Developmental Patterns of Individuals Within a Sensory- Based Learning Environment in Art Education:
Insights Emerging from a Case Study

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Developmental Pattern of Intelligence Within...

Sensory-Based Learning Environment in Art Education

Issues Emerging from a Case Study

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Abstract

My research permitted me to reexamine my recent evaluations of the Leaf Project given to the Foundation Year students during the fall semester of 1997. My personal description of the drawing curriculum formed part of the matrix of the Foundation Core Studies at the Ontario College of Art and Design. Research was based on the random selection of 18 students distributed over six of my teaching groups. The entire process included a representation of all grade levels.

The intent of the research was to provide a pattern of alternative insights that could provide a more meaningful method of evaluation for visual learners in an art education setting. Visual methods of learning are indeed complex and involve the interplay of many sensory modalities of input.

Using a qualitative method of research analysis, a series of queries were proposed into a structured matrix grid for seeking out possible and emerging patterns of learning. The grid provided for interrelated visual and linguistic analysis with emphasis in reflection and interconnectedness. Sensory-based modes of learning are currently being studied and discussed amongst educators as alternative approaches to learning.

As patterns emerged from the research, it became apparent that a paradigm for evaluation would have to be a progressive profile of the learning that would take into account many of the different and evolving learning processes of the individual. A broader review of the student's entire development within the Foundation Year
Program would have to have a shared evaluation through a cross section of representative faculty in the program.

The results from the research were never intended to be conclusive. We realized from the start that sensory-based learning is a difficult process to evaluate from traditional standards used in education. The potential of such a process of inquiry permits the researcher to ask for a set of queries that might provide for a deeper form of evaluation unique to the students and their related learning environment. Only in this context can qualitative methods be used to profile their learning experiences in an expressive and meaningful manner.
Acknowledgements

A meaningful journey can evolve only if a series of repeated connections can be reflected upon and related. Thirty years of experience as Artist/Teacher at the Ontario College of Art and Design had already developed a set of patterns that might have been difficult to change. With the guiding and understanding eye of a dear friend and colleague, Dr. Nora McCardell, a group of my colleagues and I were invited by Nora to seek the Master of Education program at Brock University. Nora’s recent passing can only conjure the sense of her guiding light that directed the potential in each one of us. Her encouragement and respect helped to provide a much-needed support throughout the five years of uncharted inroads. I will always remember Nora and would like to dedicate my personal transformations and growth to her eternal memory.

Learning very often takes place on the shoulders of others. At Brock University, I had the opportunity to meet many challenging voices. To the following, I would like to express my thanks.

To Professor C. Reynolds, for providing meaning for the multidimensional voices of culture and gender. Beyond stereotyping, there is always a place for the potential of the individual.

To Professor A. Schutz, for her love of the creative community and its unique set of creative activities. Her invitational forums of teaching integrated with the philosophy of John Dewey provided for sessions of exciting dialogue. Through motivation and encouragement, I was fortunate to learn new and alternative directions.

To Professor M. Connolly, my advisor and mentor, who consciously believed in my potential to make important connections
with my students. Over the last two years as the thesis evolved, I developed an insight of understanding for teaching and learning. The excitement of queries to be unfolded and shared is just beginning. Rarely does one have the opportunity to exchange creative ideas with a spirit of continuous growth and mutual respect.

The thesis is a creative relationship of many minds guided through roads up and down, but its dedication can only go to two parties: Professor M. Connolly and my dear family. No meaningful journey is possible without the love and encouragement of loved ones. Secondly, I dedicate this thesis to my dear wife, Karen, and my daughters, Andrea, Jaime and Nadine.
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CHAPTER ONE: INTRODUCTION

Background

This case study endeavours to explore visual and tactile patterns of learning that form a primary focal position of the current curriculum at the Ontario College of Art and Design. A progressive curriculum is one that permits a student to structure his or her own pedagogic space(s) and personal surroundings in ways that facilitate sensory-based knowledge. For visually gifted learners the senses, both visual and tactile, form the foundations of making meaning of reality with respect to their objective world. Every one of the sensory modalities of learning has its own language structure that is distinct from normal modal linguistic structures such as reading and writing.

For the past 30 years, I have felt the need to identify with alternative methods of teaching that would provide a more harmonious basis for learning. Recently, H. Gardner (1985) and his colleagues have provided theoretical frameworks for people that learn from a variety of complex perspectives and procedures. In teaching, I have experimented with a wide range of motivational and invitational approaches that can help facilitate transformative learning through a network of interactive interdisciplinary processes. In turn, young artists are able to develop meaningful strategies with respect to their own creative work.

Many of my students at the Ontario College of Art and Design have had a great deal of difficulty learning within formal educational settings. Alternative approaches must be explored if we are to be successful in reaching creative students who express themselves through a variety of sensory dimensions. I feel strongly
null
that the education of the senses is where we can begin to reach creative individuals. Sensory responses are dependent on the matrix and complex structures of their respective anatomies in all living organic structures, as pointed out by Edward T. Hall (1966), a cultural anthropologist. All of us have a great deal to learn about the semantics and syntaxes of the rich variety of modal expressions that facilitate learning. Through the world of tactility, textures stimulate the "natural" experiences of one's "natural" learning environment. A series of dialogical experiences bring about patterns of interpretations that are both subjective and rational. Through these different kinds of informed transformations, students learn to appreciate their own focused locations as unique learners.

My experiences at Brock University in the graduate program have permitted me to reflect on the strengths and weaknesses with respect to the manner in which I approach teaching. As artist and educator without formal training in pedagogy and professional teaching methodologies, I have often directed my skills in teaching from an intuitive perspective. Brock University provided the "raison d'être" and reinforcement in validating the good qualities of my approaches. Most importantly, I came to understand and appreciate my limitations as a human being. The craft of teaching is most difficult and calls forth all the attributes that an individual can and must provide to its integrity.

With the influential contributions by leading art educators such as Eisner (1971, 1972, 1979, 1984), Lowenfeld (1970), and Gaitskell (1970), institutions are beginning to change their perspectives of understanding about how and why people learn through different modes of expression and experience. Academic
educational researchers such as Gardner (1983, 1985) and Brookfield (1985, 1987, 1995) have provided much evidence in the literature to support my suggestion that textural and sensory-based experiences can facilitate a transformation that is critical, reflective and meaningful.

Central to learning through the structures of sensory-based knowledge is the required ability to develop complex connections to patterns that involve many different types of characteristics that can be combined through the education of the dominant sensory modality being put to task. Pattern awareness is the ability to recognize connections across seemingly disparate or related features. These connections can be reorganized based on changing parameters. In anatomy, I often use "aggregate patterns of grouping" when teaching students how to study complex relationships. For example, I might select a basic geometric property that could define the appearance of a certain group of bones and muscles. For artists, pattern recognition provides the ability to formulate characteristic attributes amongst sets of events. Creative strategies are often provided or determined through pattern associations (i.e., a drawing moves from within to take on new meaning).

In my close association with Gaitskell (1965), I feel one of the most important aspects of tactile learning is that of helping students bring forward their personal sources of pattern consciousness. I know through experience that inputs through the different senses must be respected for their differences in structure and also for their respective responses to stimuli. Students with different perceptual gifts will experience events in
unique ways that permit them to incorporate their associations into a variety of meaningful approaches.

Within a context that takes into account sensory-based tactile experiences, I hope eventually to provide learning experiences that are a mixture of concrete and formal experiences central to the creative needs of visual learners.

Rationale and Problem Statement

At the Ontario College of Art and Design over the past 30 years, I have been teaching students anatomy, drawing, painting and computers. These students who study visual arts come from many diversified backgrounds. For many, traditional methods of learning have been uneventful. According to Eisner (1971), there is a general tendency for these students to define their self-esteem and learning experiences in other forms of expression (such as visual arts, music and drama), usually less valued in existing educational settings. What makes such students so unique and a pleasure for me to observe is how they cherish their personal learning spaces through their tactile senses so highly developed in the anatomy of their hands and brains, and the “felt” connection between their hands and brains that is there for them. It is my belief that the development of a conscious acknowledgement of the natural phenomena which surround learners can be strongly enriched through sensory-based experiences.

At this point, I feel it is important to distinguish between experiential learning and sensory-based learning in visual arts. In experiential learning, the context of “doing” and “the doing” is significant in and of itself. Learners learn about something through
The researchers from Department A recently published a paper on the impact of social media on mental health in young adults. The study found that excessive use of social media can lead to depression and anxiety. They recommend limiting social media use to improve mental well-being.

In a related study, Department B analyzed the effects of sleep on cognitive performance. The results showed that adequate sleep improves memory and attention, which are crucial for academic success. They suggest incorporating regular exercise and a healthy diet to enhance sleep quality.

Both studies highlight the importance of balancing technology use and lifestyle choices to maintain overall health.
doing or experiencing of an activity.

In sensory-based learning, doing is still the ground; however, the metaknowledge and expression of the doing are a critical component of both the doing and the understanding of doing. Further, the tactile dimension of the doing and understanding is consciously emphasized in sensory-based learning.

Below, I will describe a course assignment which demonstrates the features of sensory-based learning which I have articulated in the preceding paragraph. The leaf project, designed by myself, used for this case study was specifically directed with the intent to facilitate and bridge the concrete experiences derived from studying leaves taken from their natural settings and directing visual observations into a formal and articulate experience that is both visual and written. These exercises formed a basis of experience that enabled the students to deal with a transformative set of tactile and visually focused defined realizations that would provide a gateway to further their understanding of pattern association between various levels of exploration, whether concrete or formal. All of these components were discussed and defined for students as expected outcomes for the respective exercises contained in the leaf project.

Leaf Project

Using a variety of tree leaves and plant specimens, various exercises were designed to explore the characteristics of linear description, pattern and shape associations, textural characteristics and tonal rendering based on geometric attributes. The use of the journal was emphasized to record observations essential for the
completed exercises stated below.

A. **Linear description.** Using a variety of leaf samples, explore the linear appearances in terms of the following straight, angular and curvilinear descriptions.

B. **Pattern and shape associations.** Using a variety of leaf samples, explore their contrasting descriptions in pure black shapes against the white background of drawing paper. The tabular formatting of these selected images will provide the similarities and differences between groups of leaves in terms of both descriptives and geometric characteristics.

C. **Textural explorations.** Study decaying and transformed “Fall” seasoned leaves with the aid of magnification. Determine an abstraction of patterns in a repeated format and then proceed to render textural solution.

D. **Tonal volumes.** Analyze the turning volumes of “Fall” leaves through the use of the basic geometric configurations such as cones, spheres and cylinders. Describe these geometries in a transformative displacement centered around their axial core descriptions. Control the lighting to enhance the appearances of these volumes and proceed to render.

Each of the exercises requires that students handle (i.e., carried, touched) materials before rendering a visual impression of the materials. According to Dondis (1973), the visual grammar of each exercise is strongly enhanced by the tactile connection to (hence, understanding of) the textures of the materials. (An example of a leaf project is in Appendix A.)

According to anatomists Wilson and Wilson (1983), research has indicated that the structure of sensory-based stimuli must be
staged against the architecture of the autonomic (sympathetic/parasympathetic) nervous system. The complexity of the autonomic nervous system is internally antagonistic, such that the sympathetic is the “stimulator” and the parasympathetic is the “inhibitor”/relaxer.

Furthermore, it can be shown that the structure of the synapses that relate and respond to tactile stimuli are chemically and environmentally sensitive to the nature of the stimuli. In addition, anatomists have shown that the nerve endings, particularly in the hands, are highly specialized architecturally to respond to pain, temperature, pressure, proprioception and other tactile traits. As educators, we have a great deal yet to learn about these reactions and their implications for learning.

These complex structures of learning are nontraditional in their approach and decenter the learning experience to invite both the teacher and students into positions of transformative and creative dialogues. The linear thinkers of yesterday’s paradigm for education must shift gears in order to accommodate the wide range of complex modes of learning through the stimulation of the senses. Gardner (1985) strongly supports vital contributions of the arts to students’ sensory education in six main areas:

- In developing the full potential of human intelligence
- In developing the ability for creative thought and action
- In education of feeling and sensibility
- In the exploration of values
- In understanding cultural change and differences
- In developing physical, linguistic and perceptual skills.

For educators such as Gaitskell and Lismer, the arts play such
an important role in making concrete experiences more relevant for the learner. Sensory-based modalities of learning are now being understood and researched by a wide range of disciplines. From my own perspective, I have come to realize that many forms of learning make up the nature of the way people perceive their complex world. My transformation as a learner compels me to be compassionate as a teacher and enact radical change in the organization and facilitation of learning processes. My belief in the fundamental significance of experiential work for learners and teachers provides the underlying rationale for developing visual arts learning experiences which are sensory/tactile driven. It is for this reason that I intend to define my problem statement around a central focus which concerns itself with the learning patterns of individuals within sensory-based modalities of expression.

Hence, our problem statement can be best presented as follows:

-How does one take into account (i.e., describe and evaluate) the student’s experiences within sensory-based learning environments?
-What must be considered in this “accounting of”?

Technical Terms

Defined centres of learning: Students define their terms for the proper environment that facilitates potential growth for learning new patterns of consciousness.

Dialogical experiences: experiences of communication of one’s learning through various forms. These can be verbal, visual, written, notational (journal) or metaphorical. Dialogical experiences provide the interconnectedness with previous learning experiences and
linkage with other disciplines:

Pattern recognition: the educated use of all one’s senses to interpret the arrangement of and connectedness between elements in an array. The essence of pattern awareness is a key component structure to transformative learning. Levels of pattern recognition evolve through a process of levels of investigation directed by the nature of inquiry. As students proceed and mature in these transformative dimensions, they can then bridge their learning experiences in a holistic dimension. Only through this long process of critical transformation is one able to creatively relate to the paradigm at hand with personal insights and in turn a personal accord of language.

Time phase learning: In my experience in teaching art, I have observed that not all perceptual experiences can be learned within the same time frame. Very often there are preferred times to introduce certain visual experiences. Educators have a great deal to learn about timing in education.

Fifth language: The fifth language is appropriate for communicating in the contemporary environment of the electronic computer age. There are distinct methods in the way we design our information language.

Sensory-based knowledge: knowledge or knowing which is grounded in accepting the body as a primary site for apprehending, understanding, organizing, and disclosing meaning.

Ingredients of tactility: discriminations based in touch, heat, light, noise, smell, vibration, motion, including the totality of sensory array available to the body and those structures of the body involved in sensation and perception.
Fine artists: define their own dynamics and intensity of exploration, often utilizing the full dimensions of their page layout. Their expressions tend to be evolving and outgrowing.

Designers: organized and shaped conscious. Sense of spatiality is higher, with the ability to juxtapose both images and text throughout their presentations.

Experiential learning: the context of "doing" and "the doing" is significant in and of itself. Learners learn about something through doing or experiencing an activity.

Sensory-based learning: Doing is still the ground; however, the metaknowledge and expressions of the doing are a critical component of both the doing and the understanding of doing. Further, the tactile dimension of the doing and understanding is consciously emphasized in sensory-based learning.

Visual learner: searches for information directly from the environment via sight.

Haptic learner: searches for information directly from body sensations, subjective experiences with which the subject is emotionally involved.
CHAPTER TWO: LITERATURE REVIEW

Introduction

The review of the current literature provides a position where I can ascertain meaningful directives and connections that both support and oppose the many defining principles of sensory-based language methodologies for a meaningful and inviting curriculum. A good variety of the literature identifies the very complex nature of sensory-based language modes of sensory learning. The application of sensory-based forms of learning are somewhat recent in their history and development. The review of the literature helps to provide a positive support for directing and defining an alternative paradigm for learning that is essential for contemporary education.

I have developed a set of schemes that are interrelated in order to bring a sense of comprehension and order to the large array of literature. The presentations of these schemes help to discern the connections between them. The primary focus of my schemes is to respect the positions of traditional philosophical boundaries regarding knowledge and learning that take into account theories of knowledge, reality, and value.

Epistemological forms of inquiry must take into account the traditional beliefs of the community. The ontological issues that provide the very essence of meaning to our experiences must be incorporated and sounded within our new models of learning. From an axiological perspective, the key question, What is valuable? from the learning experiences can be formulated only through a well structured platform of reflective and critical assessments of how the learner perceives various transformative experiences through
sensory-based modalities of learning. The value of these transformative sensorial experiences provides a holistic overview for meaningful learning.

In the literature review I present several theorists whose work provides insight into the aforementioned traditional and ontological issues and meaningful learning experiences. I present my literature on learning models in the following categories: (a) traditional, (b) transitional, and (c) contemporary.

The following summarizes the key contributing theorists and their concepts. This form of visualization provides a meaningful direction that enables both the researcher and reader a better understanding of the dynamic processes that are present throughout the matrix of these complex forms of conceptual inquiries and processes. Figure 1 represents the historical framework of learning models.

Learning Models in Traditional Mode

Traditional methods of teaching and learning have always been designed with focused content-associated experiences. The relationship between teacher and student are appropriated with respect to the teacher as information specialist and student as information recipient.

Historically, the paradigms for learning have been based on sequential, logical models that favour the disciplines of science rather than the arts and humanities. As a result, traditional methods of teaching and learning are often translated through the acquired skills of reading and writing with a strong directive that is deterministic in character. Relevant learning can be accounted for
Learnings

Traditional Models

- Tyler
- Piaget

Transitional Models

- Dewey
- Whitehead

Contemporary Models

- Postmodernists
- Reconceptualists

- Pinar
- Aoki
- Lather
- Hooks

Adult Education

- Gardner
- Mezirow

Art Education

- Eisner
- Lowenfeld
- Gaitskell
- Dondis
- Hall
- Logan

Concepts

- political and social implications
- sequential and defined stages of development
- curriculum prescribed outside the learner
- behaviour and psychological profiles of the learner are taken into account and evaluated against expected measures

- respect for historical and traditional values
- educational experiences that are meaningful to the growth of the individual
- recognition of the democratic positions with respect to choice and freedom to develop one’s full potential
- learning experiences that are both concrete and formal

- multiple voices, multiple locations perspectives of learning
- learning personalities
- lifelong learning
- alternate learning experiences
- teacher-student relationship
- transformative centers of learning
- of learning directed through strategies of critical reflection
- sensory and cognitive platforms for learning

Figure 1. Learning models.
through statistical models that enable one to match expected results in discrete numerical quantities.

Clarence Kinsley (1918) in his book, *Cardinal Principles of Secondary School Education*, discusses the historical background of school reform that took place in the early 1920s. Reforms were directed towards post-War I nationalism and Americanization of immigrants. As a result, the learning experiences were centered on social issues with a utilitarian orientation.

Many of these traditional aspects of questioning have been carried forward in the learning institutions. Basic assumptions that imply the specific acts or behaviour in the classroom are still measured by the success that a teacher can evaluate. According to Kliebard (1986 cited in Pinar, 1975) this development of teaching techniques without regard for reflecting on the nature of learning processes is at best a procedure that develops into a technology of teaching. The end is only to measure those students that can be accounted for achieving certain measured results based on expectations and behaviour.

History illustrates to a large degree where and why certain attitudes in learning have developed. Franklin Bobbit (1924 cited in Pinar, 1975) was the first to state that well-defined objectives were important in learning. After the objectives are well defined, the learning experiences can be well stated. His major work devotes a large amount of space to the listing of objectives. This work had an influence on the Tyler Model that was concentrating away from "ability to" to a transformation that focused onto "behavioural and operational" forms of learning. Tyler (1949) was interested in the production model of how the processes of teaching and learning go
hand in hand through the control empowered by the political nature and interests of the institution. In conclusion, the Tyler contemporary model becomes a well-defined “technological model” that imposes certain specifications and expectations on how we want the student to behave and learn. In turn, our objectives become the stepping stones for simply checking behaviour and expectations.

Tyler’s model was introduced in 1949. Still an important force in the area of teaching and learning, Tyler was able to identify four basic questions that are the backbone of his model:

What are the educational purposes that the school seeks to attain?

What learning experiences can best be described that can be useful to the defined objectives?

How can learning experiences be organized for effective instruction?

What measures of evaluation can we use to evaluate the learning process?

Many of Tyler’s concerns are based on the principle of accounting for expected patterns of behaviour during the process of learning. Tyler (1949) states that the student is expected to illustrate a kind of behaviour that can be accounted for and evaluated. The overall plan starts from three distinct “sources”: student, society and subject. These sources contribute to defining the main objectives of the school that in turn get filtered through traditional methods of how educators perceive the way people traditionally learned.

For Tyler, all strands of his model are to ensure that each “discipline” is completely defined independently within itself. The
bridges between these disciplines were to be expressed as afterthoughts at some future time in the growth of the individual. Education was seen as a "total culture" through the summation of its parts designed through the independent sequence of deterministic experiences.

Tyler (1949) had in mind when composing his screening mechanism a way that values could be contained within the boundaries of democratic principles. Hence he ensured the recognition of the individual, their wide participation in all phases of activity, the development of one's personality, and the development of the potential of the individual in the nature of questioning.

During this period of reform, Tyler was strongly influenced by a number of theories of learning and human behaviour. Piaget played a major role in directing many of the attitudes that provided the defining stages for the transformative relationships regarding learning experiences. Piaget (1963) categorized learning through a series of maturation processes. He felt that when children reached certain distinctive ages their anatomical structures developed in a manner that enabled them to deal with a diversity of complex learning experiences ranging from concrete to formal. Tyler's paradigm for learning was in accord with the central principles of Piaget and his associates.

Piaget's organic and biological description of learning was seen as follows:

- the institution as the inside environment;
- the learning context as prescribed contents;
- the measured outcomes and expectations as recycling and
feedback; and

the learner exists in symbiotic relationships that are controlled in a sequential pattern of prescribed directives that reassure that the dynamics of learning are kept in equilibrium.

Many of the early educational forms were formatted in a manner that satisfied the social and regional expectations. Mechanistic and insular in character, the learner was expected to explore ranges of experiences that were to a large degree divorced from personal and creative cross-fertilization between disciplines. The notion of learning was bounded within the institution with little regard for including the personal experiences from one’s immediate learning environment. This scientific model did not provide an umbrella for the in-depth series of inquiries that are normally associated with the humanities and art-related disciplines. The necessity for a shifting paradigm took place gradually as historical needs and new understanding of how people learn were provided from different viewpoints and directions. Hence, it became important to reflect on these discrete processes and construct experiences that might be more inclusive of the learner’s personality and needs. This transitional period is hallmarked by two giants of educational reform, John Dewey and Alfred North Whitehead.

Learning Models in Transitional Mode

Normally, transitional phases are slow periods when a shifting paradigm takes into account valuable experiences from the past and suggests new directions of interpretation and implementation. Many of the characteristics are similar in pattern, but their emphasis is slightly shifted to bring on an alternative transformation of
solutions.

Alfred North Whitehead (1960), an English scholar, mathematician and philosopher wrote an abundance of literature that was critical of the school system in England at the turn of the 19th and early 20th centuries. The dichotomy between the social preferences for science over humanities brought about a fracturing with respect to the balance of disciplines within the school. Whitehead felt that to a large degree the contents of the different disciplines were loaded with inert levels of information not particularly useful to the needs of the student. Trained as a mathematician, he felt that the "classical traditions and values" provided the highest platforms for enriching intellectual powers. As a philosopher and educator, his holistic view of educational reform placed a strong emphasis on the essential linkages of pattern association across disciplines. Like Dewey, Whitehead centered much of his reform principles in a manner that respected the potential of the learner and those real-life experiences that fortified the relevant experiences necessary for learning.

In a similar pattern to Piaget, but contrasted with experiences of emotions, Whitehead suggested three developmental cycles or stages of learning based on age divisions:

Stage of Romance (1-12 years of age)
Stage of Precision, period of discipline (14-18 years of age)
Stage of Generalization (18-21 years of age).

Unlike Piaget, Whitehead recognized that the nature of learning must be defined from the perspectives of personal impulse and desire. For Whitehead the umbrella of classical education provided the stage for developing one's potential intellectual capabilities.
According to Dewey (1966), traditional education tended to ignore the importance of personal impulse and desire as moving springs. The occurrence of both impulse and desire are not the final end in themselves. Dewey believed that social intelligence defines the interaction between student and teacher through conscious dialogical sharing of experiences. Such experiences, expressed around focused centers provided by students, were important steps to ensuring academic freedom and the realization of the potential growth of an individual in a democratic setting.

In his book, *The Meaning of Purpose in Experience and Education* (1967), Dewey presupposes some of the limiting traits in the Tyler tradition. Like Whitehead, Dewey's interest in reform explored pathways that were invitational and respectful for the diverse and complex human makeup of day-to-day experiences that provided a synthesis for meaningful learning. The interdependence of concrete and formal platforms were seen as a natural continuum of each other that developed with maturation as one reached certain ages of schooling. Dewey felt intelligent activity leads to the identification of freedom with the immediate execution of impulses and desires. The traditional scheme is, in essence, one of imposition from above and from outside. It imposes adult standards, subject matter and methods upon those who are only growing slowly towards maturity.

<table>
<thead>
<tr>
<th>Traditional Values</th>
<th>Progressive Values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>values</strong> external discipline</td>
<td><strong>values</strong> internal discipline</td>
</tr>
<tr>
<td>obtained through experience</td>
<td>bringing about a renewed sense of freedom</td>
</tr>
</tbody>
</table>
values learning from texts and teachers
values learning through immediate experiences within a defined cultural environment
values acquiring knowledge values knowledge essential for a more or less remote future for changing societal demands within a contemporary society

In conclusion, Dewey defines traditional objectives as follows:
organized bodies of education;
prepared forms of skill related to these resources of information;
subject matter and standards of behaviour are handed down from the past;
students are encouraged to be docile, receptive and obedient;
books are the chief representatives of lore and wisdom of the past.

During this transitional period, Dewey (1966, 1967) and Whitehead (1960) examined all aspects of learning. The mainstream of their research centered on the evaluation of subject content. The organization and evaluation of subject matter investigated the following types of questions:
What is the place and meaning of the subject matter?
What does one mean by the organization within experience?
How does the subject matter function?
What results follow when the materials of experience are not progressively organized?

Our contemporary philosophy of education must partake in exercising the disciplinary and critical platforms of strategies that ensure a meaningful dimension to defining the societal perspectives
of education. The traditional questions that direct themselves to "What is knowledge?" and all its associations must be clearly defined. Dewey in subsequent chapters stresses the importance of building and respecting a continuum of past histories with their direct correspondence to contemporary values. Previous paradigms must continue to have a linkage of valuable lessons that will provide safeguards or boundaries for reformed ideas. According to Dewey (1966), the solution of this problem requires a well thought-out philosophy of social factors that operate in the constitution of individual experience.

The transitional period of reform paved the way in which the next generation of theorists, the reconceptualists, might do their research. The nature of learning would begin to address concerns for such issues as multiple voices, multiple locations, perspectives of learning, learning personalities, and so forth. Both Whitehead and Dewey focused their reforms around the meaningful everyday experiences relative to the learner that initiated the matrix of linkages to support and nurture concrete-formal learning relationships. This fertile soil of change enabled the next generation of theorists to examine their priorities from a diverse set of perspectives.

Learning Models in Contemporary Mode

A large volume of literature justifies the needs for an alternative and politically relevant context for addressing educational needs. New pathways encourage theorists to bring forth alternative methods and linkages that are reflective and transformative interpretations for education.
I have selected three major areas of paradigm shifts that I feel have a direct bearing on my thesis. Each one of these areas is complex by nature, and pivotal on a distinct focus. In each of the three cases, I have researched the literature with respect to some of the major architects: the reconceptualists, adult educators and art educators. Generally, these multitude of voices can be seen as ways in which postmodern theorists are attempting to define learning experiences from the diversified needs of a dynamic and contemporary society. As indicated in Figure 1, the diversity of energies, insights and shifts provided throughout this contemporary period has painted an exciting multidimensional array of platforms that permits us to address our own concerns for lifelong learning.

**Post Modernists/Reconceptualists**

The umbrella of associated theorists described as reconceptualists owe a good deal of gratitude to the major theoretical works inspired from the various cognitive science disciplines. During our recent history, learning agendas have had to deal with the impact of technology, political forces, personal empowerment, lack of financial support and the resurgence of equating education with the workplace. According to Gardner (1985) in his book, *The Mind's New Science*, "central questions to learning had to be re-considered. What is the best system of learning that enables the student to deal with problems and decisions in a rich global and multicultural setting?" (p. 42).

The cognitive science (multiple disciplines) group can be dated from the initial "spirited meetings" that took place in the
Massachusetts Institute of Technology on September 11, 1956. Miller (1979) in A Very Personal History (cited in Gardner, 1985) writes about the presence of many leading figures in communications and human sciences. Two powerful metaphors, Herbert Simon's "Logic Theory Machine" and Noam Chomsky's "Three Models of Language", provided the impetus for reviewing the cognitive processes of learning away from the mainstream descriptions of behaviour and psychological viewpoints. Miller notes that the scientific parameters of each model have an inviting configuration of feedback mechanisms that can be accounted for and scrutinized along its pathways.

The major impact that this Symposium on Information Theory provided was an expression for a new set of patterns that theorists from all disciplines would and could be permitted to analyze their own respective learning experiences. The symposium allowed a spirited community of researchers from all disciplines to share their respective models of references that would provide for a fuller and enriched state of learning.

According to Pinar (1975), the advancement of educational theory could be brought about with the inclusion of the following reconceptualizing situations:

- acceptance of tradition as a starting position;
- acceptance of a critical platform to effect change (nature of criticism);
- acceptance of an inclusive paradigm that introduces existentialism and phenomenology into the field; and
- acceptance of various dimensions of human experience.
Revisionists or Reconceptualists

The reconceptualists' objective is to redefine and reconceive learning as both tacit and explicit. Criticism based on various structures and methodologies from the disciplines of social science, behavioural science, humanities, and psychology allows for a range of formatted criticisms (Pinar, 1975):

- historical format (Lawrence A. Cremin, Herbert M. Kliebard);
- methodological format (Michael W. Apple, Ross L. Mooney);
- political format (Ross L. Mooney);
- language format (Dwayne Huebner, Maxine Green, William Pinar).

I have provided support for many of the ideas that postmodern theorists elevate to the redefined positions of what is true knowledge and the complements of meaningful learning experiences that can further validate these new positional experiences. In playing with some of these ideas that help to validate and inform the importance of tactile and sensory-based language modes of learning, the following set of procedures provides a rationale of procedural linkages for transforming one's experiences:

- observation of surrounding conditions;
- relating current experiences with past experiences and sharing similar experiences with others in a similar context; and
- making judgment with respect to the current events.

Pinar (1975) states, "Intelligent activity leads to the identification
of freedom with immediate execution of impulse and desires" (p. 79). According to Pinar, the dynamics of change that are currently taking place with respect to teaching and learning are in a state of flux as a result of the multitude of research taking place.

Huebner (cited in Pinar, 1975) stressed the importance of language in the structure of reforming learning contexts. His concerns for reform were rooted in their historical perspectives in a way that permitted him and his fellow theorists to categorize the use of language as descriptive, explanatory, controlling, legitimizing, prescriptive, and affiliative.

Others, like Kliebard, Smith and Ross (cited in Pinar, 1975), were able to design their learning experiences centered on the Model Process Concept such as specifying the role, identifying specific tasks, selecting tasks to be taught, analyzing each task, stating performance objectives, specifying instructional sequence. etc.

Learning experiences are drawn from cultural development of a civilization. Jerome Brunner (1961), in his book The Process of Education (cited in Pinar, 1975), feels that the reconceptualising of the subject matter of schools should take place around the structure of disciplines and the modes of discipline’s inquiry. On the other hand, John A. Brownell and Arthur King, Jr. (1966 cited in Pinar, 1975) state that the rationale for the priority of disciplines lies in the assertion that man’s essential nature is most reasonably fulfilled by his symbolic capacities with priority on general ideas and especially those most learnable.

Pinar (following Dewey) would argue against the supremacy of discipline-based knowledge and encourage cross-disciplinary experiences.

Creative and newly defined boundaries for postmodern reform have provided a magnitude of literature that illustrates the complexities of viewpoints that make up the backbone of inquiry. Recent research is now incorporating insights that reach out beyond just the descriptive nature of knowledge to be more inclusive of and relevant to the social, human and personal qualities. The next two important supporting platforms for reform take their influences from both adult education and art education.

Adult Education

The entry of a large population of adults returning to education has directed attention to readdressing a meaningful exploration of what are essentially those characteristics that provide for meaningful forms of learning. A number of critical social theorists have made enormous contributions that illuminate the manner in which we can value and bridge lifelong learning for adult learners. From these perspectives the very central rationale for developing sensory-based forms of learning may be exercised to their full potential.

For Freire (1970), “What is knowledge?” is in direct opposition to the positivist paradigm currently dominant in educational theory. Positivists view knowledge as neutral, value free, and objective, existing totally outside of human consciousness. In contrast, Freire insists that:
Experimental and theoretical results indicate that the缅怀中国革命的需要，使中国革命在缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要，使中国革命的缅怀中产生革命的需要。
knowledge is not static.
there is no dichotomy between objectivity and subjectivity.
there is no dichotomy between reflection and action.
knowledge is not neutral.
Freire states that knowledge is continually created and recreated as people reflect and act upon the world. Knowledge is not fixed permanently in the abstract properties of objects, but is a process where gaining existing knowledge and producing new knowledge are two moments in the same cycle.

Furthermore, Freire (1970) searches for additional properties for defining reality. “Knowledge . . . necessitates the curious presence of subjects confronted with the world. It requires their transforming action on reality. It demands a constant searching . . . . In the learning process the only person who really learns is she/he who . . . re-invents that learning” (p. 101).

According to Collins (1977) in his book, Paulo Freire: His Life, Works and Thoughts, Freire felt that the world of learning should share its knowledge base as “giving” rather than “given” (p. 82). Subjectivity and objectivity are not two separate ways of knowing.

Freire (1970) in his book, Pedagogy of the Oppressed, states:
To deny the importance of subjectivity in the process of transforming the world and history is . . . to admit the impossible: a world without people . . . . On the other hand, the denial of objectivity in analysis or action . . . postulates people without a world . . . [and] denies action itself by denying objective reality. (pp. 35-36)

The purpose of education is for people to humanize themselves by overcoming dehumanization through the resolution of the
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fundamental contradiction of our epoch: that between domination and liberation.


a critical mode of reasoning and behaviour . . . [that] functions so as to help people analyze the world in which they live, to become aware of the constraints that prevent them from changing that world, and, finally, to help them collectively struggle to transform that world. (pp. 114, 116)

For Freire and Giroux, the interpretation of reality is directly connected to experiences that imply understanding any fact or situation in its historical, socioeconomic, political, and cultural contexts. The causal relationships that make connections to other phenomena enable the learner to see how the processes of learning might humanize or dehumanize. They feel that a critical model of reflection should include the following processes:

1. Mediation - challenges the "taken-for-granted"
2. Appropriation - focuses attention on the human agency on how people's action both continues and challenges the relations of domination
   - critical knowledge involves uncovering the limits and possibilities for transforming our world
3. Transcendence - unites commitment with theory
   - uses knowledge to reconstruct society that is "free of alienating and oppressive social institutions and life forms."
   (Giroux cited in Freire, 1970, p. 122)

In contrast to the reform direction taken by Freire in third-
null
world-country settings, both Mezirow and Brookfield provide paradigms of reflection and transformation by reviewing the learner’s background perspectives in a manner that provides for a more human and trusting form of education.

In his book, Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning, Jack Mezirow and associates develop models of inquiry that profoundly review the psychological frameworks of one’s attitude towards one’s learning experiences. Karen S. Kitchener and Patricia M. King (cited in Mezirow, 1990) state that the Mezirow model for critical reflection emphasizes the need to question the assumptions that are used to solve problems. Many types of problems meet the learner from well defined to ill defined. “Transformative learning is aimed at helping the individual become more aware and critical of assumptions” (p. 159).

Reflective thinking is studied in terms of its epistemological levels that imply that various levels of interpretation take place depending on the learner’s skills and maturity. “The Reflective Judgment Model” proposed by Kitchener and King (1981, cited in Mezirow, 1990) illustrates the complexities and uncertainties that are required to move through the five stages of the model. Through this long learning and maturing process of reflective development one is able to move into the realm of a meaningful transformative and emancipatory learning structure.

From the social theorists that have propagated many new approaches to learning, it seems only fitting to review briefly the central position that art education brings to the foreground of how we can effectively add other forms of meaning to the education that
incorporates our tactile and sensorial forms of interpreting reality.

Art Education

In his book, *Frames of Mind*, Howard Gardner (1983) suggests the notion of **multiple intelligences** that are used in translating everyday experiences:

- Linguistic intelligence, related to words;
- Logical mathematical intelligence;
- Spatial intelligence, related to visualization;
- Kinesthetic intelligence;
- Musical intelligence;
- Interpersonal intelligence; and
- Intrapersonal intelligence, aware of one’s belief system and its effects on action, and involved in reflective processes of all the arts.

The implementation of these various intelligences now forms the basic skeleton for new curriculum designs. For Gardner, education and self-development are based on many intelligences that reside in the human mind. Art education expands the concept of education beyond the traditional emphasis in the verb land of mathematical modalities and allows all students to learn and contribute according to their dominant and individual learning styles.

Gaitskell (1970), Like Rousseau, felt that children must be able to control their own learning experiences. Visual thinking starts from a very early age. Different stages provide for a description of skills that allow one to express and articulate one’s surroundings:
1. Stages of manipulation (kindergarten to grade one).
2. Stages of symbols (first grade - grade 3)
   - pictorial-verbal statement
   - symbols directed to everyday experiences and environments
   - differentiation of symbols
   - refinement of symbols: verbal and visual.
3. Symbol and environmental phase
   - introduction to baseline, skyline
   - variation of symbol sizes: direct focus
   - development of personality traits.

Gaitskell's classifications are succinct in a manner that illustrates the syntaxes of visual development over a chronological time frame. These stages are a result of genetic predisposition and institutional nurturing within the environmental setting of the individual.

Developmental Growth:
1. Young children
   - early expression
   - egocentric
2. Later childhood
   - organization is articulated
   - visual space is more cautious and studied
   - increasing reality
3. Adolescent
   - stereotyping
   - artistic differences between the sexes.

Gaitskell (1970) believed that art education must adhere to the principles of social values and democratic freedom. He was
conscious that the maximum development of an individual can be stimulated only against a reference of social settings that account for a diversity of artistic expressions. He was concerned about enforcing rigid boundaries of classification into the mainstream of visual learning.

Viktor Lowenfeld (1970), a leading contemporary art educator of Gaitskell, felt the emergence of personality types that should be examined. He felt that two creative types could be identified and creative activities can begin from these two distinct positions:

**Visual type:**
- searches for information directly from the environment via sight.

**Haptic type:**
- searches for information directly from body sensations, subjective experiences from which the subject is emotionally involved.
  - touch, sensory feelings, muscular sensations and kinesthetic fusions provide input to its dimension.

According to Lowenfeld (1970), "most people tend to fall between the two extremes. Twenty-five percent, one out of four individuals depends more upon their subjective reactions, such as touch and kinesthetics, than upon vision" (p. 259).

The reading of Gaitskell and Lowenfeld defined the boundaries of my research in providing an understanding of what is implied by sensory-based learning modalities.

**Visual type of learner**
- visual impressions
- psychological factor of having the ability to observe
-visual type approaches things from their appearance:
holistically
-visual types normally start to define from outlines and then
describe details:
  (a) analysis of characteristics of shape and structure of the
      object itself
  (b) the changing effects of these shapes and structures
determined by light, shadow, color, atmosphere and
distance
-visually minded persons have a tendency to transform
kinesthetic and tactile experiences into visual experiences.
**Haptic type of learner**
- main intermediary is made up of body self-muscular
  sensations, kinesthetic experiences, touch impressions, and all
  expressions that place the self in value relationship to the outside
  world.
**Haptic art**
- self is projected as a result of a synthesis of sensory,
  emotional and intellectual comprehension of shape and form
- sizes and spaces are determined by their emotional value in
  size and form
- haptic art is primarily subjective.
  Totally haptically minded persons do not transform kinesthetic
  and tactile experiences into visual ones, but are completely content
  with the tactile of kinesthetic modality itself.
  As a result of reading such a wide range of educational
  literature, I have increased my understanding of the very complex
  nature of the expressive and visual learning processes. Expressive
challenges are brought forth into the classroom by complexities.
CHAPTER THREE: METHODOLOGY

Design

My research design is a qualitative descriptive case study. According to Merriam (1988 cited in Bogdan & Biklen, 1992), a case study is a detailed examination of one setting, or a single subject, a single depository of documents, or one particular event. The present study is a blending of an examination of setting and depository of documents--the setting being a single semester foundation drawing course in Art and Design, and the documents being a set of particular assignments.

Bogdan and Biklen (1992) further elaborate on the efficacy of the case study as a means of closed, detailed examination of a phenomenon under study. Characteristics tend to include broad questions and observations which eventually distill into finer, more precise insights, descriptions and themes/patterns.

The design utilizes purposeful sampling strategy, completed projects as data sources, and within-case and cross-case content analysis for pattern and differences as the data analysis strategies.

Informants

The study included students from the Ontario College of Art and Design who have completed my Foundation Year Course, Drawing Principles, during the first semester of 1997. Those students entering the foundation year program represent graduates from many different high schools across Canada. A good percentage of the students are from other parts of the world. Because of the diversity of background in art experience, students are given an entrance interview with a portfolio of their work. The students are selected
for entry into the foundation year through a panel of four artists and one current student. Students who participated in my drawing course kindly offered their work as data for my thesis. (Consent forms are signed. See Appendix B for example.)

Data Collection

Data collected take the following formats. Within purposeful sampling approaches, I used the following:

Maximum variation sampling:

I intend to allow for the maximum variation in my sampling so that I can examine some of the unique or diverse variations that have emerged in adapting to different conditions. Through this approach, I hope to be able to identify important common patterns that cut across these variations.

Combination or mixed purposeful sampling:

I intend to combine my different samplings in order to read further insights that allow for flexibility that meets multiple interests. This type of data collection provides input into the ongoing development of a meaningful curriculum as outlined in the Foundation Year Curriculum Guideline, The Ontario College of Art and Design (1997).

Data Format

The data take the form of student projects. Data collected take the following formats.

Completed Projects

The objective of a project assignment is to synthesize some of
the main components that provide support to major themes
developed in the curriculum. Students are expected to develop their
projects in the following way.

**Project Objective**

To develop a skill for observing both inside and outside
classroom experiences.

To use metaphors to bridge connections with previous learning
experiences.

To develop conceptual strategies for final projects.

To express critical and reflective experiences that help to
provide a meaningful shift for transforming learning centers.

To personalize and comment on the effects of learning
throughout the entire first year program via the journal and class
critiques.

During the second semester, three projects were requested.
Each project was graded at 25%. The particular project collected
and analyzed for the present study was the Leaf Project. A
description of this project follows:

Using a variety of tree leaves and plant specimens, various
exercises were designed to explore the characteristics of linear
description, pattern and shape associations, textural characteristics
and tonal rendering based on geometric volumes. The use of the
journal was emphasized to record observations essential for the
completed exercises stated below. (See Appendix A for examples of
leaf projects.)

**Linear Description:** Using a variety of leaf samples, explore the
linear appearances in terms of the following straight, angular and curvilinear descriptions.

**Pattern and Shape Associations:** Using a variety of leaf samples explore their contrasting descriptions in pure black shapes against the white background of drawing paper. The tabular formatting of these selected images will provide the similarities and differences between groups of leaves in terms of both descriptives and geometric characteristics.

**Textural Explorations:** Study decaying and transformed Fall season leaves with the aid of a magnification. Determine an abstraction of patterns in a repeated format and then proceed to render textural solution.

**Tonal Volumes:** Analyze the turning volumes of Fall leaves through the use of the basic geometric configurations of such geometric volumes as cones, spheres, and cylinders. Describe these geometries in a transformative displacement centered around their axial core descriptions. Control the lighting to enhance the appearances of these volumes and proceed to render.

Each of the exercises requires that students handle (i.e., carried, touched) materials before rendering a visual impression of the materials. The visual grammar of each exercise is strongly enhanced by the tactile connection to (hence understanding of) the textures of the materials. (An example of a leaf project is in Appendix A.)

**Data Organization**

Since I had six groups, I decided to be as neutral and nonbiased
as possible when collecting data. Groups were selected in a random fashion so that the eventual within-case analysis would reveal patterns of association across a heterogeneous achievement group (i.e., not only A students are selected).

Table 1 indicates the population distribution of the six groups and their respective percentages of 142 students. Defined categories of grade levels with percentage frequency as distributed throughout the population are indicated. The total percentage of grade levels throughout the six groups indicates that the 38.2% in the marks between 79 and 70 (B range) is the median.

Method of Selection of Source Data

Project analysis (Leaf Project) occurred on work done by foundation year students at the Ontario College of Art and Design enrolled in the Drawing Principles Course during the fall semester of 1997. A random method of selection was used as follows:

Step 1

1. Each student from each of the six classes was represented.
2. Both my advisor and I took turns to randomly select names from the representative bags of six class lists.
3. A sampling size of 18 was considered a good random measure for a population of 142 students distributed over the six class groups.

Step 2

1. Randomly selected names taken from the total population were then placed into bags representing grades A, B, C, and D.
2. The frequency of grade selection was dependent on the random selection process.
Table 1
Population Distribution by Grade Level and Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
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<tr>
<td>4</td>
<td>23</td>
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<td>5</td>
<td>24</td>
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<tr>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>10</td>
<td>24</td>
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</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>100-80</th>
<th>79-70</th>
<th>69-60</th>
<th>59-50</th>
<th>49-0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>8</td>
<td>11</td>
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<td>5</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Totals: 142
Distribution (%): 24.3 38.2 26.4 8.3 1.4

Note. From a total population of 142 students, the percentages of grade distributions are illustrated over the six groups. Percentages of grade levels are indicated.
3. Each selected student was provided with a special coded name to hide any form of identity. Example: DZ-(A)6-97: DZ = student's initials; (A) = grade level; 6 = class group number.

4. A letter of permission to use the project for thesis analysis was obtained from each student.

Table 2 displays the distribution by grade level of the randomly selected subjects, and Table 3 indicates the mark distribution for the total population by the various groups.

Rationale for Selection Procedure

1. Random selection provides for the most neutral basis of selection.

2. Random selection provides for a heterogeneous representation of a given population.

Random Pattern of Distribution

The random sample selected represented the following distribution by grade level: grade A, 6; grade B, 4; grade C, 4; grade D, 4. The total sample number was 18.

Note that within the grade level D, failing grades were included.

Data Analysis

Analysis and Reasoning

Patton (1990) has articulated the features which contribute to the methodological rigor of qualitative research. I shall discuss how my data collection and data analysis procedures demonstrate these features.
### Table 2

**Distribution of Sample by Grade**

<table>
<thead>
<tr>
<th>Group</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
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<tr>
<td></td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>18</td>
</tr>
</tbody>
</table>

**Note.** Mark distributions are indicated for 18 collected projects from the six groups.
### Table 3

**Distribution of Grades over Group Populations**

<table>
<thead>
<tr>
<th>Group</th>
<th>Population</th>
<th>Grade Level</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
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<tr>
<td>1</td>
<td>29</td>
<td></td>
<td>9</td>
<td>31.0</td>
<td>8</td>
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<td>3</td>
<td>21</td>
<td></td>
<td>5</td>
<td>23.8</td>
<td>10</td>
<td>47.6</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td></td>
<td>5</td>
<td>21.7</td>
<td>11</td>
<td>47.8</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td></td>
<td>4</td>
<td>16.7</td>
<td>9</td>
<td>37.5</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td></td>
<td>8</td>
<td>36.4</td>
<td>9</td>
<td>40.9</td>
</tr>
<tr>
<td>10</td>
<td>24</td>
<td></td>
<td>4</td>
<td>16.7</td>
<td>7</td>
<td>29.2</td>
</tr>
<tr>
<td></td>
<td>142</td>
<td></td>
<td>35</td>
<td>24.5</td>
<td>54</td>
<td>37.8</td>
</tr>
</tbody>
</table>

**Note.** Over the entire population of the six groups, the distributions of grade levels are indicated (i.e., group 1, 9 As; group 6, 8 As).
<table>
<thead>
<tr>
<th>Title</th>
<th>Column1</th>
<th>Column2</th>
<th>Column3</th>
<th>Column4</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Value1</td>
<td>Value2</td>
<td>Value3</td>
<td>Value4</td>
</tr>
<tr>
<td>Second</td>
<td>Value5</td>
<td>Value6</td>
<td>Value7</td>
<td>Value8</td>
</tr>
<tr>
<td>Third</td>
<td>Value9</td>
<td>Value10</td>
<td>Value11</td>
<td>Value12</td>
</tr>
</tbody>
</table>
The data provide for a new direction of pattern development that can contribute to a renewed interpretation of the course projects. Perhaps these patterns can facilitate new approaches to enrich the learning processes that students can have as they become more comfortable with textural and concrete experiences. From the wide range of data, I make critical and inductive appraisals. In the application of these patterns I have in mind what Patton refers to as the holistic nature of the assignment I am examining.

The whole phenomenon with its entire complexity is under review. The integration of interdependent patterns of association are more important than the usual breakdown of the structure into cause and effect descriptions.

One of the key aspects that makes qualitative inquiry so suitable for the arts is that data analysis is developed out of the insiders' perspective. Each student provides a personal interpretation to his or her natural surroundings. The dimension of experience can be translated in a variety of formats, be they metaphorical, narrative, kinesthetic, visual, etc. The importance of multilevel sensory inputs allows qualitative methods to provide analytic approaches not possible through other forms of statistical analysis.

One of the unique aspects of my data is the fact that my data have a human dimension (i.e., there is personal contact and insight). As a researcher, I am a direct participant with the learner in the experiment of learning. The dynamics of an ongoing and transformative process of dialogue and reflection enable a diversity of voices. Students' personal perspectives are in flux with regard to their maturing and shifting centers of consciousness. This means
that the insights from the data emerge within a dynamic system.

Henceforth, I can only support Patton's position in stating that the qualitative aspects of research deal with each data source as having a unique set of properties. Through the association of critically examining the wide range of data inputs, I find patterns of association across data sources. Through analysis, I position the set of interpretations in a manner that is context sensitive.

Lastly, I must position myself somewhat between the upper and lower boundaries of neutrality. Qualitative analysis provides room for both the upper boundary of objectivity and the lower boundary of subjectivity. I take the stance of empathetic neutrality as I involve myself in data analysis of my students' work.

The analyses are within-case (single source) and cross-case (all collected sources) content and thematic analysis.

**Content analysis** provides the description of what is there in each data source.

**Thematic analysis** provides the basis for structuring or organizing similarities or patterns for possible themes.

The following criteria are the features used to organize the evaluation (and analysis) of the within-case sources:

**Criteria for Analysis and Its Implications**

Leaf Project: Breakdown of description into its component parts.

Directing each exercise as a method of experiencing some aspect of the grammar of visualization.
Part One: Physical layout

Exercise #1: Descriptive line
number of pages
text layout

Exercise #2: Front and back linear description
number of pages
text layout

Exercise #3: Different leaves, different shapes and different sizes
number of pages
text layout

Exercise #4: Textural description
number of pages
text layout

Exercise #5: Shape description
number of pages
text layout

Part Two: Relation between text and pictures

Exercise #1
Exercise #2
Exercise #3 (within the Leaf Project)
Exercise #4
Exercise #5

Part Three: Reflections with respect to the outcomes of the above insights determined from the above analysis
reevaluation of given grade
Part Four Cursive aspects

kind of language
style
structural placement
syntax
metaphor/reflection

Part Five: Indigenous topologies

insider driven—emerges from the data set
choices by the learner

Within-case Analysis

The analytic grid on each project constitutes a within-case analysis within a grade level cohort. Table 4 shows the sample of students randomly selected for analysis, including their code names and numerical grades.
Table 4
Sample by Grade Level and Code Name

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Code Name</th>
<th>Grade (%)</th>
<th>Leaf</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>DZ-(A-)6-97</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KR-(A+)1-97</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EB-(A)5-97</td>
<td>88</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JK-(A-)10-97</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CKS-(A-)5-97</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>KY-(B-)6-97</td>
<td>71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SMC-(B)1-97</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AS-(B)10-97</td>
<td>74</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JG-(B+)1-97</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>SW-(C)10-97</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RG-(C)10-97</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA(C)1-97</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC-(C+)1-97</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JH-(C)3-97</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>KMM-(F)5-97</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GM-(D)4-97</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TP-(D)5-97</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LB-(C-)4-97</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Illustrates selected sampling identifying grade level, given code name and respective numerical grade; that is, for DZ-(A-)6-97, DZ = initials of student; (A-) = letter grade, 6 = group 6, 97 = year.
CHAPTER FOUR: RESULTS

Analysis of Results

In case analysis of students' work was organized according to:
physical layout,
relationships between text and pictures,
comments on quality with respect to evaluation,
cursive aspects of language, and
indigenous topologies.

Tables 5 through 21 display the results for each student and are sequenced through grade levels as follows: Tables 5 - 9, level A emerging patterns; Tables 10 - 15, level B emerging patterns; Tables 14-18, level C emerging patterns; and Tables 19 - 21, level D/F emerging patterns.

A condensed within-case analysis was prepared for each grade level, and emerging patterns developed for each grade level. These findings are reported in Tables 22 - 29.

A cross-case analysis comparing results for the four grade levels for the criteria of relationships between text and pictures and comments on quality was summarized. The results are reported in Table 30.

Outcomes from Cross-Case Analysis

The following is a summary/commentary on patterns from cross-case analysis.

Physical Layout

Uniform application of page size and format (vertical)
Table 5
Incase Analysis, Grade Level A, Student DZ-(A-)6-97

Numerical grade: 80%

<table>
<thead>
<tr>
<th>Physical layout</th>
<th>1-2 pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11x14 format</td>
</tr>
<tr>
<td></td>
<td>spatially considered</td>
</tr>
</tbody>
</table>

Relationships text/pictures
- objectives well defined
- hand written text
- text supports the visual experiences of the exercises

Comments on quality
- strong understanding of exercises
- fair evaluation

Cursive aspects
- language and style were basically descriptive
- no metaphorical language used

Indigenous topologies
- logical relationship determined the drawing process
- reasoning ability provided for the outcome that was not too exciting visually
Table 6

Incase Analysis, Grade Level A, Student EB-(A)5-97

Numerical grade: 88%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>spatially considered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>block printed format</td>
</tr>
<tr>
<td>objectives well defined</td>
</tr>
<tr>
<td>easy to read text</td>
</tr>
<tr>
<td>text and images relate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>strong understanding of exercises</td>
</tr>
<tr>
<td>confidence and artistic ability indicated</td>
</tr>
<tr>
<td>evaluation was fair</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>language is precise and mainly directed to the outlines for each exercise</td>
</tr>
<tr>
<td>structural placement considered in a design relationship between images and text</td>
</tr>
<tr>
<td>no metaphorical and reflective language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>relates drawing activities in an organized procedure</td>
</tr>
<tr>
<td>very little bridging takes place</td>
</tr>
</tbody>
</table>
Table 7

Incase Analysis. Grade Level A. Student JK-(A-)10-97

Numerical grade: 80%

Physical layout
1-2 pages
8 1/2x11 format

Relationship text/pictures
not applicable

Comments on quality
did not complete majority of the exercises
evaluation was influenced from the high level of drawings in the
journal
assignment grade should have been C

Cursive aspects
not applicable

Indigenous Topologies
student had excellent work in journal
series of exercises were not invitational or challenging
student is a strong artist with motivational patterns of
expression
one of the best artists in Group 10
Incase Analysis. Grade Level A, Student KR-(A+)1-97

Numerical grade: 91%

Physical layout
1-2 pages
8 1/2x11 format
excellent design layout

Relationships text/pictures
text and images well balanced
text is designed to follow the contour of images
block style
rationale of processes

Comments on quality
has an excellent comprehension of all aspects of the project
evaluation: fair

Cursive aspects
cautious description of descriptions
cause and effect relationships are minimal
no metaphorical language

Indigenous topologies
designers have a strong sense of organization
difficulty linking experiences of learning: similar type of handling style with respect to each page

at this stage, I am asking myself if drawing a designer is perhaps a tool to have a dialogue for analysis?
some students with a more art-directed orientation use a drawing experience in a pure state of evolving into itself
**Table 9**

**Incase Analysis, Grade Level A, Student CKS-(A-)5-97**

Numerical grade: 81%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>design layout not considered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>mixture of written and printed forms of text</td>
</tr>
<tr>
<td>objectives defined</td>
</tr>
<tr>
<td>no attempt to reason with outcomes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>indicates a basic understanding</td>
</tr>
<tr>
<td>evaluation too high; should be a B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>simple description of plant parts</td>
</tr>
<tr>
<td>not applicable to other aspects of cursive language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>evaluation biased by examples in journal</td>
</tr>
<tr>
<td>exercises not executed with interest</td>
</tr>
<tr>
<td>visual rather than design mode of learning</td>
</tr>
</tbody>
</table>
Table 10
Incase Analysis. Grade Level B. Student KY-(B-)6-97
Numerical grade: 71%

Physical layout
1-2 pages
8 1/2x11 format
spatially considered

Relationships text/pictures
small text, hand written, and difficult to read
relationship between text and images not applicable

Comments on quality
indicates some understanding of project
evaluation: fair

Cursive aspects
not applicable: no language awareness

Indigenous topologies
little exchange of feeling and expression
no experimentation
more imitative than generative
Table 11

Incase Analysis. Grade Level B. Student SCM-(B)1-97

Numerical grade: 75%

Physical layout
1-2 pages
8 1/2x11 format
spatially considered
vertical/horizontal frame of reference

Relationships text/pictures
some printed text
text used to complement the design layout
text does not relate to the exercise principles

Comments on quality
basic understanding
done hastily with little understanding
evaluation: fair

Cursive aspects
very direct and simple
does not indicate a language awareness

Indigenous topologies
poor motivation
illustrated a design sense but unable to extend talent
<table>
<thead>
<tr>
<th>Table 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incase Analysis, Grade Level B, Student AS-(B)10-97</td>
</tr>
<tr>
<td>Numerical grade: 74%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>poor layout</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
<tr>
<td>objectives not defined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>poor understanding of basic principles</td>
</tr>
<tr>
<td>evaluation too high; C is a better evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>most students expect a starting grade of a low B for little effort</td>
</tr>
<tr>
<td>method of evaluation can be inconsistent</td>
</tr>
</tbody>
</table>
Table 13

Incase Analysis, Grade Level B. Student JG-(B+)1-97

Numerical grade: 75%

Physical layout
1-2 pages
8 1/2x11 format
    spatially considered

Relationships text/pictures
hand block printed text adjacent to each drawing
objectives poorly defined

Comments on quality
evaluation: fair
some of the exercises incomplete
strong drawing ability

Cursive aspects
simple and visually descriptive
other aspects: not applicable

Indigenous topologies
visual learner with strong drawing ability
reasoning not apparent
Table 14

Incase Analysis, Grade Level C, Student BA-(C)1-97

Numerical grade: 64%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>no sense of design layout</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>very few exercises completed</td>
</tr>
<tr>
<td>did not illustrate understanding of basic principles</td>
</tr>
<tr>
<td>evaluation: fair</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>good example of a student passing with very little effort</td>
</tr>
<tr>
<td>illustrated a raw talent</td>
</tr>
</tbody>
</table>
of the

[Text content not clearly visible or legible]
Table 15  
Incase Analysis. Grade Level C. Student JH-(C)3-97  
Numerical grade: 66%  

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>some layout considerations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>hand written text</td>
</tr>
<tr>
<td>no objective outlines</td>
</tr>
<tr>
<td>text associates with the difficulty of the exercise</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>does not understand basic concepts</td>
</tr>
<tr>
<td>very artistic students have difficulty with defined concepts</td>
</tr>
<tr>
<td>evaluation: should be a B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>emotive language</td>
</tr>
<tr>
<td>directly concerned with the appearances of the final image</td>
</tr>
<tr>
<td>other cursive aspects: not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>mature student returning to school</td>
</tr>
<tr>
<td>strong contemplative and artistic sensibility</td>
</tr>
</tbody>
</table>
### Table 16

**Incase Analysis. Grade Level C, Student LB-(C-)4-97**

**Numerical grade:** 62%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>no design layout</td>
</tr>
</tbody>
</table>

**Relationships text/pictures**

- hand written text
- tiny and difficult to read

**Comments on quality**

- no understanding of basic concepts
- inward and tenseness of images
- evaluation: fair

**Cursive aspects**

- language is simplistic and emotional
- no other aspects apply

**Indigenous topologies**

- self-portrait illustrates a student that is introverted and tense
  with encouragement and time student would be capable of producing sensitive work
Table 17

*In Case Analysis, Grade Level C, Student RG-(C)10-97*

Numerical grade: 65%

**Physical layout**
- 1-2 pages
- 8 1/2x11 format
- no design layout

**Relationships text/pictures**
- block printed text describing the appearances of images
- no defined objectives

**Comments on quality**
- minimal understanding of concepts
- difficulty with learning and drawing
- evaluation: appropriate

**Cursive aspects**
- simplistic and emotional language revealing frustrations with studies
- other aspects do not apply

**Indigenous topologies**
- has a great deal of difficulty learning
- indicates a low level of visual maturity
- very difficult to assess
Table 18

**Incase Analysis, Grade Level C, Student SW-(C)10-97**

**Numerical grade:** 66%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>mainly single page</td>
</tr>
<tr>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td>no design layout</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>no objectives defined</td>
</tr>
<tr>
<td>block printed text to adjacent image</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>did not complete all the exercises</td>
</tr>
<tr>
<td>poor understanding of basic concepts</td>
</tr>
<tr>
<td>evaluation: fair</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence structures incomplete</td>
</tr>
<tr>
<td>other aspects not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>difficulty with the course</td>
</tr>
<tr>
<td>ability to draw was limited</td>
</tr>
</tbody>
</table>
Table 19

**Incase Analysis, Grade Level D, Student TP-(D)5-97**

Numerical grade: 54%

<table>
<thead>
<tr>
<th>Physical layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 pages</td>
</tr>
<tr>
<td>design layout not considered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>exercises not completed</td>
</tr>
<tr>
<td>does not have basic concepts</td>
</tr>
<tr>
<td>presentation poorly organized</td>
</tr>
<tr>
<td>evaluation: fair</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
</tr>
</tbody>
</table>
Table 20
Incase Analysis, Grade Level D, Student KMM-(F)5-97
Numerical grade: 42%

<table>
<thead>
<tr>
<th>Physical layout</th>
<th>1 page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td></td>
<td>design layout not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships text/pictures</th>
<th>written text had no meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>serious grammatical/spelling errors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments on quality</th>
<th>no understanding of concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>evaluation: fair</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cursive aspects</th>
<th>not applicable</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Indigenous topologies</th>
<th>not applicable</th>
</tr>
</thead>
</table>
Table 21

Incase Analysis, Grade Level D, Student GM-(D)4-97

Numerical grade: 56%

<table>
<thead>
<tr>
<th>Physical layout</th>
<th>1-2 pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>horizontal layout</td>
</tr>
<tr>
<td></td>
<td>8 1/2x11 format</td>
</tr>
<tr>
<td></td>
<td>design layout not applicable</td>
</tr>
</tbody>
</table>

| Relationships text/pictures | not applicable |

| Comments on quality        | very few exercises completed |
|                            | basic concepts not understood |
|                            | evaluation: fair |

| Cursive aspects            | not applicable |

<p>| Indigenous topologies     | has the ability to observe and articulate some fine details |
|                           | cannot apply talent to the task at hand |</p>
<table>
<thead>
<tr>
<th>Event</th>
<th>Visual Learner</th>
<th>81% (81%)</th>
<th>91% (91%)</th>
<th>80% (80%)</th>
<th>87% (87%)</th>
<th>81% (81%)</th>
<th>97% (97%)</th>
<th>91% (91%)</th>
<th>97% (97%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
</tr>
<tr>
<td>Designer</td>
<td>N/A</td>
<td>Fair</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
</tr>
<tr>
<td>Artist</td>
<td>N/A</td>
<td>Fair</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
</tr>
<tr>
<td>Design Approach</td>
<td>N/A</td>
<td>Precise</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
</tr>
<tr>
<td>Uniform Expression</td>
<td>N/A</td>
<td>Limited</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
</tr>
<tr>
<td>Logical Reasoning</td>
<td>N/A</td>
<td>Simple</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
<td>Designed</td>
<td>N/A</td>
</tr>
<tr>
<td>Art Stream</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
<td>B</td>
<td>N/A</td>
</tr>
</tbody>
</table>

For Grade Level A

Condensed Within-Case Analyses: Overview of Emerging Patterns

Table 22
Table 23
Emerging Patterns: Grade Level A

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Emerging Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical layout</td>
<td>1-2 pages, 8 1/2x11 format</td>
</tr>
<tr>
<td></td>
<td>50% design conscious: attention to spatiality</td>
</tr>
<tr>
<td>Relationships</td>
<td>variety in print; generally intelligible</td>
</tr>
<tr>
<td>text/pictures</td>
<td>50% well defined and carefully considered</td>
</tr>
<tr>
<td>Comments on quality</td>
<td>grading was not accurate (50-60%); grading</td>
</tr>
<tr>
<td></td>
<td>biased from external factors</td>
</tr>
<tr>
<td>Cursive aspects</td>
<td>clear, simple and minimal</td>
</tr>
<tr>
<td>Indigenous topologies</td>
<td>well organized but may not necessarily be</td>
</tr>
<tr>
<td></td>
<td>making creative connections</td>
</tr>
<tr>
<td></td>
<td>synthesis: “present-time” learners (i.e.,</td>
</tr>
<tr>
<td></td>
<td>not carrying forth a visual repertoire</td>
</tr>
<tr>
<td>Respect to grading</td>
<td>Concerns with ambiguity and designer</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>(74%)</td>
</tr>
<tr>
<td></td>
<td>(75%)</td>
</tr>
</tbody>
</table>

For Grade Level B

Condensed Within Case Analysis: Overview of Emerging Patterns

Table 24
Table 25
Emerging Patterns: Grade Level B

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Emerging Patterns</th>
</tr>
</thead>
</table>
| Physical layout     | 1-2 pages, 8 1/2x11 format  
25% design conscious: attention to spatiality |
| Relationships       | variety in print; generally intelligible  
less than 25% well defined and carefully considered |
<p>| text/pictures       | grading inconsistent; 75% correct upon reflection/review |
| Comments on         | clear, simple and minimal |
| quality             | |
| Cursive aspects     | |
| Indigenous          | large percentage of students were not able to share feelings or experiment with basic ideas |
| topologies          | minimal effort in 50% of cases studied evaluation for minimal effort is considered by students to merit a B grade |</p>
<table>
<thead>
<tr>
<th></th>
<th>Visual Difficulties</th>
<th>Language Problems</th>
<th>Learning Difficulty</th>
<th>Low Visual Matturty</th>
<th>Learning Experience</th>
<th>Noninitaitonal Strong Artlist Mature Student</th>
<th>Passive Student</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>Fair</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>(66%)</td>
<td>(65%)</td>
<td>(66%)</td>
<td>(76%)</td>
<td>(64%)</td>
<td>(64%)</td>
<td>(64%)</td>
</tr>
</tbody>
</table>

**Table 26**

For Grade Level C

Condensed Within-Case Analyses: Overview of Emerging Patterns
Table 27
Emerging Patterns: Grade Level C

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Emerging Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical layout</td>
<td>1-2 pages, 8 1/2x11 format</td>
</tr>
<tr>
<td></td>
<td>25% design conscious: attention to spatiality</td>
</tr>
<tr>
<td>Relationships</td>
<td>in most cases not applicable</td>
</tr>
<tr>
<td>text/pictures</td>
<td></td>
</tr>
<tr>
<td>Comments on quality</td>
<td>grading 80% consistent</td>
</tr>
<tr>
<td>Cursive aspects</td>
<td>in all cases not applicable</td>
</tr>
<tr>
<td>Indigenous topologies</td>
<td>in nearly all cases students had difficulty with learning</td>
</tr>
<tr>
<td>Learning Difficulty</td>
<td>N/A</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Learning Disability</td>
<td>N/A</td>
</tr>
<tr>
<td>Not Focused</td>
<td>N/A</td>
</tr>
<tr>
<td>Some Sensitivity</td>
<td>N/A</td>
</tr>
</tbody>
</table>

LB-(C-4-97) (62%) (54%) (42%) (50%)
TP-(D-5-97) KMM-(F-5-97) GM-(D-4-97)

For Grade Level D/F
Condensed Within-Case Analysis: Overview of Emerging Patterns
Table 28
Table 29
Emerging Patterns: Grade Level D/F

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Emerging Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical layout</td>
<td>1-2 pages, 8 1/2x11 format</td>
</tr>
<tr>
<td>Relationships text/pictures</td>
<td>not applicable</td>
</tr>
<tr>
<td>Comments on quality</td>
<td>grading 100% consistent</td>
</tr>
<tr>
<td>Cursive aspects</td>
<td>not applicable in all cases</td>
</tr>
<tr>
<td>Indigenous topologies</td>
<td>learning with respect to psychological makeup and</td>
</tr>
<tr>
<td></td>
<td>language difficulty</td>
</tr>
</tbody>
</table>

Indigenous topologies in nearly all cases students had difficulty with learning with respect to psychological makeup and language difficulty.
Table 30
Cross-Case Analysis of Patterns Emerging Across Grade Levels

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Relationships</th>
<th>Text/Pictures</th>
<th>Indigenous Topologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>50%</td>
<td>spatiality high</td>
<td>grading not consistent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50% would be graded differently</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>grasp of basic concepts</td>
</tr>
<tr>
<td>B</td>
<td>25%</td>
<td>spatiality moderate</td>
<td>grading not consistent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25% would be graded differently</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>grasp of basic concepts</td>
</tr>
<tr>
<td>C</td>
<td>25%</td>
<td>spatiality low</td>
<td>grading not consistent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25% would be graded differently</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>minimal grasp of basic concepts</td>
</tr>
<tr>
<td>D</td>
<td>0%</td>
<td>spatiality very low</td>
<td>marks consistent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>no grasp of basic concepts</td>
</tr>
</tbody>
</table>
throughout all grade levels.

- Specifications were outlined in assignment handouts.

**Relationships Between Text and Pictures**

In the distribution of the highest marks (A-C) spatiality ranges from high to low.

Level A has the highest (50%) design conscious applications for the page presentation. Level B and Level C are 25% design conscious.

- Design consciousness is a skill that is both intuitive and taught. The students with the highest level marks could have had previous design experiences.

**Comments on Quality**

The highest proportion of reconsidered marks was found in the Level A range.

- This pattern was defined by the work previewed both in the journals and in the project itself.

- Subjectivity and an intuitive reading into the student’s artistic personality provide a basis for this inconsistency.

  Level B reconsideration is 25%.

- Most students expect a B level mark for minimal effort and understanding.

  Level C reconsideration is 25%.

- Most students indicate very little interest in the project, but do illustrate some evidence of creativity.

  Level D/F reconsideration is 0%.

- There is strong demarcation of visual immaturity and other associated patterns of learning disabilities.
Indigenous Topologies

In both level A and Level B, students are generally well organized and indicate outlined objectives and specifications of each section of the Leaf Project.

In a large percentage of cases, students are "present-time learners" and do not interlink visual learning experiences from other foundation year courses taken in the first semester.

The organization of research and the final presentation is not always obvious.

Lower grade level students had difficulty with image making and were unable to provide a language base for their learning experiences.

- The inability to provide a strategy for researching the expectations and outcomes for each part of the project lead those students into a lower range of marks.

- Many of the cursive aspects of language were not evident throughout all levels of grading.

- There was very little evidence of reflective thinking throughout all levels of grading.

Presentation and Explanation of Emergent Themes

During the analysis several repeated patterns provided the basis for the following key themes.

Students who were well organized and "shaped" conscious could perhaps be defined as designers. Their sense of spatiality was often high. The ability to juxtapose both images and text were evident throughout the projects.

- This consciousness is partly an educated trait, but mostly an
inherent characteristic that often dictates the professional direction (Design) and course of study for the remaining academic years at the College.

Students who worked within the dynamics and intensity of exploration often utilized the full dimension of their page layout. There was an evolving and outgrowing form of expression. These students are normally classified as “Fine Artists”.

- Students are encouraged to flow and potentially grow visually into stream(s) that are best suited to their form of expression.

Alternative method of evaluation must be provided in order to indicate the various developmental stages and processes that take place in the creative growth of the individual.

- Qualitative readings of learners can provide a profile of growth that can be addressed by several linked courses in the foundation year program.

- Such a report (or profile) can be ongoing and progressive, indicating a large range of parameters that are considered important in the mental and artistic growth of a student, such as:
  - ability to grasp outlined concepts in a structure of visual literacy.
  - ability to bridge themes and experiences across a wider spectrum of the curriculum.
  - ability to reflect and exchange learning experiences in both classroom and journal format.
  - ability to internalize personal growth into other forms of visual, written, and other associated cognitive forms of
expression.
- ability to execute strategies for self-directed learning
  and problem solving.
- ability to respect the nature of questioning over time
  with the acknowledgement of mentor(s) and alternative
  experiences for future explorations.
For an artist/teacher, the emergence of a dynamic and
unfolding set of transformations can be shared very strongly and
personally on many levels. My responsibilities are defined by a
unique set of circumstances that deal with the complex patterns of
the creative act. The synthesis of these actions must incorporate
the respect for:
  the individual student
  the cherished values inherent within the history of the
  institution
  the critical range of ever-changing values of the external
  parameters of the visual world
  the nurturing for a pattern of lifelong learning so essential to
  creative thinking.
  During analysis, certain patterns emerged throughout the grid.
These are summarized as follows:
What emerged:
effort
basic concepts
spatiality
design consciousness
synthesis.
What did not appear to be significant:
  cursive aspects of language
  very few cases linked with previous learning experiences.
CHAPTER FIVE: DISCUSSIONS AND RECOMMENDATIONS

Implications

Course Planning

In the process of reviewing, very specific patterns emerged that directed my attention to two major streams of students with different visual characteristics. Both "Fine Art" and "Designer" type students can be identified as follows:

Fine Art classification emerges when students illustrate an internal sensibility for emotional responses when in empathy with their subject content. These types of students favour the imaginary side of their creative spirit. Very often they can progress with their creative thoughts through a thematic schema of presentations.

Designer classification emerges when a student is attracted to the visual organization of shapes and patterns in both two-dimensional and three-dimensional forms of expression. This intuitive mode of expression can be highly trained. Students of this type have a distinct appreciation for the holistic appearance of the presentation.

I feel that too rigid a classification of stereotyping at the early stages of one's visual education can lead to some limiting experiences. Most visual learners enjoy the presentation of their experiences in both streams.

Even though the College stresses this type of streaming after the first semester in the foundation year program, I feel that not enough time has been allowed for exploration of the two worlds of Art and Design. Over a longer period of time, students can develop a sense of their own creative potential. To explore the diversity of
null
modal sensory experiences can only enhance these important experiences.

**Evaluation**

New approaches to learning involving sensory-based expressive experiences demand a different form of evaluation. The Progressive Profile report as indicated earlier is one alternative to the conversion to a number system of traditional marking. The instructor needs the opportunity to revisit the evaluation in a variety of contextual ways (e.g., work in progress rather than discrete components of the creative act).

The aforementioned method of team evaluation (Chapter Four) would provide the students with a meaningful and transformative reading of their visual and intellectual growth within the foundation year program. Based on these observations and results, significant decisions would be informed by a more holistic profile than by standardized streaming.

**Resonances with the Literature**

The following summary of recommendations evolved from the findings and interpretations:

Progressive Profile of Evaluation would provide a fairer and more equitable level of assessment of the student’s development since these reports would derive their input from a wider range of faculty within the program.

I would strongly suggest a nondichotomizing development of experimentation that explores and challenges the “natural” inclinations for both art and design forms of expression. Both forms
of expression must be developed at the earliest stages of formal studies.

The addition of providing three-dimensional expression(s) to the project would allow students to explore a wider range of solutions and appreciate their results in more positive ways.

Projects should be revisited as part of a progressive and formative aspect of evaluation that would help both the instructor and the student provide a meaningful dialogue of interpretation into the patterns of developing changes that are taking place.

One of the limiting factors to institutional marking is that intra-cohort standards are seldom blended with disciplinary standards. As teachers, the outcomes of our grading ought to be influenced by the uniqueness of the cohort group. I feel that a consistent level of grading should be inclusive of the required technical skills, the ability to synthesize past and present learning, and basic concepts of art and design. As well, every attempt should be made to develop an appreciation of the cursive aspects of language that permit the incorporation of other sensory modalities.

In conclusion, educators like Gardner (1983, 1985) and Eisner (1971, 1972, 1979, 1984) have provided a rich support for the role that visual arts can play in the development of human intellect. Gardner explores the nature of multiple intelligences, each with its unique form and modality of expression. Eisner feels that, in particular, the measure and position that the arts must take in our contemporary institutions need to be considered differently with respect to the student’s cultural setting and previous learning experiences. The related perspectives form the very backbone of one’s personal forms of expression. Thematic forms of expression
need to be addressed through alternative and more progressive means of evaluation. Both Gardner and Eisner feel that the inclusion of the arts into the mainstream course of studies can only enrich and personalize a meaningful transformation of learning.

Both Lowenfeld (1970) and Gaitskell (1970) explore the entire psychological and developmental aspects of a child's visual growth throughout mental and physical periods of growth. The involvement of many of the bodily senses is so fundamental to the successful completion of these milestones. The inclusion of definitions for both the "visual" and "haptic" learners I feel is one of the areas that needs future research. The methods of recording sensory inputs to the brain must have more than a scientific reading. Their dynamics are so inclusive as to how we perceive phenomena. The importance of three dimensional experiences heightens the acuteness of the senses. Visual learning for artists has to be contextual, bearing forth the concrete experiences of tactile experimentations. Thematic abstractions are driven by these continuous experiences and reflections.

Gaitskell felt that the emergence of visual characteristics could be identified during different chronological stages, but felt that it was dangerous to depend entirely upon a form of classification that might provide a basis of rigidity. Many of the syntaxes of the arts can be thought of as but a boundary of experimentation which would be cherished and welcomed in the growth of every artist. The progressive evaluation of growth within the institutional life of a student must be shared with colleagues and students alike. Standards must be consistent so that there is a provision of guidelines for real learning.
My first teaching apprenticeship in the summer of 1965 took place under the faithful eye and guidance of Dr. D. Gaitskell. Recalling those summers of my initial experiences of helping teachers to share my enthusiasm and love of the visual arts formed the framework of what I continually experience as the art and most difficult craft of teaching. Human expressions come in many forms and places in the short life of any individual. Each human expression must be shared and respected for, like Dr. Gaitskell, my role is to acknowledge and encourage the potential growth of the mind and soul of those individuals entrusted to my pedagogic guidance.

In the future, I would like to explore some of the connections that semioticians seek describing experience. The contemporary world of art is in an exciting state of flux where the need to address a variety of conceptual and complex questions is open ended. An enquiring mind is a prepared mind willing to take risky journeys into the untravelled world of problem solving and creativity. The role that the senses play in our learning experiences is just unfolding for educators, and I feel the need to research more into the anatomical and psychological details of these marvellous and complex entities.
References


Selected Bibliography


Appendix A

Examples of Levels A, B, C, D/F Artwork:

A Formative Evaluation of Artwork
GROUP #: 4
DATE: OCTOBER 27TH, 1997

DRAWING PRINCIPLES:
LEAF STUDIES

INSTRUCTOR: R. NEVITT

A+ work
Excellent research: Richard

CN-(A+)4-97
Figure One (Experiment #1)

Selection of descriptive lines taken from various leaves.

Objective: Define description line in terms of line contrast and line components.

Time: 1½ hr.

Paper:

LARGE VERTICAL CHANGE IN LINE DIRECTION OF THIS MAPLE. I HAVE HIGHLIGHTED THIS "V" WITH ARROWS LINE WEIGHT. INTERIOR DEFINITION MATCHES THESE "V"S.

HIGH DEFINITION IN THE INTERIOR VIEW NETWORK.

< EXTERIOR LINE, TAUPE EDGES WORKED INTO INITIAL OUTLINE OF THE LEAF.
There is little interior definition of line here.

The Bruno has soft, undulating curves which are more or less consistent to its outline.

Initiated drawing by outlining shape of leaf with one line, and then working detail into that line to create sharp, angular corners characteristic of this leaf.

Interior definition is strong, and an increasing pattern of line space is evident.

This leaf has spatial straight lines.

Experiment #1
Selection of random lines taken from a variety of leaves.

Objective: to slowly analyze linear description in terms of contrasting lines, and in particular straight, curve and angular components.

Time: 2 hrs
Date: 9/12/97
Exercise Two: Front and Back

Examine both inside and outside leaf surface in terms of their description.

Top of leaf

Sea: Back of leaf (Over 2)

Exercise One Continued...

Leaf #6

Veins branch at opposite internodes.

Combination of A and C lines on exterior.
Exercise Two
Continued...

Define contrasting description taken from the source leaf.

Describe in contrasting lines both the front and the back of the leaf.

Time:

Date:

- Heavy dilation near stem.

Dominant branches where veins branch from stem.

Furting - hard edge to describe shortening.

Bottom / Back of leaf.

- Back of leaf has the more dominant description.
  The veins/patterns are elevated.
FREE STUDY OF LEAF INTERIOR
DATE: 9/24/97
TIME: ½ HR

Spine and Major Arteries
Exercise Three

Variety of Descriptions

Select 3 leaves of different shapes and sizes.
In description line define the leaves both inside and outside.
Explore contrasting principles >3).

Time: 3 hrs.
Date:

- Ginko
- Triangular
- Waterfall
- Fleeting light
- Rough, smooth lines reflect rubbery feel
- Describe line: meandering - too mechanical; best shape of the leaf here
- Sharp, digging tips; flicking and swift; dark curving line contrast
- Greens appear darker where edges of leaf are less well defined; a smaller area on the other line stems.
**Experiment #4**

**Textural Patterns**

*The Effects of Decay*

Magnify part of a leaf and try to imitate the patterns of decay.

**Modelling Used:**

**Time:** 2 hrs.

**Date:**

- Early decay evident as leaf dries out and curls
- Advanced decay here
- Decay most obvious between veins
- Veins are the last thing to rot (kind of like the flesh: bones)

Dead leaf with convolute

Magnification x 2
Textural Patterns: Leaf Decay

Objective: Magnify parts of leaves and dry imitate the pattern of decay.

Time: 2 hrs

Date:

Folding along veins

Darker shading around along with decay

In both leaves, there is an obvious pattern of depression, or pits, between the veins.

Separation of lot of leaves from large veins, resulting in (darkened) overhanging

Bubbling on leaf surface

Colour Copy
EXPERIMENT #5

CONTRASTING SHAPES

INSTRUCTIONS: USING BLACK BRUSH MARKERS TO DEFINE DESCRIPTION IN TERMS OF THE SAME PRINCIPLES EXPLORED IN EXPERIMENT ONE.

TIME: 4 HOURS.
DATE: 
EXPERIMENT #5 CONTINUOUS...

CONTRASTING SHAPES

OBJECTIVE: USING BLACK BRUSH MARKERS TO DEFINE DESCRIPTION IN TERMS OF THE SAME PRINCIPLES EXPLORER IN EXPERIMENT #1 (A, E, -).

TIME:

DATE:

HIGH INFERIOR DEFINITION IN THIS GROUND LEAF.

DECREASED RINKAGE IN THIS (OAK) LEAF.

NO INFERIOR VENAL DESCRIPTION IN THESE TWO EXAMPLES, I FIND THIS CREATES A MORE EFFECTIVE WHOLE. CONTRAST OF SHAPE.
I was surprised that this was a Van Gogh because of its detail.
I like the cross hatching throughout, particularly in his treatment of the roof.
Inspiring windows.

Gustav Klimt  Head of a Woman, 1918

I liked Klimt's alternating dark/heavy and light lines. His lines rarely maintain a consistent width in this painting.
The heavy lines occur near the forehead, balancing out the more finished top half.
Great hair!

In the sketch, there is a figure with long, loose hair. The artist notes, "Hair is often used to convey emotion and add personality to the subject."

Sketch by [Artist's Name]

Date: [Date]

Location: [Location]
Free study
Date: 9/18/17

These flowers swell up
an entire city block.
When they bloom...

Night-blooming
Cereus,
or is it
Cyrias?

\[ 	ext{These flowers grow once a year.} \]

\[ 	ext{Members of the Cactus Family} \]
FREE STUDY
"Face in a Crowd in
Some Magazine I Read"
Date: Sept. 18th 1977
Time: 1 1/2 hr.
Level A

GROUP #1
THURS 1-4
OCTOBER 30th 1997

DRAWING PRINCIPLES

LEAF STUDIES

INSTRUCTOR: R. NEVITT
The veins of a plant do not always grow in a symmetrical nature.

When focusing on the trunk and branches, the pattern they form is interesting to observe.
SELECTION OF RANDOM LINES TAKEN FROM VARIOUS LEAVES.
FRONT AND BACK DESCRIPTION OF A

FROM THE GUTS THE SPOKE OF A LEAF
PHOTOGRAPHED BECAUSE IT WAS NOT VISIBLE.
SELECTION OF 3 DIFFERENT LEAVES WITH RESPECT TO SIZE AND SHAPE.

*This leaf was taken from a vine outside my house. The curling of the leaf was due to the wind, but the shape and size were similar to the drawings.*

*Thin light leaves were found on a small tree. The shape and size were similar to the drawings.*

*Drawings of leaves with traces of curling.*
The darker shaded areas indicate the leaf is turning brown.

Under raised areas, bluish-white quinone
and chlorophyll accumulate.

Injury is in the middle of the leaf.
CONTRASTING SHAPES.

- The internal structure of this leaf closely resembles the internal structure of a tree.

- It is interesting to note that this leaf is structured vertically.

- This leaf was taken from a garden of various trees of various shapes.
The two bottom leaves closely resemble the silhouette of a butterfly. It is interesting to see similarities in plant and animal life.

Each vein in a leaf may have one or two veins attach together, but as the leaf reaches the top, the veins may join.

Contrasting Shapes
Sketching figures

"It is not bright colors but good drawing that makes a figure beautiful."

Titian (c. 1488–1576)

"Confidence in drawing depends on the opportunity to sketch people, transportation, at the beach or sketching them frequently, you
store of visual information: language and facial expression. Translating this information becomes easier the more you

**Using your medium**

All kinds of techniques can be applied to drawing or painting any subject, but it is often helpful to let your medium suggest an approach.

Using a pencil may lead you naturally to small-scale drawings that depend on a precise outline of the figure and sensitive detailing of smaller shapes (left).

**Victor Ambrus**

Lisa

Graphite pencil on paper

19 1/4 x 13 3/4 in (48.5 x 33 cm)
Qualitative Analysis
Brock University
Master of Education... 1997
Prof: M. Connolly
Richard Nevitt

Student Name: Kristi Robinson
Student Code: KR-(A)1-97

Fall Semester 1997

Project 1: Descriptive Line as it applies to drawing and as a component part of the grammar of visualization

Part One:

Physical Layout

- Part One: Descriptive Line
  Number of Pages (2) pages
  Page Layout page 1: layout 8 1/2 x 11 inches
  (4) fragments of two different plants
  integrated alongside block printing
designed to the profile of each leaf
Entire page is completely filled with both
text and drawing
Layout is well designed
page 2: layout 8 1/2 x 11 inches
Objectives and titles well defined
(3) distinct leaves are layout in similar proportions located
in equal thirds to the page
Upper two drawings have a horizontal format. The bottom
drawing is in a vertical format occupying the central area
of the lower third of the page
All text is in block style formatted in a flowing contour
pathway to the leaf's contour description

- Part Two: Front and Back

Linear Description

Number of Pages (1) page
Part Three: Different Leaves
different shapes
and sizes
Number of Pages (1) page
Page Layout Horizontal format including (4) varieties of leaves
in a variety of sizes
Page is beautifully designed with text closely
bounded to each drawing in a variety of
orientations. The title of assignment is carefully
spaced and capitalized horizontally across the
upper border of the page

Part Four: Textural Description
Number of Pages (2) pages
Page Layout page 1: Vertical formatted page
(5) circular detailed magnification views of
textural experiments of equal sizes.
Text is placed directly below each image in a
curved block-like format. Page is symmetrically
balanced

Page 2: (2) circular textural drawings located in the central area of the page

Part Five: Shape Description

Number of Pages: (2) pages
Page Layout:

Page 1: (6) different assortment of leaves described in contrasting black shapes with white interior skeletal descriptions illustrating the design distribution of parts. Text is precisely arranged adjacent to leaf format Page is well designed

Page 2: (3) different leaves arranged in a balanced configuration Text arranged as in previous page

Other(s): Personal Section

Number of Pages: (1) page
Page Layout:

Part Two:

Relation between Text and Pictures

Part One: Descriptive Line

Page 1: Text is in hand printed format that compliments the design layout of the respective page. It tends to follow the design profile of each leaf fragment. Text explains the visual relationships of the design principles of the leaf layout especially the internal
**Part Two:** Front and Back

**Linear Description**

Text is in block format.

No real understanding is explored as to why there is a distinct appearance between front and back aspects of the leaf.

**Part Three:** Different Leaves

different shapes

and sizes

This page illustrates the best use of text both in a visual context and reasoning mode for providing support for the many descriptive elements that make plants so interesting to draw. The text personalizes the selection of specimens.

**Part Four:** Textural Description

These rich textural drawing are supported by text that explains some of the decaying processes as well as some of the visual counterparts that provide drawing challenges.

The articulation of textural description enables a student
Quality of Drawing Exercise

[ Yes ] Indicates that the student has an understanding...

Upon reviewing this portfolio of drawings I feel my marking was fair. The work provides a good understanding of required principles of description. In this case the students tends towards a design strength of presentation providing a set of conscious deliberations for the total layout of each page. All drawings and other forms of exploration are of uniform intensity with respect to their appearances. The reasoning that is supported by text tends to favour the visual design rationale.

Part Four:

Cursive Aspects

- kind of language: writing is carefully provided defining titles and requires assignments.
- style: language is clear and simple in its range of vocabulary
- more visual emphasis seems to evolve for the application of text.
- writing is one dimensional without exploring a wide range of issues or
to develop a sensing of patterns within a structure that is then translated and repeated throughout the drawing.

Part Five: Shape Description

page 1: The text is use to facilitate the design layout of the page. The student has successfully provided a page that is easy to read. The application of text expresses the design values found within.

page 2: Text is used in the same as on page 1. Some references are related to similarities between plant and animal skeletal designs.
Qualitative Analysis
Brock University
Master of Education, 1997
Prof. M. Connolly
Richard Nevitt

concerns with respect to cause and effect relationships.

- student tends to be primarily visual - spatial in terms of learning

- structural placement:
  - tends towards a design emphasis of presentation with primary
    concerns for simple bilateral symmetries.

syntax:

- metaphor/reflection
  - simple and direct but not overly exciting

- none

Part Five:

**Indigenous Data / Indigenous Topologies**

Insider driven... emerges from the data set

choices by the learner

- remarks... It became evident to me as I reviewed the work for a longer period of
time that I saw a distinct pattern of presentation taking place. Students that tend towards the design
sensibilities have a very strong sense for organization and are able to incorporate pattern learning more
directly into their learning experiences. I also saw that the drawings take on a similar type of handling style
from page to page. Every detail is precisely described with the same emphasis giving the drawings a
monumental or architectural appearance. The relationships to other modes of learning experiences seem
more difficult for this student to make. I believe I am working with a visual dominant learning type.

- others... At this stage, I am asking myself if drawing for the design is perhaps a
tool for have a dialogue of analysis? Some students with a more art-directed orientation use a drawing
experience in a pure state of evolving into itself.
group 1

thurs 1-4  oct. 30/97  375g

Level B

Keeley's

DRAWING PRINCIPLES
LEAF STUDIES

INSTRUCTOR: R. NEVITT
random lines taken from leaf

- examine parts of several leaves
- illustrate their description in terms of line
- contrasting weights of line

part 1 descriptive line
Based on basic shapes, this helps to get overall composition.

Contrasting weights of line and corner of leaf.
Objective: To explore contrasting lines

Front view

\[\text{A skeletal structure}
\]

\[\text{a) shown a much stronger/deeper much more descriptive in the sense that a) found that the back side of the leaf was}
\]

\[\text{day after: explains shrinking of leaf)}
\]

Back view

\[\text{leaf entire set except 2 front & back view of same}
\]

\[\text{part 2} \]
Line variations w.r.t. respect to diff. types of leaves

[Part 3]

Leaf 1

- Thicker lines make it more powerful & large.

Leaf 2

- Thinner lines make it small & fragile.

I noticed that I tended to use heavier/thicker lines on the larger leaf 1 than the smaller leaf 2. The thinner lines help give the smaller a more fragile quality -> a more delicate drawing.
PART 4

- Textural drawings (large scale/magnified)

- Blowup of decaying side of leaf
  - Plant cells are all dried out

- Blow up (extreme) of a large leaf
  - All cells have whitened
full size (actual) of dried leaf

as they slowly rot their sides curl over making heavy/dark shadows for lines
Part 5

* descriptive shape (black & white)

* these leaves are drying out & creating very bumpy edges as they begin to fold over...
While these two have much smoother/flowing edges that create soft shapes.
This is a drawing I did as a study for a painting. I worked off of a live model.
Qualitative Analysis
Brock University
Master of Education... 1997
Prof. M. Connolly
Richard Nevitt

Student Name: Stephen Mac Donald
Student Code: SCM-(B)1-97
Fall Semester 1997

Project 1: Descriptive Line as it applies to drawing and as a component part of the grammar of visualization

**Part One:**

<table>
<thead>
<tr>
<th>Physical Layout</th>
<th>Number of Pages</th>
<th>Page Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part One:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Descriptive Line</td>
<td>(2) pages</td>
<td>Page 1: Vertical 8 1/2 x 11 inch format</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4) fragments of the same leaf linked by 'positional' directed lines to indicate the nature of line description</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Images are well designed for a balanced format</td>
</tr>
<tr>
<td>Page 2:</td>
<td>Page is rapidly done with not a great deal of care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upper 2/3 region of page has drawing of (1) curved leaf with diagram support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower 1/3 region includes a magnified view of a descriptive corner of the leaf above</td>
<td></td>
</tr>
</tbody>
</table>

| Part Two:       |                |             |
| Front and Back  |                |             |
| Linear Description| (1) page       |             |
| Number of Pages | Horizontal format with (2) large presentations of a number of leaves radiating from the centre of a stem distribution |
| Page Layout     | Page is supported through the use of blocking lines |
Qualitative Analysis
Brock University
Master of Education... 1997
Prof. M. Connolly
Richard Nevitt

- Part Three: Different Leaves
different shapes
and sizes

Number of Pages
Page Layout

(1) page
Vertical format with (2) leaves dividing the page into equal areas. "Boxing" used to draw attention to the various focuses throughout the page

- Part Four: Textural
Description

Number of Pages
Page Layout

(2) pages
Page 1: (2) magnified drawings inserted into a rectangular and square format respectively. "Blocking" used to support the details of the respective drawings.
Page 2: describes a branch of weathered leaves formatted within a square

- Part Five: Shape Description

Number of Pages
Page Layout

(2) pages
Page 1: (3) black different shaped leaves well balanced on the page.
No interior description is provided.
Page 2: (2) similar black shaped drawings of equal size.
Centrally located on the page presenting a static appearance.
Part Two: Relation between Text and Pictures

- Part One: Descriptive Line
  Text is placed in printed form presented in a rectangular fashion to complement the design of the square pictorial images. Text does not add to the meaning of the exercises. Text is large and clear and in lower case script style with "Blocking" to add emphasis.

- Part Two: Front and Back
  Linear Description
  Text not well designed but executed quickly. Both text and drawing do not clearly explain the principles of geometry.

- Part Three: Different Leaves
  different shapes and sizes
  Text indicates confusion with respect to objective requests, design layout weak.
Part Four: Textural Description

Text indicates confusion with respect to objective requests; design layout weak

Part Five: Shape Description

Text indicates confusion with respect to objective requests; design layout weak

Quality of Drawing Exercise

[Yes] indicates that the student has an understanding...Upon reviewing this assignment I feel that my evaluation was fair. Many of the assignments were done with a great deal of speed without a full understanding. Many of the results had the same quality of description and lack of concern for presentation.

Part Four:

Cursive Aspects

- kind of language: very direct and simple
- style: N/A
- structural placement: N/A
- syntax: N/A
- metaphor / reflection: N/A

Part Five:

Indigenous Data / Indigenous Topologies

Insider driven...emerges from the data set choices by the learner

- remarks...This student illustrated a strong design sense but was unable to
project his talent further. His work was similar in all his efforts. The inclusion of the figurative study that was inspired through his own initiative indicates that he has the ability to do well if care and understanding are pursued.
Level C

LEAF STUDIES
DRAWING PRINCIPLES
OCT. 31 / 97
GROUP #10
INSTRUCTOR: R. NEVITT

BY:

SW-(c)-10
The back of the seed is much more delicate to guide the stem and the wings more important.
I chose a drawing from Goya because I really like the way he uses light and the play of light in the reflection on the canvas. The overall effect is very dramatic.
Qualitative Analysis
Brock University
Master of Education... 1997
Prof: M. Connolly
Richard Nevitt

Student Name: Stacey Walker
Student Code: SW-(C)10-97

Fall Semester 1997

Project 1: Descriptive Line as it applies to drawing and as a component part of the grammar of visualization

Part One:

**Physical Layout**

- **Part One:** Descriptive Line
  
  Number of Pages: (1) page
  
  Page Layout: 81/2 x 11 inches; Vertical format

- **Part Two:** Front and Back Linear Description
  
  Number of Pages: (1) page
  
  Page Layout: Vertical format; Same leaf equally spaced on the page

- **Part Three:** Different Leaves, different shapes and sizes
  
  Number of Pages: (1) page
  
  Page Layout: Different leaves of a variety of sizes with a "Fitted Layout" with little concern for design principles

- **Part Four:** Textural Description
  
  Number of Pages: (1) page
  
  Page Layout: Vertical layout; poor composition
Part Five: **Shape Description**

* Number of Pages: 2 pages
* Page Layout:
  
  **Page 1:** (3) oval shaped leaves contrasted with one large leaves. No sense of layout is illustrated
  
  **Page 2:** (3) leaves of the same size. Layout is static

---

**Part Two:**

Relation between Text and Pictures

- **Part One:** *Descriptive Line* No outline of objectives

- **Part Two:**
  
  **Front and Back** Objectives not defined. Text associates with visual appearance of the images.
  
  **Linear Description**

- **Part Three:**
  
  **Different Leaves**
  
  **different shapes and sizes** Text in block printed form is located adjacent alongside the leaves. Some attempt is made to reason some of the visual descriptions.

- **Part Four:** *Textural Description* N/A

- **Part Five:** *Shape Description* N/A
Analysis

Joseph
Education... 1997

Jr.

Quality of Drawing Exercise

[ NO ] indicates that the student does not have a complete understanding...

Some exercises illustrate a sensitivity with respect to drawing. In general student has difficulty learning. I feel the mark was fair.

Part Four:

Perspective Aspects

Kind of language: visually descriptive
Style: Simple and direct... no attempt to write in full sentences
Structural placement: Adjacent to areas being described
Syntax: N/A
Metaphor / Reflection: N/A

Part Five:

Indigenous Data / Indigenous Topologies

Insider driven... emerges from the data set
choices by the learner

• remarks...

This student has difficulty with visual structures and indicates a struggle throughout the entire process.
Level D/F

Group #5, time 1:00 to 4:00 Tuesdays

Drawing Principles, Leaf Studies

Instructor: T. Neotti

Oct 28, 97
What is the difference?

MAGNIFICATION

What is this? Please write in this section in case of further questions.
SHARP EDGES AND SLIGHTLY CURVED SHAKE

FLOWING LINE AND SLIGHTLY CURVED SHAKE

SHARP EDGES
TIP LEAF ARE ALL CURVED
Qualitative Analysis
Brock University
Master of Education... 1997
Prof: M. Connolly
Richard Nevitt

Student Name: Kathleen MacMillan
Student Code: KMM-(F)5-97

Fall Semester 1997
Project 1: Descriptive Line as it applies to drawing and as a component part of the grammar of visualization

Part One:

**Physical Layout**

- **Part One**: Descriptive Line
  - **Number of Pages**: (1) page
  - **Page Layout**: Sample of images were cut from journal and photocopied.
  - (5) fragments placed within an 8 1/2 x 11 inch format. Each "block copy" is of the same size.

- **Part Two**: Front and Back
  - **Linear Description**
  - **Number of Pages**: (1) page
  - **Page Layout**: Two large maple leaves directed in the same diagonal direction

- **Part Three**: Different Leaves
different shapes and sizes
  - **Number of Pages**: (1) page
  - **Page Layout**: Various fragments located throughout.
  - Exercise not completed as outlined.
Qualitative Analysis
Brock University
Master of Education... 1997
Prof: M. Connolly
Richard Nevitt

Part Four: **Textural Description**

- **Number of Pages**: (1) page
- **Page Layout**: (1) drawing located in the centre of the page

Exercise not understood

Part Five: **Shape Description**

- **Number of Pages**: (2) pages
- **Page Layout**: Page 1: (3) traced images located throughout the page without regard for layout design
  
  Page 2: traced images located throughout

Part Two: **Relation between Text and Pictures**

(Since the exercises were poorly done the written text is arbitrary. The presentation of text is done erratically with both printed and written styles of presentation. Descriptions contain serious grammatical and spelling errors.)

Above comments apply

Part One: **Descriptive Line**

Above comments apply

Part Two: **Front and Back Linear Description**

Above comments apply

Part Three: **Different Leaves:**
  different shapes and sizes

Above comments apply
Part Four: **Textural Description**

Part Five: **Shape Description**

**Quality of Drawing Exercise**

(NO) indicates that the student has no understanding of any of the parts of the assignments. None of the objectives have been outlined or properly explored. My assessment was very fair.

Part Four:

**Cursive Aspects** (In all cases not applicable)

- kind of language:
- style:
- structural placement:
- syntax:
- metaphor / reflection

Part Five:

**Indigenous Data / Indigenous Topologies**

- remarks: Student has a strong learning disability. Drawings are expressed with the same range of sensitivity with very little contrast. There is a definite language problem.
Appendix B

Consent Form
Letter of Permission

I am now in the process of completing my thesis for my graduate studies at Brock University in the Faculty of Education. The central focus of the thesis is to illustrate the importance of visual language as a structure to facilitate levels of integrated learning.

I feel that many of the ways that we explore the events of learning that take place within the Ontario College of Art and Design Community must be recognized and appreciated by a broader spectrum of educators.

The leaf project provides a beginning for such an inventory of explorative and reflective patterns essential for creative learning. I ask that I may use your work samples taken from your journals as a major support for the backbone of my presentation.

The permission for the use of research data ensures that the confidentiality of such material is safeguarded.

- the works will be selected from a random distribution of categories of mark groupings from each of the six groups that I have thought this fall semester, 1997.
- confidentiality of the student and work will be given a code name.
- the distribution and analysis of your work will be used solely for the purposes of the thesis.
- the data analysis will be primarily qualitative in nature that will help to unfold additional patterns of learning other than visual within the individual student.

If you are willing to participate in this research project many thanks for your support and encouragement.

Richard Nevitt

Please fill the form below:

Date

Print Name in Full

Signature

Group #