, Word) and two types of auxiliary equipment (colour photocopier/printer, digital camera). Five students (55%) used computer skills for the AI exercises. All students (100%) used their computer/auxiliary skills for ASP. Four students (44%) used computer (Word) and auxiliary skills for AS by the due date. Therefore, computers had an effect on students as they exercised their knowledge in relation to three Outcomes, but not with the AS Outcome.

CHAPTER SEVEN

Discussions, Recommendations, and Conclusions

Answering the Research Questions

In this chapter, the primary research question and four sub-questions are answered. These questions are the following:

1.0 What was the effect of CLL on students;

1.1 What were students' attitudes towards CLL;

1.2 What skills did students require for CLL;

1.3 What knowledge did students exercise with CLL; and

1.4 What were students' preferences for learning with CLL?

In seeking to answer these questions, data from questionnaires, interviews, and art portfolios were summarised at the end of Chapters Four, Five, and Six. These summaries are now used to answer the research questions.

Sub-Question 1.1: Student Attitudes

Sub-Question 1.1: What were students' attitudes towards CLL?

Students' attitudes towards the three components of CLL (subject, learner, tool) was sought to be answered from information collected from pre- and post-questionnaires and pre- and post-interviews.

Questionnaires.

The questionnaires showed students' attitudes towards the three components of CLL. For CLL's subject, it appeared that the students had positive attitudes towards the three Outcomes (AI, ASP, AR) and a negative attitude towards one visual arts theory Outcome (AS).

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With CLL's learner, the students had a positive attitude towards two intelligences (visual-spatial, bodily-kinaesthetic; they had a neutral attitude towards three intelligences (musical, intrapersonal, naturalistic); and, they had a negative attitude towards the remaining four intelligences (linguistics, logical-mathematical, interpersonal, existential).

For CLL's tool (computers), the students had a positive attitude towards computers for their visual arts education.

Interviews.

The interviews showed students' attitudes to two components of CLL (subject, tool). For CLL's subject, the students had both positive and negative attitudes about learning visual arts theory with computers. That is, they had provided three positive statements (a good way of learning, interesting, hands-on) and three negative statements (boredom, time consuming, information overload).

For CLL's tool, the students had mostly a positive attitude towards computers (comparisons, convenience and performance) and one negative attitude towards computers and that was with regard to performance (technical difficulties). The interviews showed that students had positive attitude towards computers as compared to books, teacher-centered learning of visual arts theory, and hand written/hard copy worksheets. Furthermore, the students had both a positive and negative attitude towards looking at real artworks as compared to viewing artworks on computers. As well, they had a positive attitude about how convenient computers were in terms of ease, speed, own pace, and access. Finally, with performance, they had a positive attitude towards content and a negative attitude towards technical difficulties regarding computers.

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Discussion.

There were two key findings from this question. The first key finding was about the visual arts theory Outcomes and computers, while the second key finding was about the multiple intelligences. For the first key finding, the results showed that students still basically prefer to learn about the arts practice Outcomes than with the arts theory Outcomes. This was very much in line with what Paris (1999) discovered in her research regarding student attitudes towards visual arts theory.

However, the results also showed that students preferred to learn the arts theory Outcomes with computers rather than without computers. Supporting this was data that showed a shift in students' attitudes towards the positive with visual arts theory (especially AR) when they were taught with computers.

The reasons for this shift in attitude towards visual arts theory (especially AR) can be attributed to computers. It appears that with computers visual arts theory shift to being student-centered learning and as the students themselves noted, computers are convenient because it is easy to use, it is faster to use, you can work at your own pace and computers are available everywhere such as at school, home, and in the community. Matthews (1988) also recognised that one of the benefits of using computers was ease of use. The ten good reasons for using computers for using computers for visual arts education are ease of use, versatility, relevance, interest, status, collaboration, Internet, creative tool, experimental medium, and key to commercial employment. To this list, we can add D'Angelo's (1988) three good reasons for using computers for visual arts education, which are versatility, simplicity, graphic capabilities.

The benefits for using computers for visual art theory are many. This justifies why computers are an essential learning tool for achieving visual arts theory Outcomes.

The second key finding was with regard to the multiple intelligences. What I noticed with three of these intelligences (visual-spatial, bodily-kinaesthetics, musical) is that each one corresponds to one of the five senses and to either the iconic or enactive modes of learning (Bruner, 1975) as follows:

(1) The visual-spatial intelligence related to the sense of sight and the iconic mode of learning;

(2) The bodily-kinaesthetic intelligence related to the sense of touch and to the enactive mode of learning; and

(3) The musical intelligence related to the sense of sound and the enactive mode of learning.

One of the reasons why students may have had a negative or neutral attitude towards the other six intelligences may have been because essentially, these intelligences are non-sensory and reflect Bruner's (1975) third mode of learning (symbolic mode).

Nevertheless, many of the multiple intelligence slides from the Sidney Nolan's interpretation of Ned Kelly PowerPoint slideshow demonstrated that it was possible for students to exercise their knowledge with any of these intelligences that are non-sensory and symbolic provided that they are linked to any of the other three intelligences that are sensory and enactive and/or iconic modes of learning (visual arts, bodily-kinaesthetic, musical). For example, many students remembered the logical-mathematical slide because this intelligence was linked with the visual-spatial and bodily-kinaesthetic intelligences, which are sensory and reflect the iconic and enactive modes of learning.

Sub-Question 1.2: Student Skills

Sub-Questions 1.2: What skills did students require for CLL?

Sub-question 1.2 regarding what skills did students require for the three components of CLL (subject, learner, tool) was sought to be answered from information collected from the art portfolios only.

Art portfolios.

The art portfolios showed that the students required six types of skills to work within this CLL framework: (1) creative; (2) critical; (3) computer; (4) multiple intelligence; (5) background research (historical, cultural, socio-economic); and (6) graphic design. However, the students mastered five out of these six skills. They did not have proficiency with the background research skills relating to the AS Outcome.

Discussion.

There were two key findings with regard to sub-question 1.2 (skills) that related to the background research skills (AS) and the multiple intelligences. The first key finding indicated that it was not an easy task for students to master the background research skills that required them to be highly proficient with their linguistic intelligence. This intelligence just happens to be one of the intelligences that the students have a negative attitude of as well as it being non-sensory and a reflection of Bruner's (1975) symbolic mode of learning. However, the questionnaires revealed a different story. That is, when this intelligence was viewed as a subject (i.e., English), the students wanted to use this subject together with their visual arts education.

This shows that what students say and what they are capable of doing is not always compatible with each other. However, it appears that too much may be expected of Year 9 students in terms of their linguistic intelligence with regard to the background research skills. For these students, it would be more educative for them if they began with more concrete exercises and then progressed to more complex and independent tasks as they advanced to Year 12. These background research skills may be guided by Bruner's spiral curriculum (Bruner cited in Ching, 2000) and Shuell's (1988) four aspect of constructive learning being action, construction, cumulative and goal-oriented. Also these background research skills required working within students' Zone of Proximal Development (Vygotsky, 1978) and also depended on whether they had scaffolding (Vygotsky, 1978) with their visual art teacher and with computers as well.

These results also showed that students did not master skills to do with AS Outcome, but did master skills to do with AR Outcome. This is because students were computer scaffolded with the Arts Response Outcome, but not with the AS Outcome. So even though the students had a negative attitude about critiquing artworks, they mastered these critical skills (six steps/stages of art criticism) and were able to exercise their knowledge in this area.

The second key finding related to the multiple intelligences. Students' art portfolios showed that they were actively utilising seven skills to do with the multiple intelligences (visual-spatial, bodily-kinaesthetic, linguistic, interpersonal, intrapersonal, naturalistic, and existential intelligences) in a hands-on way and the other two intelligences (musical, logical-mathematical) in a minds-on way.

These seven intelligences are the same intelligences that in the interviews the students said were used frequently in visual arts education.

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Although, Gardner (1995) stated that it was not mandatory to use all of the intelligences with particular subjects, I found it beneficial for students to explicitly use as many intelligences as it was possible to do. Furthermore, the students were also shown and how they could use uni-intelligences and combinations of multi- intelligences for learning in visual arts practice and theory.

Sub-Questions 1.3: Student Knowledge

Sub-question 1.3: What knowledge did students exercise with CLL?

Sub-question 1.3 was about what knowledge did students exercise with the three components of CLL (subject, learner, tool). This was sought to be answered through the interviews and art portfolios.

Interviews.

The interviews sought answers to whether students exercised their knowledge with two components of CLL being subject and learner. In terms of CLL's subject, the results showed that the students had exercised their knowledge and had enhanced learning of one visual arts practice Outcome (ASP) and one visual arts theory Outcome (AR); one of the three criteria of the AS Outcome (historical). On the other hand, the students did not exercise their knowledge of the AI Outcome or two criteria of the AS Outcome (cultural, socio-economic).

In terms of the interviews and CLL's learner, the students exercised their knowledge with seven intelligences (visual-spatial, bodily-kinaesthetic, musical, logical-mathematical, interpersonal, naturalist, and existential) in the post-interview regarding the PowerPoint slideshow of Nolan's Kelly paintings. They did not exercise their knowledge with the two intelligences (linguistics, intrapersonal) by the post-interviews.

Art portfolios.

The art portfolios sought answers to knowledge of CLL (subject, learner, tools). In terms of the art portfolios and CLL's subject, the results revealed that students had exercised their knowledge of the two visual arts practice Outcomes

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(AI, ASP) and one visual arts theory Outcome (AR), but not the other theory Outcome (AS). In terms of CLL's learner, the art portfolios showed that the students had exercised their knowledge with all the intelligences. In terms of CLL's tool, the results showed that students had exercised their knowledge with computers.

Discussion.

There were two key findings that came out of sub-question 1.3 (knowledge) with regard to CLL's subject (AS) and CLL's learner (linguistics, intrapersonal).

For the first key finding about CLL's subject, the students exercised the least knowledge with the AS Outcome.

However, I believe that it is possible for students to be able to exercise their knowledge with the AS Outcome if at least two changes occur. First, that only the historical background be taught to Year 9 students. The cultural background could be introduced in Year 10 while the socio-economic backgrounds in Years 11 and 12. Secondly, AS Outcome could be taught with computer scaffolding. The AR Outcomes was taught in this way (i.e., via the PowerPoint slideshow AR workbook/template).

However, it is not sufficient to provide students with visual arts theory lessons via computers that are presented exactly like books or other forms of learning. This form of learning requires students to have great strengths with a single intelligence such as linguistic intelligence, of which these students had a negative attitude of and did not exercise their knowledge sufficiently with the linguistic slide in Nolan's Kelly PowerPoint slideshow.

The PowerPoint slide of the historical background needs to be designed with the addition of other favourable intelligences that will assist students to exercise their knowledge and achieve the AS Outcome. These intelligences include visual-spatial, bodily-kinaesthetic, and musical intelligences as they reflect the senses and have iconic and/or enactive modes of learning.

Furthermore, designing educational computer programs may be guided by what others have discovered in their research as follows:

(1) avoiding three design obstacles being the superficial complexity, passivity, and fantasy traps (Squires, 1996, pp. 10-17);

(2) three characteristics of learning with computers being participation in groups, frequent interaction and feedback, and connection to real-world context (Roshelle et al, 2000, p.76);

(3) six elements of scannable text being keywords, sub-headings, bulleted lists, one idea per paragraph, inverted pyramid, half the word count (Neilsen, 1997, p.1);

(4) characteristics of constructivism being active, constructive, cumulative, goal oriented (Shuell, 1988 cited in Simons, 1993);

(5) three modes of learning being iconic, enactive, symbolic (Bruner, 1975);

(6) Gardner's (1993) multiple intelligences (visual-spatial, bodily-kinaesthetics, musical, linguistics, logical-mathematical, interpersonal, intrapersonal, naturalistic, existential);

(7) scaffolding with computers (Yelland and Masters, 1999);

(8) Zone of Proximal Development (Vygotsky, 1978).

The second key finding is about the lack of exercising knowledge with two of the multiple intelligences (linguistics, intrapersonal) as a result of relying heavily on students' linguistic intelligences to exercise knowledge without the support of the other intelligences. Some of the differences between those PowerPoint intelligence slides of Nolan's Kelly paintings that students remembered from the linguistics and intrapersonal intelligences that the students did not remember may be attributed to the following:

(1) The students had entertaining hands-on interactions with the slides such as with question-answer games or clicking on, buttons that start a short movie clip;

(2) The students had engaging multi-sensory experiences such as clicking on a button to hear music about Ned Kelly;

(3) The students viewed visuals such as coloured images of the Ned Kelly paintings and the artist; and

(4) The students recalled those slides that consisted of multiple-intelligences slides more so than uni-intelligence slides. Such was the case with one of the linguistic slides regarding the historical background of Nolan and Ned Kelly, which consisted of large amounts of writing (and small font).

The linguistics and intrapersonal intelligences slides needed to be designed with these points in mind just like those slides that students had exercised their knowledge of and had enhanced learning.

Sub-Questions 1.4: Student Preferences for Learning Visual Arts Theory

Sub-question 1.4: What were students' preferences for learning with CLL?

Sub-question 1.4 (preferences) sought answers to CLL's tool (computer technology) from the questionnaires. The question had two parts to it. First, the students were asked to choose from five different social and non-social situations as to what their preferences were for learning visual arts theory. Second, the students were asked to choose the percentage of time (0%, 25%, 50%, 75%, and 100%) that they would have liked to learn visual arts theory with computers. The answers for this part of the question were determined by the analysis of the pre- and post-questionnaires.

Questionnaires.

Students' five preferences and percentage of time for visual arts theory learning is now provided in order of their first choice to their last choice:

(1) To work in a small group/class in the presence of an visual arts teacher for facilitation and support (rose from 25 and 50% to 75%);

(2) To work in a small group of two or three students (rose from 50% to 75%);

(3) To work one-on-one with the visual arts teacher (decreased from 50% to 25%);

(4) To work in a teacher-centered form of visual arts theory instruction (remained the same from 25% to 25%); and

(5) To learn visual arts theory on their own (from a tie of 25% and 50% to 25%).

In general, students' first preferences for learning visual arts theory was in a group that reflects a social constructivist and student-centered environment using computers 75% of the time.

Discussion.

There was one key finding in answering sub-question 1.4 (preferences).

This key finding is that the more social the setting (e.g., the visual arts teacher and a groups of students) for learning visual arts theory, the more the students will still be willing to learn visual art theory and the more time they want to spend with computers. On the other hand, the less social the setting, (e.g., students learning visual arts theory by themselves), the students will be less willing to study theory or spend time by themselves learning about theory via computers.

This is compatible with what Roshelle (2000) found in that students prefer to work in groups with computers. Also it relates to what Watson (1991-2) discovered about these three benefits to learning in small groups.

Research Question 1.0: Effect

Research Question 1.0: What was the effect of CLL on students?

The main research question is addressed by answering the four sub-questions. A discussion of each sub-question follows in answering the questions.

Attitude.

Student attitudes' towards CLL were sought to be answered from the questionnaires and interviews. The results are summarised in the Table 7.1.

Table 7.1

Overall attitude towards CLL

Effect on attitude	Answered by	CLL's subject	CLL's learner	CLL's tool
Greatest Effect	Questionnaires	Positive attitude 1. AI; 2. ASP; 3. AR.	Positive attitude 1. Visual-Spatial 2. Bodily-Kinaesthetics	Positive attitude Computers for visual arts education
	Interviews	Positive attitude 1. Learning; 2. Interest; 3. Hands-on.	Positive attitude 1. Visual-Spatial 2. Bodily-Kinaesthetics 3. Musical 4. Logical-Mathematical 5. Interpersonal 6. Intrapersonal 7. Existential	Positive attitude 1. Comparisons (to books, teachers, hand written worksheets, artworks); 2. Convenience (ease, speed, own pace, access); 3. Performance (Content).
Least Effect	Questionnaires	Negative attitude: 1. AS	1. Neutral attitude: (musical, intrapersonal, naturalistic) 2. Negative attitude: (linguistics, logical-mathematical, interpersonal, existential)	
	Interviews	Negative attitude: 1. Boredom; 2. Time consuming; 3. Information overload		Negative attitude 3. Performance (technical difficulties)

Overall, Table 7.1 showed that CLL had the more rather than less effect on students. CLL had a great effect as follows: (1) the subject: a very positive attitude towards three Outcomes (AI, ASP, AR); (2) the learner: a very positive attitude about two intelligences (visual-spatial, bodily-kinaesthetic); and, (3) the tool: a very positive attitude about computers for visual arts education and see it as being convenient (content) and prefer to work with computers in comparison to working with books, teachers, hand written worksheets, but are in a tie situation in seeing real artworks rather than via computers.

The students had both positive and negative attitude about five intelligences (musical, logical-mathematical, interpersonal, intrapersonal, existential)

Finally, CLL did not have an effect upon students in four areas. They had a negative attitude towards the following: (1) the subject: AS Outcome; (2) the learner: two intelligences (linguistics, naturalistic); and (3) the tool: computers for visual arts education if the program is boring, time consuming, information overload, or poor computer performance in terms of technical difficulties.

Skills.

Students' skills of CLL was sought to be answered from the art portfolios.

The results are summarised in the Table 7.2.

Table 7.2

Overall skills required for CLL

Effect of six skills	Answered by	CLL's subject, learner, tool
Greatest Effect	Art Portfolios	1. Creative 2. Critical 3. Computer 4. Multiple Intelligence 5. Graphic Design
Least Effect	Art Portfolios	6. Background Research

Overall, Table 7.2 showed that CLL had more of an effect on students than

less of an effect. The students had the most effect from five of six skills required

to work with CLL. The one skill that had the least effect on them was the

background research skills required for the AS Outcome.

Knowledge.

The interviews and art portfolios sought to discover where students' were

exercising their knowledge within the CLL framework. The results are

summarised in the Table 7.3.

Table 7.3

Overall knowledge exercised with CLL

Effect on knowledge	Answered by	CLL's subject	CLL's learner	CLL's tool
Greatest Effect	Interviews	1. ASP 2. AR 3. AS (historical)	7 intelligences: Visual-Spatial Bodily-Kinaesthetic Musical Logical-Mathematical Interpersonal Intrapersonal Existential	
	Art Portfolios	1. AI 2. ASP 3. AR	All 9 intelligences in a hands-on and minds-on way	Computers (WWW, Word, PowerPoint) and Auxiliary equipment (Digital Camera, colour photocopier/printer)
Least Effect	Interviews	1. AI 2. AS (cultural, socio-economic)	1. Linguistics 2. Naturalistic	
	Art Portfolios	1. AS		

Overall, CLL had more of an effect on students than least of an effect. They were able to exercise their knowledge as follows: (1) the subject: AI (only in the art portfolios), ASP, AR, and AS (only the historical background-interviews); (2) the learner: all of the multiple intelligences; and, (3) the tool: with computers.

On the other hand, CLL had less of an effect on students in three areas as follows: (1) the subject: AS overall and AI (in the interviews); (2) the learner: two intelligences (linguistics, naturalistic); and, (3) the tool: no problems depicted in this area.

Preferences.

Students' preferences for CLL was sought to be answered from the questionnaires. The results are summarised in the Table 7.4.

Table 7.4

Overall preferences for CLL

Effect of preferences regarding visual arts theory in relation to learning environment and time on computers	Answered by	First to last preferences	CLL's tool (time using computers for visual arts theory learning)
Greatest Effect		1. Peers and art teacher	Rose (50% to 75%)
		2. Small groups	Rose (50% to 75%)
		3. one-on-one with art teacher	Decreased (50% to 25%)
	Questionnaires		
Least Effect		4. Art teacher only	Same (25% to 25%);
		5. Student only	Same/decrease (a tie of 25%; and, 25% to 50%)

Overall, Table 7.3 showed that the most effective way for students' to learn visual arts theory with computers is in a social constructivist and student-centered environment using computers 75% of the time.

The least effective way for students to learn visual arts theory is by themselves.

Discussion.

It appears that most of the three components of CLL had an effect on students in terms of attitude, skills, knowledge and preferences (refer to Table 7.5).

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Table 7.5

Where CLL had the greatest effect on students

Where CLL had the most effect on students	CLL's subject	CLL's learner	CLL's tool
Attitude	AI ASP AR	V-S B-K	1. Positive attitude towards computers for visual arts theory in terms of learning, interest, hands-on, background information, knowledge, and guidance/direction. 2. Positive attitude towards computers in terms of comparisons (books, teachers, worksheets, artworks); convenience (ease, speed, own pace, access); and performance (content).
Skills	5 of 6 skills (creative, critical, computer, multiple intelligence, graphic design)		
Knowledge	AI ASP AR	All multiple intelligences	Knowledge exercised with computers
Preferences	For Visual Art Theory	Social constructivist and student-centered environment (e.g., peers and visual arts teacher)	75% time on computer

Another way of presenting how CLL had the most effect upon students in relation to attitude, skills, knowledge, and preferences is as follows

(1) CLL's subject: Positive attitude towards three Outcomes (AI, ASP, AR); five of six skills (creative, critical, computer, multiple intelligence, graphic design); and students exercised knowledge with three Outcomes (AI, ASP, AR);

(2) CLL's learner: Positive attitude towards two intelligences (visual-spatial, bodily-kinaesthetic); skills (students were able to used skills associated with the multiple intelligences in a hands-on and minds-on way, but their background research skills needed further attention); and, knowledge was exercised and learning was enhanced with all the intelligences;

(3)   CLL's tool: Students' have a positive attitude towards computers for visual arts theory in terms of learning, interest, hands-on, background information, knowledge, and guidance/direction. They also have a positive attitude towards computers in terms of comparisons (books, teachers, worksheets, and artworks) convenience (speed, own pace, and access); and performance (content). Students' computer skills are good, but needs more work with the background research skills. The students exercised their knowledge and had enhanced learning with computers. Finally, the students' preferences to learn visual arts theory is with computers in a social constructivist and student-centered environment using computers 75% of the time.

Where CLL had the least effect on students is shown in Table 7.6:

Table 7.6

Where CLL had the least effect on Students

Where CLL had the least effect on students	CLL's subject	CLL's learner	CLL's tool
Attitude	AS	Seven intelligences: Musical, Intrapersonal Naturalistic, Logical-mathematical, Interpersonal, Existential.	1. Negative attitude towards computers for visual arts theory in terms of boredom, time consuming, and information overload; 2. Performance (technical difficulties)
Skills	1 or 6 skills being the background research skills (AS)		
Knowledge	AS	Two intelligences: Linguistics Naturalistic	
Preferences			Learning visual arts theory by themselves and the amount of time they are willing to spend on computers (25% of the time).

Another way of presenting how CLL had the least effect upon students in terms of attitude, skills, knowledge, and preferences is as follows:

(1) CLL's subject: Students were not effected by the AS Outcome in terms of attitude; skills (background research), and knowledge;

(2) CLL's learner: Attitude (neutral and negative) towards seven intelligences (musical, intrapersonal, naturalistic, linguistics, logical-mathematical, interpersonal, and existential); skills with the multiple intelligences were fine, but their background research skills (AS) require more development; and knowledge was not exercised or learning enhanced with two intelligences (linguistics, naturalistic);

(3) CLL's tool: Attitude was negative in terms of computers for visual arts thoery (boredom, time consuming, information overload and attitude) and also with Performance (technical difficulties); students' computer skills are fine, but their background research skills (AS) require further attention; students had exercised their knowledge and enhanced learning with computers; and students had low preferences for learning visual arts theory by themselves and using computers 25% of the time.

In what areas CLL had the least effect on students is now used in the next section as recommendations for the future.

Recommendations for the Future

In conclusion to this study, the following five recommendations are made.

Recommendation one.

Students require assistance to change their negative attitudes of the AS Outcome. In this research, the students had already begun to change their attitude towards the AR Outcome, but this still needs further attention for the AS Outcome.

Therefore, it is recommended that students use computers (which they have a good attitude towards in terms of skills, knowledge, and a high preference for) and computer scaffolding to achieve the AS Outcomes. For this to occur, computers may also need to be installed in or near where visual arts education classes are held.

Recommendation two.

Students need further assistance to improve their skills (i.e., their background research skills to do with historical, cultural, socio-economic) in addressing the AS Outcome.

Therefore, it is recommended that Year 9 students are introduced to only one background research skill beginning with the historical background. They may start with easy tasks and then advance to more difficult tasks from one school year to the next. The cultural background may be introduced in Year 10 while the socio-economic background may be introduced in Years 11 and 12.

Recommendation three.

Students need further assistance to exercise their knowledge with the AS Outcome.

Therefore, it is recommended that when this Outcome is taught via computers, that all the intelligences be employed and especially the visual-spatial, bodily-kinaesthetic, and musical intelligences. These three intelligences are sensory and reflect the iconic and/or enactive modes of learning. When these are used in conjunction with some of the less favoured intelligences (such as the linguistic intelligence that is non-sensory and a symbolic mode of learning and is dominant in the AS Outcome), it appears that many students are then more willing to engage with the learning and to more willingly exercise their knowledge in this area.

Recommendation four.

Students need to change their attitude and knowledge of various intelligences in relation to visual arts education.

Therefore, it is recommended that students have the opportunity to use both multi-intelligences and uni-intelligences experiences with computers and for their art portfolios.

With regard to computers, it is recommended to have multi-intelligence experiences that combine sensory and iconic and/or enactive modes of learning (e.g., visual-spatial, bodily-kinaesthetic, and musical intelligences) along with those intelligences that are non-sensory and reflect symbolic modes of learning (e.g., logical-mathematical intelligences).

For student art portfolios, it is recommended that teachers provide students with several choices in uni-intelligence assignments. The students may elect one of these uni-intelligence assignments to re-interpret an artwork such as their hero or villain paperclay masks. For example, a student with high musical intelligence may choose to re-interpret their mask by composing a piece of music or researching some music that complements a particular artwork.

Recommendation five.

Students have negative attitudes towards computers for their visual arts education if they find the work to be the following:

(6) Boring;

(7) time consuming;

(8) information overload; and

(9) technical difficulties.

For this reason, it is recommended that visual arts teachers, museum or gallery educators and/or web designers/masters continue to have professional development so as to be able to design dynamic educational computer programs in visual arts theory that is educational as well as entertaining, mindful of time, and not overwhelming students with too much information all at once.

Also, it is recommended that schools employ computer technicians who can assist students and teachers with technical difficulties with computers as they arise.

Conclusions

This study sought answers to see if CLL had an effect on students This was investigated through students' attitudes, skills, knowledge, and preferences using research instruments such as questionnaires, interviews, and art portfolios.

The results showed that the three components of CLL (subject, learner, tool) had predominately a great effect on students' attitude, skills, knowledge, and preferences. In terms of their most preferred way of learning with CLL, it appeared that the students showed a first preference for learning visual arts theory in a CLL framework that reflected a social constructivist and student-centered way of learning and using computers 75% of the time. This thesis demonstrated that CLL was an effective framework in visual arts education for these Year 9 visual arts students.

REFERENCES

Aland, J. (1991). The influence of the South Kensington school on the teaching of drawing in South Australian schools from 1880s into the 20th century. *Australia Art Education: Journal of the Australian Institute of Art Education, 15*(1), 45-53.

Allison, B. & Hausman, J. (1998). The limits of theory in art education. *NSEAD: Journal of Art and Design, 17*(2), 121-127.

Armstrong, T. (1999). *7 kinds of smart: Identifying and developing your multiple intelligences.* (2nd rev. ed.). New York: A Plume Book.

ArtsEdNet. (2003A). Scope and sequence: Introduction. Getty. Retrieved 15 October 2003 from http://www.getty.edu/artsednet/resources/Scope/foreword.htm

ArtsEdNet. (2003B). National standards for visual arts education...achievement standards. Getty. Retrieved 15 October 2003 from http://www.getty.edu/artsednet/resources/Scope/Standards/achievements.htm

ArtsEdNet. (2003C). Ability areas of the scope and sequence. Getty. Retrieved 15 October 2003 from http://www.getty.edu/artsednet/resources/Scope/Abilities/abilityareas.htm

Artsword. (2002). Art education continuity and change. *Artsword: The newsletter of the school of visual arts at Penn State, Fall,* 1-21.

Barkan, M. (1962). A transition in art education. *Art Education, 15*(7), 12-18, 27.

Barkan, M. (1955). *A foundation for art education.* New York: The Roland Press.

Battin, M. P. (1994). Cases for kids: Using puzzles to teach aesthetics to children. *Journal of Aesthetic Education, 28*(3), 89-104.

Battin, M., Fisher, J., Moore, R., & Silvers, A. (1989). *Puzzles about art: An aesthetics casebook.* New York: St. Martin's Press.

Bird, E. (1992). *The development of art and design education in the United Kingdom in the nineteenth century*. Abstract. Unpublished doctoral dissertation, Loughborough University of Technology. Retrieved 6 February 2003, from http://www.ariad.co.uk/uk/ sa3.tmpl$search?db=db/ proj.db&SKU data=4059&max=1&extra=s

Birkett, J. (1985). New South Wales. Cited in The state of Australian art education: State by state. *Journal of the Institute of Art Education: A Scholarly Journal of the Australian Institute of Art Education. 9*(2), 43-64.

Bolin, P. E. (1985). The influence of industrial policy on enactment of the 1870 Massachusetts free instruction in drawing act. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference*. (pp. 102-107). State College, PA: The Pennsylvania State University.

Borg, W. R. (1987). *Applying educational research: A practical guide for teachers*. New York: Longman.

Boughton, D. (1999). How to build an art teacher (1986). *Australian Art Education: Journal of the Institute of Art Education, 22*(1), 59-67.

Boughton, D. (1989). The changing face of Australian art education: New horizons or sub-colonial politics? *Studies in Art Education: A Journal of Issues and Research, 30*(4), 197-211.

Bruner, J. (1975). *Towards a theory of instruction*. Massachusetts: The Belknap Press of Harvard University Press.

Candy, P.C. (1989). Alternative paradigms in educational research. *Australian Educational Researcher, 16*(3), 1-12.

Carey, P. (2000). *True history of the Kelly gang*. Brisbane, Queensland: University of Queensland Press.

Chalmers, F. G. (1985). South Kensington and the colonies II: The influence of Walter Smith in Canada. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference*. (pp. 108-112). State College, PA: The Pennsylvania State University.

Chapman, L. H. (1978). *Approaches to art in education*. New York: Harcourt Brace Jovanovich, Inc.

Chilvers, I. (Ed.). (1990). *The concise oxford dictionary of art and artists*. New York: Oxford University Press.

Ching. (2000). Retrieved 15 October 2002 from
wysiwyg://44/http://userwww.sfsu.edu/~Ching/personal/Learning/theorists/b
runer.htm

Clark, G. A. (1991). *Examining discipline-based art education as a curriculum
construct.* (ERIC Document Reproduction Service No. ED338540)

Cohen, L. & Manion, L. (1980). *Research methods in education* (3rd ed.). London:
Croom Helm.

Colbourn, C. J. (1995). *Constructing cognitive artefacts: The case of multimedia
learning materials.* Southampton, UK: University of Southampton,
Department of Psychology. Retrieved 15 October 2003 from
http://webtools.cityu.edu.hk/ ct1995/colbourn.htm

Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship:
Teaching the crafts of reading, writing and mathematics. Cited in Resnick,
L. B. (Ed.). *Knowing, learning and instruction: Essays in honour of Robert
Glaser.* (pp. 453–494). Hillsdale, New Jersey: Lawrence Erlbaum Assoc.

Cornell, J. (1990). *Drawing the light from within: Keys to awaken your creative
power.* New York: Simon & Schuster.

Craftsman perspective: History of the arts and crafts movement, 1830-1920.
(n.d.). Retrieved September 6, 2003 from
http://members.aol.com/craftperspective/docs/history.html

Crotty, M. (1998). *The foundations of social research: Meaning and perspective
in the research process.* St. Leonards, New South Wales: Allen & Unwin.

Crowe, B. A. (1988). *Computers in the secondary school art curriculum: Painting
a picture of effective teaching. Mississippi.* (ERIC Document Reproduction
Service No. ED305897)

Curriculum Council of Western Australia. (1998). *Getting started: Using the arts
learning area statement.* Perth, Western Australia: Curriculum Council.

Curriculum Council of Western Australia. (1997). *Draft curriculum framework
for kindergarten to year 12 education in Western Australia.* Perth, Western
Australia: Curriculum Council.

D'Angelo, J. (1988). Computers for art education. *Art Education, 4*(5), 41-48.

Davis, R. R. (1991). *Learning how to learn: Technology, the seven multiple
intelligences and learning.* (ERIC Document Reproduction Service No.
ED338214)

Delacruz, E. M. & Dunn, P. C. (1996). The evolution of discipline-based art education. *Journal of Aesthetic Education, 30*(3), 67-82.

Dewey, J. (1980). *Art as experience.* (4th ed.). New York: A Wideview/Perigree Books.

Dewey, J. (1975). *Experience and education: The kappa delta pi lecture series* (18th ed.). New York: Collier.

Dimmack, M. (1965). *Modern art education in the primary school.* Melbourne, Victoria: Macmillan & Co., Ltd.

Dow, A. W. (1913). *Composition.* New York: Doubleday, Page & Co.

Dunahoo, D. E. (1993). Re-thinking creativity: A discipline-based perspective. *Art Education, July,* 53-60.

Duro, P. & Greenhalgh, M. (1994). *Essential art history.* London: Bloomsbury.

Efland, A. D. (1990). Change in the conceptions of art teaching. *Journal of the Australian Institute of Art Education, 14*(3), 11-21.

Eisner, E. & Ecker, D. (1966). *Readings in art education.* Waltham, Massachusetts: Blaisdell Publishing Company.

Eisner, E. (1988). Structure and magic in discipline-based art education. *Journal of Art* and *Education, 7*(2), 185-196.

Eisner, E. (1987). The role of dbae in America's schools. *Art Education, 40*(5), 6-21, 44-45.

Eisner, E. (1972). *Educating artistic vision.* New York: Macmillan.

Feldman, E. B. (1987). *Varieties of visual experience.* (3rd ed.). New York: Prentice-Hall, Inc., Englewood Cliffs, N. J. Harry N. Abrams, Inc.

Fetherston, T. (2000). *Research primer.* Edith Cowan University, Perth, Western Australia. Retreived 15 October 2002, from http://139.230.169.16/ sites/tony/research.htm

Field, D. (1973). Art and art education. Cited in Field, D., & Newick, J. (Eds.). *The study of education and art.* (pp. 1-13). London: Routledge & Kegan Paul.

Frayling, C. (2002, October). *Head, heart and hand: The story of British art and design education.* Paper presented at The Annual Frederick Parker Foundation Lecture, London.

Future tense: *Arts education technology conference summary*. (1991). Sponsored by the Getty Center for Education in the Arts. January, 24 -26. Los Angeles, California. (ERIC Document Reproduction Service No. ED341630)

Gaitskell, C. D., Hurtwitz, A. & Day, M. (1968). *Children and their art, methods for the elementary school* (4th ed.). New York: Harcourt Brace Jovanovich, Inc.

Gardner, H. (1995). Reflections on multiple intelligences: Myths and messages. *Phi Delta Kappan, 77*(3), 200-209. Bloomington. Retrieved 20 September 2002 from http://www.aea11.k12.la.us/shrader/miarticles.htm

Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences* (2nd ed.). London: Fontana Press, An Imprint of Harper Collins Publishers.

Gardner, H. (1988). Challenges for museums: Howard Gardner's theory of multiple intelligences. *Hand to Hand: Children's Museum Network, 2*(4), 1-6.

Gardner, H. (n.d.). The seven types of intelligences. Retrieved 30 March 2000 from http://www.sd01.k12.id.us/schools/garfield/super.htm

Gardner, H. & Hatch, T. (1989). Multiple intelligences go to school: Educational implications of the theory of multiple intelligences. *Educational Researcher, 18*(8), 4-10.

Gilbride, G. D. (1985). *Art in the curriculum: An historical and comparative study, 1935-1982.* Unpublished MPhil dissertation, University of Hull, UK. Retrieved 3 February 20003, from http://www.ariad.co.uk/uk/sa3tmpl$search?db=proj.db&SKUdat=3185&max=1&extra=s

Gillard, D. (2001). *A brief history of education in England.* Retrieved 15 October 2003 from http://www.kbr30.dial.pipex.com/educ19.shtml

Cohen, L. & Manion, L. (1980). *Research methods in education* (3rd ed.). London: Croom Helm.

Greer, D. W. (1984). Discipline-based art education: Approaching art as a subject of study. *Studies in Art Education: Journal of Issues and Research, 25*(4), 212-218.

Greh, D. (1986). Art in secondary schools. *Art Education, 39*(6), 4-9.

Grow, G. (1995). *Writing and the seven intelligences.* (ERIC Document Reproduction Service No. ED379662)

Grundy, S. (1995). *Action research as ongoing professional development*. Arts Accord (Affiliation of Arts Education, WA). *January*. Canberra, ACT: Commonwealth of Australia.

Hamblen, K. A. (1993). The emergence of neo-dbae. *Proceedings of the Annual Meeting of the American Research Association American Research Association*. (pp. 3-16). Atlanta, GA.

Hammond, G. (1981). Art education ideologies: Current emphasis in Australia. *Journal of the Australian Institute of Art Education, 5*(3), 83-93.

Hein, G. (1995). The constructivist museum. *Journal of Education in Museums,* (16), 21-23. Retrieved 28 November 2001 from http://www.gem.org.uk/hein.html

Hein, G. (1991). The museum and the needs of people. *ICOM/CECA (International Committee of Museum Educators) conference*. Jerusalem, Israel, 15-22 October, 1991. http://www.exploratorium.edu/IFI/resources/constructivistlearning.html

Henry, C. (2002). Reflections on Manual Barkan's contributions to art education. *Art Education: Journal of the National Art Education Association, 55*(6), 6-11.

Herlihy, B. (2001). *The development of a valid and reliable instrument to assess constructivist practices in primary classrooms*. Unpublished Bachelor of Education (Honours) thesis, Edith Cowan University, Perth, Western Australia.

Hess, R. D. & Croft, D. J. (1972). *Teachers of young children* (2nd ed.). Boston, Massachusetts: Houghton Mifflin Company.

Hicks, L. E. (1990). A feminist analysis of empowerment and community in art education. *Studies in Art Education: A Journal of Issues and Research, 32*(1), 36-46.

Hiller, P. (1985). Tasmania. Cited in The state of Australian art education: State by state, 1985. *Journal of the Institute of Art Education: A Scholarly Journal of the Australian Institute of Art Education, 9*(2), 43-64.

Hilson, M. (1991). The journal of Joseph Fowles. *Australian Art Education: Journal of the Institute of Art Education, 15*(1), 54-60.

Hilson, M. (1987). Walter Smith: An indirect connection with Australia. *Australian Art Education: Journal of the Institute of Art Education, 11*(3), 46-54.

Hilson, M. (1984). Art education in New South Wales, 1850s -1940s. *Australian Art Education: Journal of the Institute of Art Education, 8*(1), 68-79.

Holdsworth, B. (1988). Marion Richardson (1892-1946). *NSEAD: Journal of Art and Design Education, 7*(2), 137-154.

Holdsworth, B. (1984). English art education between the wars. *NSEAD: Journal of Art and Design Education, 3*(2), Abstract.

Hollyman, D. (n.d.). A web overview. Massey University. Retrieved 15 October 2002 from Wysiwyg://47/http://au.geocities.com/vanunoo/Humannature/bruner.htm

Hook, D. (1985). The Fenollosa and Dow relationship and its value in art education. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference.* (pp. 238-242). State College, PA: The Pennsylvania State University.

Hooper-Greenhill, E. (1994). *Museums and their visitors.* London: Routledge.

Hopwood, G. (1968). *Art: Students' handbook.* (7th ed.). Victoria: The Specialty Press Limited.

Hughes, A. (1998). Reconceptualising the art curriculum. *NSEAD: Journal of Art and Design Education, 17*(1), 41-49.

Hughes, A. (1997). The evisceration of art education? *NSEAD: Journal of Art and Design Education, 16*(2), 117-126.

Hurwitz, A. & Day, M. (1995). *Children and their art: Methods for the elementary school* (6th ed.). Orlando, Florida: Harcourt Brace & Company.

Husen, T. & Postlethwaite, T. N. (Editors-in-Chief). (1994). *The international encyclopedia of education* (2nd ed.). *11,* 3877. New York: Pergamon Press.

Jonassen, D. H. (1991). Evaluating constructivist learning. *Educational Technology, 31*(9), 28-34.

Jordan, L. (1996). Children's multimedia non-fiction: Education and entertainment come together in the publishing of children's multimedia non-fiction. *Writing Magazine, 5*(2), 37-38.

Kenyon, G. (2001, 31 October). Prince criticises art education. *BBC News.* Retrieved 3 February 2003, from http://news.bbc.co.uk/1/hi/education/1630301.stm

Kenyon, G. (2002, 20 June). Calls for review of art education. *BBC News.* Retrieved 7 March 2003, from http://news.bbc.co.uk/1/hi/education/2055558.stm

Kerin, J. & Frank, C. (1995). Beyond the textbook: Learner-powered multimedia. *Technos Quarterly for Education and Technology, 4*(14). Retrieved 15 October 2003 from http://206.106.95.11/journal/volume4/4frank.htm

Kern, E. J. (1985). The purposes of art education in the United States from 1870-1980. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference.* (pp. 40-52). State College, PA: The Pennsylvania State University.

Kindler, A. (1992). Discipline-based art education in secondary schools: A possible approach. *Australian Art Education: Journal of Art & Design Education, 11*(3), 345-355.

Lambert, R. S. (1938). *Art in England.* England: Pelican Books.

Lorsback, A. & Tobin, K. (1992). Constructivism as a referent for science teaching. *Association of Science and Technology Centers (ASTC).* Retrieved 15 October 2003 from http://www.astc.org/resource/educator/construc.htm

Lowenfeld, V. & Brittain, W. L. (1975). *Creative and mental growth* (6th ed.). New York: Macmillan Publishing Co., Inc.

McInerney, D. M. & McInerney, V. (2002). *Educational psychology: Constructing learning* (3rd ed.). Frenchs Forest, NSW: Pearson Education.

McLaren, J. (1974). *A dictionary of Australian education.* Blackburn, Victoria: Penguin Books.

McNiff, J. (1988). *Action research: Principles and practice.* London: Routledge.

Mandelson, L. (1985). From drawing to art in Australian state primary schools. *Journal of the Institute of Art Education, 9*(1), 35-45.

Mason, R. (2001). Obituary professor Brian Allison. *JADE, 20*(1), 8-10.

Matthews J. C. (1988). *Computers and art education.* (ERIC Document Reproduction Service No. ED410180)

Ministry of Education Western Australia. (1989). *Frameworks: Unit curriculum art guide: 8-10.* Perth, Western Australia: Ministry of Education Western Australia, Curriculum Programmes Branch.

Ministry of Education Western Australia. (c.1989). *Art and craft syllabus k-7*. Perth, Western Austalia: Ministry of Education Western Australia.

Mock-Morgan, M. (1985). The influence of Arthur Wesley Dow on art education. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference*. (pp. 234-237). State College, PA: The Pennsylvania State University.

Moore, R. (1994). Aesthetics for young people: Problems and prospects. *Journal of Aesthetic Education, 28*(3), 5-18.

Moore, R. (1993). Aesthetic case studies and discipline-based art education. *Journal of Aesthetic Education, 27*(3), 51-62.

Morgan, K., Morgan, M., & Hall, J. (1998). *Personal and interpersonal development of humans in high technology environments*. (ERIC Document Reproduction Service No. ED42197)

Naea. (n.d). Retrieved 6 February 2003, from http://naea.leeds.ac.uk/more.htm.

Neilsen, J. (1997). How users read on the web. *October*. Retrieved 15 October 2003 from http://www.useit. com/alertbox/9710a.html

Ott. R. W. (1989). Teaching criticism in museums. Cited in Berry, N. & Mayer S. (Eds.). *Museum education: History, theory, and practice*. Virginia, USA: NAEA.

Palmer, D. (1988). *Looking at philosophy: The unbearable heaviness of philosophy made lighter* (2nd Ed.). London: Mayfield Publishing Company.

Paris, L. (1999). *Visual arts history and visual arts criticism: Applications in middle schooling*. Unpublished Masters thesis, Edith Cowan University, Perth, Western Australia.

Payne, J. (1985). Manual Barkan's "Foundations of art education": The past is prologue. I Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference*. (pp. 259-264). State College, PA: The Pennsylvania State University.

Peers, C. (n. d.). A 'Methodist' intervention in the history of art education in New South Wales. The University of New South Wales. (pp. 1-11). Retrieved 26 November 2002, from http://www.aare.edu.au/01pap/pee01238.htm

QSR International. (2000). *QSR NUD*IST: software for qualitative data analysis*. Victoria, Australia.

Richards, L. (1998). *NUD*IST 4: Qualitative solutions and research*. Australia: Qualitative Solutions and Research Pty Ltd.

Richardson, M. (1964). *Art and the child* (5th ed.). London: University of London Press Ltd.

Robb, G. & Smith, E. (1993). Smith, R. (Ed.). *Concise dictionary of Australian Artists*. Melbourne, Victoria: Melbourne University Press.

Roshelle, J. M., Pea, R. D., Hoadley, C. M., Gordin, D. N., & Means, B. M. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of Children: Children and Computer Technology, 10*(2), 76-101.

Rozelle, Z. D. (1994). Minimal conditions in art classrooms and strategies to overcome "bare bones art". *Art Education, 47*(3), 45-46.

Rush, J. (1987). Interlocking images: The conceptual core for a discipline-based art lesson. *Studies in Art Education, 28*(4), 206-230.

Schumacher, S. & McMillan, J. H. (1993). *Research education: A conceptual introduction* (3rd ed.). New York: Harper Collins College Publishers.

Simons, P. R. J. (1993). Constructive learning: The role of the learner. Cited in Duffy, T. M., Lowyck, J. & Jonassen, D. (Eds). *Designing environments for constructive learning.* (pp. 291-292). Berlin, Germany: Springer-Verlag.

Smith, M. K. (2002). Jerome S. Bruner and the process of education, *The encyclopedia of informal education.* Retrieved 15 October 2003 from http://www.infed.org/thinkers/bruner.htm

Smith, P. (1996). Another vision of progressivism: Marion Richardson's triumph and tragedy. *Studies in Art Education: A Journal of Issues and Research, 37*(3), 170-183.

Smith, P. (1985). Franz Cizek: Problems of interpretation. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference.* (pp. 219-224). State College, PA: The Pennsylvania State University.

SPSS 11.0 for windows, 2001. (2001). Retrieved 15 October 2003 from http://www.spss.com

Squires, D. (1996). Can multimedia support constructivist learning? *Teaching Review, 4(*12), 10-17.

Stevini, M. (1968). *Art and education*. London: William Clowes and Sons Ltd. for the publishers B. T. Batsford Ltd.

Strommen, E. F. (1992). *Constructivism, technology, and the future of classroom learning*. Children's Television Workshop Bruce Lincoln, Bank Street College of Education. Retrieved 15 October 2003 from http://www.ilt.columbia.edu/ilt/papers/construct.html

The Louvre: Museums of the world for kids [CD-ROM]. (n.d.). USA: Voyager and Gallimard Jeunesse Coproduction.

Thistlewood, D. (1985). National systems and standards in art and design higher education in Britain. Cited in Wilson, B. & Hoffa, H. (Eds.). *The history of art education: Proceedings from the Penn State conference*. (pp. 80-86). State College, PA: The Pennsylvania State University.

Thompson, T. (1999). Jerome Bruner: Overview. Retrieved 15 October 2003 from http://www.ssd.k12.ak.us/Technology/tlt_resume/PAGES/Bruner.html

Townsend, F. C. & Townsend, C. M. (1992). *Meeting learning needs through multimedia: A look at the way modern technology can help classroom teachers meet the varied instructional needs of students*. 2-38. (ERIC Document Reproduction Service No. ED352969)

Tripp, D. (1993). *Critical incidents in teaching: Developing professional judgement*. London: Routledge.

Tuckman, B. W. (1991). *Educational psychology: From theory to application*. New York: Harcourt Brace Jovanovich College Publishers.

Vander Zanden, J., & Pace, A. (1984). *Educational psychology*. New York: Random House.

Veenema, S. & Gardner, H. (1996). Multimedia and multiple intelligences. *The American Prospect, (29)*, 69-76.

Vygotsky, L. (1978). *Mind in society*. Cambridge, Massachusetts: Harvard University.

Watts, M., Jofili, Z., & Bezerra, R. (1997). A case for critical constructivism and critical thinking in science education. *Research in Science Education, 27*(2), 309-322.

White, B. (2000). *Dissertation skills for business and management students*. London: Cassel.

Wiersma, W. (1995). *Research methods in education: An introduction* (6th ed.). Sydney: Allyn and Bacon.

Wilson, M. & Wilson, B. (1982). *Teaching children to draw: A guide for teachers and parents*. Englewood Cliffs, New York: Prentice-Hall, Inc.

Yelland, N. & Masters, J. (1999). New ways of learning with technology: Scaffolding children's learning and understanding. *Proceedings of ICCE'99*, Chiba, Japan. (pp. 499-506). Chiba, Japan: IOS Press. Retrieved 15 October 2003 from http://www.fed.qut.edu.au/masters/#research

Zervos, C. & Fetherston, T. (1999). Multimedia and learners in art galleries. *Museum Education* and *Public Programs, 1-2*, 17-19.

Zervos, C. (1997). *Art education and computer technology: Chalk and cheese or bread and butter?* Paper presented at the Western Australian Institute of Educational Research (WAIER) conference, Notre Dame University, Fremantle, WA.

Zervos, C. (1990). *Children's museums: A case history of the foundations of model institutions in the United States*. Unpublished Masters thesis, Pennsylvania State University, State College, PA.

APPENDICES

Appendix A

Appendix A refers to "Aesthetics" in Chapter Two. These are examples of

cases of puzzles for teaching children aesthetics (Battin, Fisher, Moore, and

Silvers, 1989).

Aesthetics.

Case 1. The Case of the Chartreuse Portrait

Al Meinbart paints a portrait of art dealer Daffodil Glurt. The resulting canvas is a single solid color, chartreuse. Meinbart hangs the canvas in the Museum of Modern Art, labelled "Portrait of Daffodil Glurt." Daffodil is not amused. But has she actually been insulted? (Battin, 1988, p. 27).

Group I: The Nature of Art
These cases all ask the question What is art? Is it representation? Is it the expression and communication of emotion, as expression theory insists? Is it the embodiment of a certain set of formal properties? Or is art just what is recognized as art by those who play roles in the world of art? For example:

Case 2. Pile of Bricks
Consider the following possibility, based on an exhibit at the Tate Gallery in 1976. A person already known, perhaps even famous, as a "minimalist" sculptor buys 120 bricks and, on the floor of a well known art museum, arranges them in a rectangular pile, 2 bricks high, 6 across, and 10 lengthwise. He labels it *Pile of Bricks*. Across town, a bricklayer's assistant at a building site takes 120 bricks of the very same kind and arranges them in the very same way, wholly unaware of what has happened in the museum—he is just a tidy bricklayer's assistant. Can the first pile of bricks be a work of art while the second pile is not, even though the two piles are seemingly identical in all observable respects? Why, or why not? 4

Groups II. Cases about Beauty and Aesthetic Experience
Group II includes cases about beauty and whether beauty is "really real" or whether it is simply something "in the eye of the beholder," a function of the way a particular person sees something. The same questions can be raised about beauty's opposite , ugliness, as well as about the sublime, the fearsome, and other forms of aesthetic experience. For example:

Case 3. Beautiful Plumage

In many species of birds, the male has brilliant plumage, which attracts females of the same species: think of the peacock, the China pheasant, the many varieties of parrot, and so on.

Is it correct to say that the male plumage is *beautiful* or that the female birds *find the plumage beautiful*? Can birds appreciate beauty? How would we go about trying to answer this question, if the only observation we can make is that the females are indeed attracted by the plumage? Is there human beauty versus bird beauty? If so, should all our references to beauty be of the form, beautiful to whom? Or are only human beings able to appreciate beauty and if so, what is it about human beings that gives them this distinction? 5

Case 4.

Let us suppose that we discover on Mars remnants of a culture that died long ago. Most of the things we find are completely alien to us; we cannot even guess how they were used. We have not deciphered the Martian language, and we know nothing about the physical appearance of the Martians, whose bodies must have completely disintegrated millions of years ago. One set of objects, however, is strikingly familiar to us; we find numerous items that look exactly like African masks. We name them Marsks. Again, we have no idea how these objects were made by the Martians and for what purpose.

Are the Marsks works of art? Are they beautiful? Are they meaningful? If yes, how? If not, are African masks works of art? Are they beautiful? Are they meaningful to us? After all, we know very little of the culture that produced them. 6

Group III: Cases Concerning the Interpretation of Art
Among cases concerning the interpretation of art, a variety of issues arise: issues about the instructional and cognitive value of art (especially pressing in historical and descriptive works); about whether nonpictorial and nonverberbal works, such as music and dance (as well as the Chartreuse Portrait) can have meaning or make statements; about the content of symbolic representations, and about truth.

Case 5. Winterbranch

The dancer and choreographer Merce Cunningham describes the reactions of different audiences to his piece Wintebranch: "We did the piece...some years ago in many different countries. In Sweden they said it was about race riots, in Germany they thought of concentration camps, in London they spoke of bombed cities, in Tokyo they said it was the atom bomb. A lady with us took care of the two children who were on the trip. She was the wife of a sea captain and said it looked like a shipwreck to her. Of coure, it's about all of those and not about any of them, because I didn't have any of those experiences, but everybody was drawing on his [or her] experience, whereas I had simply made a piece which was involved with I, the idea of bodies falling.

Is Winterbranch about race riots, concentration camps, bombed cities, shipwrecks, and the other human catastrophes in terms of which people see it? Is it only about falls? Or is it *not* about anything? Is Cunningham's intention when he made the piece relevant to legitimate interpretation of the piece? 7

GroupIV: Cases about Creativity and Fidelity in Performance, Replication, and Reading
These cases, arising in those arts in which there is a model, script, or score for performance or where some other form of replication takes place, all focus on the relationship between the artist's actual product and the way it is actualized in performance or presentation. To what degree, if at all, may the singer "interpret" and thus alter the opera's score? What constitutes a conductor's "reading" of a work, and what is a "change," "liberty," "mistake," or other unwarranted departure in the symphony? What counts as a forgery? What exactly may/should a performing artist do and not do with and to the work being performed? Are these answers different for an actor, a dancer, a musician? What about a restorer of artworks that have been damaged? And so on.

Case 6. Exact Replication

As a result of advanced experimentation in molecular physics, a small manufacturing company announces that it has perfected a process by which any work of visual art can be replicated on a molecule-for-molecule basis. In painting, this process makes possible replication of an entire work, including canvas, frame, and all lower as well as exposed layers of pigment. No human guesswork (or error) is involved, and the finished replica is indistinguishable from the original to the most sophisticated visual, physical, and chemical analyses.

1. The company applies for a permit to produce one replica each of the Mona Lisa and ten other very well-known works at the Louvre as insurance, it says, against "natural disaster." The replicas are to be stored in a permanent underground vault and are not to be removed (or viewed) unless the originals are destroyed by calamities such as earthquake, vandalism, or nuclear war.
2. The company applies for a permit to produce 100 replicas of each of the above works to establish satellite museums in major cities and regional capitals throughout the world.
3. The company applies for a permit to produce unlimited replicas of the works, and announces that it plans to market the replicas in sundry and department store outlets for $14.95 each.

Would you grant any or all of the above permits? If you would grant (1) or (2), why not (3)? 8

Group V: Cases about Conflicts between Art and Other Values
These cases involve conflicts between aesthetic and other values, including historical values, ethical values, religious values, economic values, and many others. Each poses what seems to be a quintessential apples-and-oranges problem, weighing the value of art against other important values, where it is not clear there is any common scale by which they can be assessed.

Case 7. The Fire in the Louvre

The Louvre is on fire. You can save either the Mona Lisa or the injured guard who had been standing next to it—but not both.
What should you do?

Case 8. Clothing Nudes

Joe Brown, a noted sculptor of athletes who lived in Princeton, New Jersey, did a larger-than-life bronze of two gymnasts for the campus of Temple University, in Philadelphia. The male figure, dressed in shorts, both feet on the pedestal, hold the unclothed female high over his head in a dramatic handstand. Mr. Brown, in response to feminist complaints that the sexes are not treated equally in his work, replied that he had a t first intended both figures to be unclothed, but the nude male at street level in a city would invite vandals to spray paint or decorate it in various ways, so he added the shorts.
    Should such issues affect the aesthetic qualities of artworks? Should the sculptor have left both figures unclothed? Both clothed? Clothed the female and left the male unclothed? Or do what he did? Are the shorts an artistic mistake? 10

Case 9. Photographing the Civil War

Civil War photographer Matthew Brady frequently repositioned and rearranged bodies of dead soldiers and other objects in composing war scenes to be photographed. Is there anything about Brady's practice that should disturb us? 11

Group VI: The Evaluation of Art
These cases all focus on critical judgement: the assessment of the valued properties of art and their relative worth. Noteworthy here are many disputes about public policies affecting art, including which works may be publicly displayed, supported, staged, and so on, as well as the critical judgements made by teachers, reviewers, program directors, funding agencies, and many others. Are critical judgements in any way objective, or are they (merely) expressions of individual taste?

Case 10. Oh, No, Not that Same Story Again!

Lord Byron criticized Shakespeare as follows: "shakespeare's name, you may depend on it, stands absurdly too high and will go down...He took all his plots from old novels, and threw their stories into dramatic shape, at as little expense of thought, as you or I could turn his plays back again into prose tales." 12

    Is shakespeare's use of familiar stories an aesthetic defect? Is Byron an undependable critic because his own poetic style and aesthetic values appear to be so different from Shakespeare's? 13

Case 11. Shooting Clay Pidgeons
Paul Ziff says that the sport of clay pigeon shooting is of "no aesthetic interest." The same is true, he says, of tiddlywinks, shuffleboard, archery, baseball, basketball, bicycling, bowling, canoeing, curling, golf, and fishing. But some

sports do have distinct aesthetic aspects: gymnastics, ski-jumping, figure skating, high-diving, and bullfighting. He explains: "The relevant difference between the first and second group is this: form is a drading factor only for the second. How one does it counts in the second group of sports but not in the first. Sink the ball hit the target: that's what counts in the first group. Form doesn't. Hold the club any way one likes, look like a duffer: if one manages somehow to sink the ball expeditiously enough one may end up a champion." 14

Is Ziff right in dividing sports up in this way? Should the judging of all sports be revised to take aesthetic aspects into account? Does a sport remain a sport when it is judged on aesthetic grounds? 15

Case 12. The Damage of the Pieta

A hammer-wielding attacker has damaged Michelangelo's *Pieta*, destroying the Madonna's nose, shattering her left arm, and chipping her eyelid and veil. You, as a director of the Vatican Museum, must choose whether to preserve the sculpture as is or attempt to restore it. Suppose the options open to you are:

1. Do not alter the statue; do nothing to repair the damage other than clear away the rubble from the base of the statue.

2. Restore the nose, arm, eyelid, and veil as nearly as possible to their original appearance. You have available to you and your staff photographs and drawings of the Pieta made before the incident, as well as a plaster cast of the statue made forty years ago, and you can use a polyester resin to reaffix any salvageable fragments and to form a ground-marble plaster where fragments are too small to be used. If your work is successful, the new parts will look just like the old, and viewers will be unable to tell which parts have been restored. 17

COMPUTERS AND ART EDUCATION QUESTIONNAIRE

- Please write your Name and phone number on the back of the last page.
- Answer each question as quickly as possible.
- If you have any questions while completing this questionnaire, please put your hand up and the supervising teacher will answer your question/s.

---

1. Do you have a computer at home? (Please **circle** either Yes or No).

   Yes   No

2. How often do you use a computer each week?
   - ✓ Please tick **only one** box.

   ❑ Never
   ❑ 1 day a week
   ❑ 2 days a week
   ❑ 3 days a week
   ❑ 4 days a week
   ❑ 5 days a week
   ❑ 6 days a week
   ❑ 7 days a week

3. How often do you use the WWW (World Wide Web) for information each week?

   - ✓ Please tick **only one** box.

   ❑ Never
   ❑ 1 to 3 times a week
   ❑ 4 to 6 times a week
   ❑ 7 to 9 times per week
   ❑ 10 or more times per week

4. What do you mainly use the computer for?

   ✓ Please tick **one or more** boxes as necessary.

- ❏ Searching the World Wide Web
- ❏ CD-ROMS
- ❏ Word Processing (e.g., Microsoft Word)
- ❏ PowerPoint Slideshow presentations
- ❏ Graphic packages
- ❏ Emailing
- ❏ Online Chat
- ❏ Spreadsheets (e.g., Excel)
- ❏ Games such as _____
- ❏ Other. Please name _____
- ❏ I don't use a computer at all.

I think that utilizing a <u>computer</u> for my art classes could...	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree

5. Do you think that computers should be available in your art education classroom?

(Please circle either Yes or No).

Yes   No

6. Complete the following statement that closely matches what you think of learning art with computers?

   ✓   Please tick only one box on **each** line.

Be of **great value** to me such as helping me to increase my learning in this subject.					
Have many **opportunities** for me such as helping me to get a job.					
Help me to **research** art theory (studying art history & artworks in greater detail).					
Help me to **write** about the art theory part of my classes.					
Help me to **discuss** the art theory part of my classes.					
Help me to **make art**.					

7. If you were permitted to combine one or more of your favourite subjects with art education, would you find your art classes a lot more interesting to do? (Please **circle** either Yes or No).

Yes   No

8.   Which subjects would you combine with art?

First choice_____

Second choice_____

Third choice_____

Other comments or
suggestions?_____

_____

9.   If there was a special resource page on your computer (e.g., via the Internet or Intranet) that showed you how others have made connections between art and their favourite subjects, would you be interested in looking at these links?
(Please **circle** either Yes or No).

Yes   No

If one of my <u>favourite subjects</u> (other than art) was linked with my art classes in some way ...	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree

10.   Complete the following statements.
      ✓   Please tick only **one** square on **each** line.

It would be of **great value** to me.					
It would provide many **opportunities** for me such as helping me in my future career.					

11.   What is your preferences for learning art in the following ways?
       ✓ Please tick **one** of the boxes on **each line**

I like...	1 I greatly dislike This	2 I tolerate this in small doses	3 I find this okay	5 I enjoy this	6 I absolutely love this
Looking at art.					
Reading about art and artists.					
Writing about art and artists.					
Talking about art and artists.					
Playing logical games or puzzles that make me think more deeply about artworks.					
Listening to music that suits a particular artwork or style.					
Watching a video on art and/or artists.					
Reading a biography or autobiography on an artist.					
Learning something about yourself from studying art and artists.					
Classifying particular styles or periods in art.					
Recognising and naming artworks.					
Identifying the artist of particular artworks.					
Learning about some meaning in life from artworks.					
Learning about some spiritual and/or religious meanings in artworks.					
Making art					

I like...	1 I greatly dislike this	2 I tolerate this in small doses	3 I find this okay	4 I enjoy this	5 I absolutely love this
Creating original ideas to make your artworks.					
Re-interpreting the ideas of others to make your artworks.					
Learning artistic skills to create artworks.					
Learning art theory (studying artworks in depth and art history).					
Researching information about art and artists.					
Describing art.					
Analyzing art (e.g. what colours did the artist use in one of their artworks).					
Interpreting the meaning in art (e.g., what do the colours mean in the artwork).					
Judging art.					
Learning about the historical significance of artworks.					
Learning about the cultural significance of artworks.					
Learning about the social significance of artworks.					
Learning about the economic significance of artworks.					

12. What do you think about making art?

Making *art*...

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Has **great value** in my life.					
Has many **opportunities** in my life such as helping acquire skills for a job.					

✓ Please tick **one** of the boxes on **each** line.

13. What do you think about learning art theory?

Learning <u>art theory</u>...

	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Has **great value** in my life.					
Has many **opportunities** in my life such as helping acquire skills for a job.					

✓ Please tick **one** of the boxes on **each** line.

14. How do you prefer to learn art theory (an in depth analysis of artworks and art history)?

Answer each question as quickly as you can and as best as you can.

I would prefer to learn art theory...

✓ Please tick one of the boxes on each line.

Step 1		Step 2					
In each of the boxes below, write **either** a 1, 2, 3, 4, or 5. The '1' will correspond to your first choice in how you prefer to learn art theory while the '5' will reflect your least favoured choice in how you prefer to learn art theory: PLEASE WRITE EACH NUMBER ONCE ONLY **1** = highest preference & first choice **2** = second highest preference & second choice **3** = third preference & third choice **4** = second lowest preference & fourth choice **5** = lowest preference & fifth choice		In each of the boxes below, write a number between 1 and 5. These numbers represents how much of the time you would like to see computers used (see below) with others and/or by yourself to help you learn art theory. YOU MAY WRITE A NUMBER MORE THAN ONCE					
		1 Never, No Way (0%)	**2** A small amount of time (25%)	**3** Half of the time (50%)	**4** Most of the time (75%)	**5** All of the time (100%)	
	By <u>myself</u> only ⟶	& **with** a computer.					
	In a <u>small group</u> only ⟶	& **with** a computer.					
	From my <u>art teacher</u> only ⟶	& **with** a computer.					
	From my <u>art teacher</u> & <u>myself</u> ⟶	& **with** a computer.					
	From my <u>art teacher</u> & a <u>small group</u> ⟶	& **with** a computer.					

Appendix C

Interview questions.

Pre-Interview	Post-Interview

CLL's subject
(Beginnings: Students look at a painting made by Sidney Nolan)
1.   Arts Responses:
    Tell me about this painting?
    -Describe
    -Analyse
    -Interprete
    -Judge
    -Funding
    -Disclosing
2. Arts Ideas:
    Do you know what 3 or 4 circumstances led Nolan to come up with the idea for this painting? Name them.
3. Arts Skills & Processes:
    What can you tell me about the art skills and processes the artist used for this painting?
4. Arts in Society:
    What can you tell me about the
    -History
    -Culture
    -Social-Economic significance
    of this painting?
5 Pluses & Minuses
    What are the **Pluses and Minuses** of learning visual arts theory and art making.
	CLL's subject
	(Overall learning: Students look at a painting made by Sidney Nolan)
	1. Arts Responses:
	    Tell me about this painting?
	    -Describe
	    -Analyse
	    -Interprete
	    -Judge
	    -Funding
	    -Disclosing
	2. Arts Ideas:
	    Do you know what 3 or 4 circumstances led Nolan to come up with the idea for this painting? Name them.
	3. Art s Skills & Processes:
	    What can you tell me about the art skills and processes the artist used for this painting?
	4. Arts in Society:
	    What can you tell me about the
	    -History
	    -Culture
	    -Social-Economic significance
	    of this painting?
	5. Pluses & Minuses
	    What are the **SWOTs** of learning visual arts theory and art making.

CLL's tool 1. Have you ever used <u>computer</u> <u>technology</u> to learn about visual arts theory before? 2. If 'yes', can you give me examples? 3. What technology have you used for your visual arts classes (e.g., computers, digital cameras, WWW, etc). 4. Do you believe that computer technology can help you to exercise your knowledge so that you may have enhanced learning with visual arts theory? Explain your response. 5. What are the **Pluses and Minuses** of using computer technology to learn about visual arts theory and art making?	**CLL's tool** 1. What computer technology has been used overall this term to help you learn visual arts theory...and art making? 2. Do you think that Computer technology has helped you increase your to exercise your knowledge so that you could have enhanced learning in visual arts theory? 3. Why? 4. Is there any other computer technology that you wished was used? 5. Overall, what do you think are the **Pluses and Minuses** of using computer technology to learn about visual arts theory and art making?
CLL's learner 1. Which of these intelligences do you think are being utilized for your visual arts classes? (SHOW A LIST OF THE MULTIPLE INTELLIGENCES-Internal & External) 2. Have you ever learnt visual arts theory in conjunction with other subjects before? 3. If yes, how do you envision art and your chosen subjects to be linked together? 4. What do you think are the **Pluses and Minuses** of utilizing other intelligences/subjects with art?	**CLL's learner** 1. Which of these intelligences have been utilized in your visual arts classes overall? 2. Do you think that visual arts theory linked with other <u>subjects</u> helped you to exercise your knowledge and have enhanced learning with visual arts theory? 3. Why do you think these other subjects helped you to learn visual arts theory?

Appendix D

Art portfolios: 'A' grade students.

'A' Grade Students	Arts Ideas	Arts Skills and Processes	Arts Responses	Arts in Society
	An example of one of the following: 1. Paper collage 2. Pencil drawing 3. Self portrait 4. Blueprint drawing	Paper clay mask	Example of one of the following: 1. Describing 2. Analysing 3. Interpreting 4. Judging 5. Funding 6. Disclosing	One page graphic design Word document
Student A1				The Leader and Doctor Doom
Student A2				Cyclops
Student A3				Not completed by the deadline

Art portfolios: 'B' grade students.

'B' Grade Students	Arts Ideas	Arts Skills and Processes	Arts Responses	Arts in Society
	An example of one of the following: 1. Paper collage 2. Pencil drawing 3. Self portrait 4. Blueprint drawing	Paper clay mask	Example of one of the following: 1. Describing 2. Analysing 3. Interpreting 7. Judging 8. Funding 9. Disclosing	One page graphic design Word document :
Student B1				Not completed by the deadline
Student B2				Not completed by the deadline
Student B3	no drawings completed			Not completed by the deadline

Art portfolios: 'C' grade students.

'C' Grade Students	Arts Ideas	Arts Skills and Processes	Arts Responses	Arts in Society
	An example of one of the following: 1. Paper collage 2. Pencil drawing 3. Self portrait 4. Blueprint drawing	Paper clay mask	Example of one of the following: 1. Describing 2. Analysing 3. Interpreting 10. Judging 11. Funding 12. Disclosing	One page graphic design Word document
Student C1	No drawings exercises completed However, her mask was inspired by her WWW image of Medusa (the same 'snake' hair).			
Student C2	No drawings exercises completed			Not completed by the deadline
Student C3				

Appendix E

Consent letters.

Edith Cowan University
Robertson Drive
MT LAWLEY, WA 6050

Wednesday, 8 August 2001

FORM OF DISCLOSURE AND INFORMED CONSENT FORM
FOR THE STUDENT

Dear Student,

I am conducting research which trials a new learning approach for art education called Cross-Linked Learning (or CLL). This endeavours to meet all four of the WA Arts Learning Outcomes and especially the *Arts Responses* and *Arts in Society* Outcomes.

It is anticipated that the results of this new learning approach, which utilizes computers, may be one unique way of assisting you to have greater enjoyment and learning in art theory. I believe that this program will enhance your learning in art.

You are invited along with the other students in your Year 9 art class to participate in Stage 1 and Stage 2 of this research during your regular art classes in term 3. Stage 1 involves all consenting students in the class completing anonymous and confidential Questionnaires, Observations, and Art Portfolios. Stage 2 involves a further six students being interviewed one-on-one with myself.

The **Questionnaires** will consist of approximately 15 questions relating to what you think about computers, art, and your preferred way of learning. This questionnaire will be provided at the beginning of the term and take approximately 20-30 minutes to complete.

The **Observations** will be conducted throughout the duration of the term. I will conduct these observations while you and your peers are working in the art department's computer lab and in the art studios.

The **Art Portfolios** will be marked and recorded (confidentially and anonymously) along with all the other consenting students in your class.

The **Interviews** will be held at the beginning, middle, and end of the term and take approximately ½ hour to complete. The six students interviewed will discuss how they believe they are progressing throughout the term.

All information gathered will remain confidential and will not identify you in any way if the research is published. You have the right to withdraw from this research at any time. If you do not wish to participate, your teacher will organize other work for you.

If you do agree to participate in this research project, then please sign and return the **Informed Consent Form for the Student** provided on the next page in the self-addressed stamped envelope or via my fax number ((08) 9471-8968) in the next 3 days. Don't forget to ask your parents/guardian to sign below as well.

Thank you for your assistance in this research.

Kind regards,

Cassandra Zervos
(Principal Researcher)

INFORMED CONSENT FORM FOR THE STUDENT

I, ..., agree to participate in this project providing that I can withdraw at any time. I give permission for results of this research to be published provided that neither the school nor myself are identified.

Please **circle** the word 'agree' or 'disagree' in each of the following two statements:

1. I agree / **disagree** to participate in <u>Stage 1</u> of this research during term 3 and to: (1) complete the Questionnaire; (2) be Observed; (3) write in a Virtual Diary; and (4) provide my marks from my art portfolios.

2. I **agree** / **disagree** to participate in <u>Stage 2</u> of this research and to be interviewed during term 3.

_____   _____

Student's first name   Student's surname

(Please print clearly)   (Please print clearly)

_____   _____

Student Signature   (date)

_____   _____

Parent/Guardian Signature   (date)

Burning at Glenrowan and Siege at Glenrowan.

Burning at Glenrowan. Sidney Nolan. 1946. Enamel on Composition Board.
121.2 x 90.7cm. National Gallery of Australia. Gift of Sunday Reed, 1977.

Siege at Glenrowan. Sidney Nolan. 1946. Enamel on Composition Board.
121.2 x 90.3cm. National Gallery of Australia. Gift of Sunday Reed, 1977.

Appendix G

Class schedule and course outline: term 3, 2001.

Wk	Monday	Tuesday	Wednesday	Thursday	Friday
1	23-July	24-July Give students permission letters	25-July	26-July	27-July
2	30-July Pre-Questionnair Welcome - Intro Project	31-July AI: what's on the WWW; how to find hero/villain; PowerPoint Presentation AI	1-Aug	2-Aug	3-Aug
3	6-Aug	7-Aug Research the Heroe and Villains AI/AS	8-Aug Drawing and Design ideas based on Research AI	9-Aug	10-Aug
4	13-Aug	14-Aug	15-Aug Demonstration of sla techniques & basic construction over newspaper mould ASP	16-Aug Final Details in 3D and photographed masks in progress AI/ASP	17-Aug
5	20-Aug	21-Aug	22-Aug	23-Aug Studio Decorate and paint bisque fired masks	24-Aug
6	School holiday	28-Aug Studio Complete decoratid of final work. Pain polish, etc.	29-Aug Review of PP's and prepare for art exhibition	30-Aug	31-Aug
7	3-Sept	4-Sept Complete final drawings for P.P.	5-Sept Photograph and prese P.P. for exhibition	6-Sept	7-Sept The Creative Art Exhibition & Festival
8	10-Sept	11-Sept	12-Sept Arts Responses and evaluations post-questionnaire	13-Sept Complete P.P. presentations	14-Sept
9	17-Sept	18-Sept	19-Sept	20-Sept	21-Sept
10	24-Sept	25-Sept	26-Sept	27-Sept	28-Sept

Ceramics and Sculpture

Year 9 Course Outline   2001 Semester 2

The general aim of this outcome based course is to allow you the opportunity to explore creative activities that encourage your personal fulfillment through designing, making, and evaluating 3D art works. Through arts practice and an understanding of visual literacy you will develop appreciation and awareness of arts in society.

COURSE OBJECTIVES:

ARTS IDEAS
Generate art works that communicate ideas

Students will be able to:
Develop original ideas that have personal meaning and that are from personal expression.
Explore and experiment with art ideas by interpreting art from other times and places.
Use direct experiences such as observation, research, emotion and imagination to explore ideas.
Develop design with a range of processes to reach a conclusion.
Present the development of the skills of inquiry through predominantly drawing based experiences reflecting creative development of ideas and concepts.

ARTS SKILLS AND PROCESSES
Use the skills, techniques, processes, conventions, and technologies of visual art

Students will be able to:
Develop the ability to creatively manipulate a variety of materials using appropriate arts skills, techniques and processes. This course specifically covers the studio disciplines of CERAMICS and SCULPTURE.
Use the appropriate conventions or 'rules' of various studio techniques and understand how these adapt and change over time and in various contexts.
Create, explore, and develop studio work through the use of adaptation of traditional and emerging technologies.

ARTS RESPONSES
Use aesthetic understanding to respond to, reflect on, and evaluate the arts

Student will be able to:
Respond to art works using the processes of inquiry to consider aspects such as genre, style or movement, context and culture.
Describe and analyse their creative thinking and studio practice.
Make informed judgments about art works particularly 2D and 3D work by evaluating them using critical reflection and cultural values.

ARTS IN SOCIETY
Understand the role of arts in society

Students will be able to:
Value the arts and show positive attitudes towards studio practice and art within community.
Understand how 2D and 3D works contribute to the Australia visual arts of the past and present.
Appreciate how arts vary according to the context of the time, place, historical, and cultural influences.
Recognise the economic contribution the arts make to the Australian economy and how economic considerations influence the arts.

CLL Powerpoint slideshow of Nolan's Ned Kelly paintings.

The following pages are of the PowerPoint slideshow on Sidney Nolan's Ned Kelly relating to CLL's subject (AI; ASP; AR; AS) and CLL's learner (multiple intelligences). There are no slides relating to CLL's tool as computer technology is the tool for showing this PowerPoint slideshow.

The slides are in the following order:
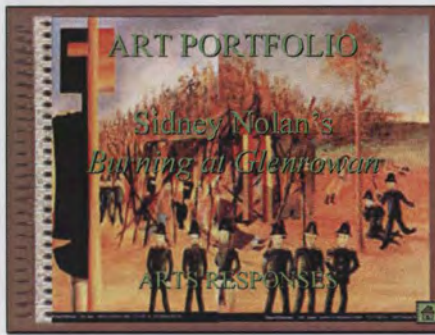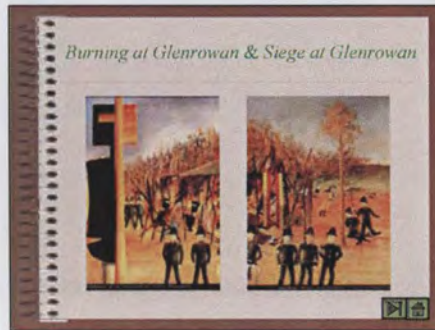
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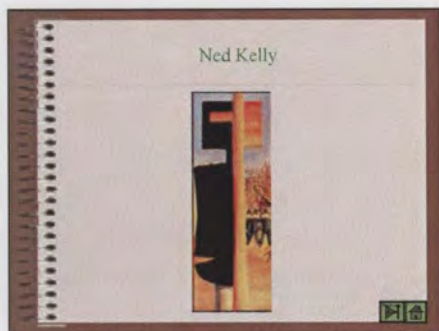
Slide 3
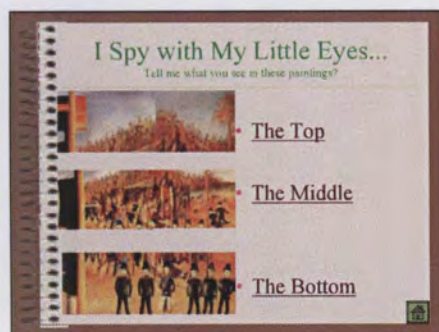
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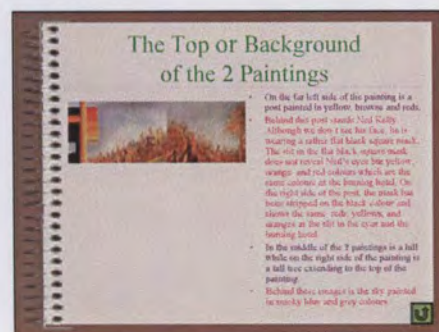
Slide 5

Slide 6

Slide 7

The Middle or Mid-Ground
of these 2 Paintings

Slide 8

The Bottom or Foreground
of the 2 Paintings

- The bottom of these 2 paintings shows a chorus line of 6 policemen who are facing us. They are preventing anyone (i.e., us) from entering into the scene behind them.
- The third policeman on the left is half policeman, half-horse. This is a man-horse or a contour with a "human body from the waist up replacing the horse's neck, and head". (Le Meunier & Melsunsk, 1955, p 120).
- On the left hand side of these 2 paintings is the bottom of the post of which Ned is hiding behind. In this section, we see the bottom part of Ned's armour.

Slide 9

Colour My World

Questions

1. What are the main colours used in these 2 paintings?

2. What do the colours mean in this artwork?

Slide 10

Colour My World

Answers

1. Black, red, *yellow*, orange, and smokey greys and blues. The red, *yellow*, oranges represent the hotel catching on fire while the smokey grey and blue sky represents the smoke from the fire.

Slide 11

Colour My World

Answers

2. The colours behind Ned's mask represent the fire in his eyes. This also means how angry he is with what the police have done to him, his family and the Gang.

Slide 12

Hide and Seek

Questions	Answers
Who is hiding?	Ned Kelly
What is he hiding behind?	A post.
What do you think he is communicating to us?	Through the colours shown inside his mask, he is telling us how fired up he is and how angry he is about what is going on around him.

Slide 13

Slide 14

Slide 15

Slide 16

Re-Interpreting Ned Kelly

- A visual arts
  Re-interpretation of
  the artwork

  *The Australian
  Magazine,*
  April 28-29, 2001.
  Cover Illustration by
  Ben Goss

Slide 17

Credits

**Arts in
Society**
Slide 1

Slide 2

Slide 3

Slide 4

Slide 5

Slide 6

Slide 7

**Arts Ideas &
the Multiple
Intelligences**
Slide 1
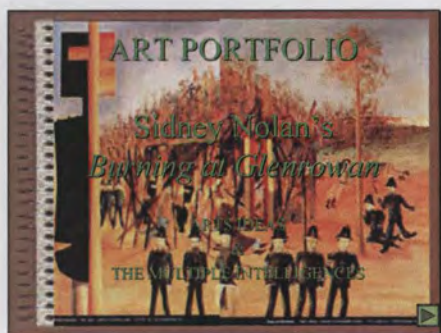
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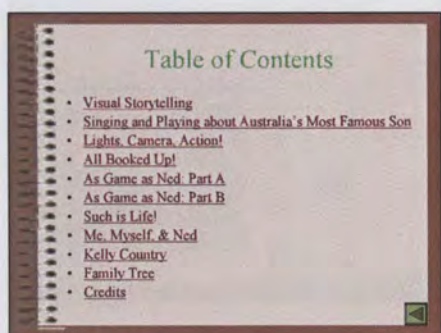
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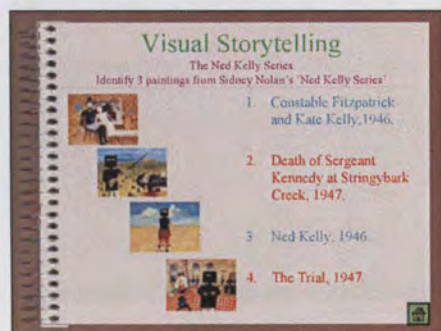
Slide 4

Slide 5

Slide 6

Slide 7

Slide 8

Slide 9

Slide 10

As Game as Ned!
Answer to Part B

At least 7 ploughs.

Slide 11
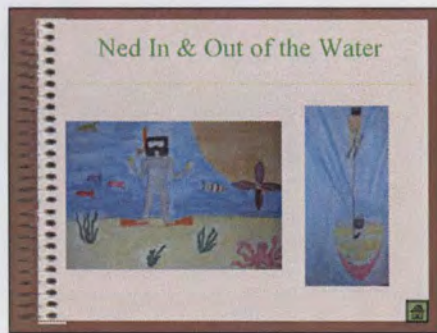

Such is Life!
A Biography on Sidney Nolan

Slide 12

Me, Myself & Ned

Slide 13

Slide 14

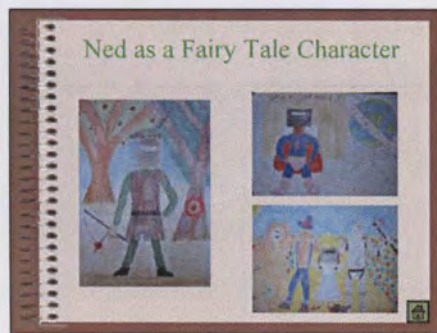Slide 15

Slide 16

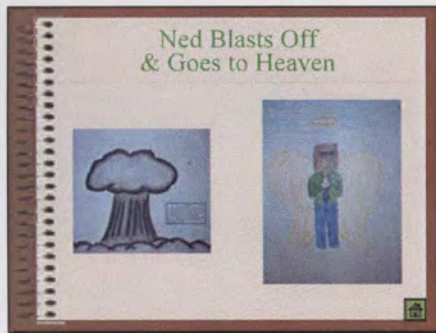Slide 17

**Arts Skills
&
Processes**
Slide 1

Slide 2

Slide 3

Slide 4

Ned & Mrs. Kelly

Slide 5

Ned In & Out of the Water

Slide 6

Ned as a Fairy Tale Character

Slide 7

Slide 8