This theme issue reviews and confirms the connection between thinking skills and art education. Articles offer possible teaching approaches and specific lesson plans dealing with thinking skills. The issue includes: (1) "Editor's View" (Sharon McCoubrey); (2) "Critical and Creative Thinking and Making Art" (Carol Fineberg); (3) "Investigations and Personal Developments" (Rick Davidson); (4) "Critical Thinking in the Arts" (Sharon Balin); (5) "Problem Solving and Drawing: A Primary Lesson" (Helen Robertson); (6) "Independent Study Packets for Cognitive Learning in Art" (Cecilia Johnson); (7) "To Think or Not To Think" (Sharon McCoubrey); and (8) "Now Onto Another Topic: The Integration of Feminist Discourse in Built Environment Education" (Hinda Avery). (MM)
Art and Thinking Skills

By: Josie Davidson, Grade 12, George Elliot Secondary School, Winfield, B.C.
ART AND THINKING SKILLS

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It has been suggested that a “Letters to the Editor” section would be a valuable addition to this Journal. I therefore invite you to write a response for this new section.

A letter could be in response to an article published in one of the Journals, or could be comments about any art education topic. The “Letters to the Editor” section could serve as an interesting and valuable way to share thoughts, give reactions, ask questions, or comment in general about various topics or issues in our field of art education.

The illustrations throughout this Journal, other than those which specifically accompany a particular article, were created and contributed by students from George Elliot Secondary School, in Winfield, B.C., part of School District #23, Central Okanagan. The art teacher at this school is Rick Davidson.

The small drawings at the beginning of each article were done by Grade 1 students at Kidston Elementary School in Vernon, B.C., Student Teacher, Kim Kass.
"thoughtful, able to learn and to think critically, and to communicate information from a broad knowledge base."

That is one of the statements from the B.C. Ministry of Education’s description of an Educated Citizen, and is therefore one of the overall goals to be kept in focus by all educators. The development of thinking skills, however, is a little more illusive than the knowledge areas of educational goals. We know quite clearly if a student knows the capitals of the 10 provinces, and perhaps we can readily think of various ways in which we might teach him if he doesn’t know, but do we clearly know if a student has thinking skills, and do we readily know how we will teach thinking skills if they are not evident. Fortunately, there are many resources on thinking skills available for teachers as this is a currently valued aspect of education.

We have known for a long time that the development of thinking skills is one of the outcomes for students involved in art education. Many of our art education mentors and early writers have made for us the connection between art activities and thinking skills. This Journal focuses on that connection in order to review and confirm that connection, and to offer readers various discussions and possible teaching approaches or specific lessons which deal with thinking skills in art.

Sharon Bailin gives us a definition and explanation of critical thinking. For anyone questioning that connection, "To Think or Not To Think" takes a brief look at the basis for the belief that art education will enhance thinking skills. Carol Fineberg gives us examples of Project Zero’s work with thinking in art.

Illustrations by: Charmaine Coughlin, George Elliot Secondary School
Rick Davidson explains the basis of his art program in a secondary school which clearly takes the approach that art is visual problem solving and thinking is a must in order to achieve the creative results that can be seen in his students' work. Cecilia Johnson explains the Independent Study Packets used in her art program. Helen Robertson's lesson confirms that art at the primary level can also require and develop thinking.

"...Now Onto Another Topic" is a section of this Journal which allows us to look at various discussions about art education that may not be specifically related to the chosen focus of a Journal, but offers valuable information for us about art education. The article in that section this time by Hinda Avery looks at aspects of both the built environment and a feminist involvement in it.

As we faithfully carry on with our work in art with our students, and as we strongly carry on with our efforts in art advocacy, we need to keep in focus the essential connection that exists between art and thinking skills.

Sharon McCoubrey
Journal Editor
What evidence is there that learning in and through the arts genuinely influence students' ability to think critically and creatively? And what are the conditions that foster that relationship? For the past ten years or so, this researcher has been studying the literature of critical and creative thinking through the arts. It was hoped that these studies would not only affirm, but virtually guarantee the relationship, providing ammunition to arts education advocates in the endless efforts to persuade school systems, funders, and businesses of the important of arts education.

It has not been easy, since not all teaching in ANY subject including the arts is consistently designed to encourage critical and creative thinking. Sometimes the teaching objective is to acquire specific knowledge or skill. The teacher may ask students to research five characteristics of Italian Renaissance. He may show students several techniques of shading with pencil. She may demonstrate the traditional way of joining two slabs of clay. These activities alone are not likely to demonstrate higher level thinking, although they may eventually be called upon in various combinations to trigger critical or creative behaviour.

Looking at completed artwork may not immediately confirm the presence of critical or creative thinking. It is impossible to ascertain the inner thinking of individuals engaged in fashioning a piece of art, music, choreography or drama without the cooperation of the artist.

Dennis Palmer Wolf, long associated with Harvard Project Zero poses a recurring question for researchers seeking a link between arts education and intellectual development. "How can the insides of artistic learning be made visible? What evidence is there that the arts entail rigorous thinking? What methods best document changes in the process of artistic thinking?" (Wolf, 1988, p. 144)

During the course of two school years (1991-93) administrators and teaching artists affiliated with a New York City Public School's collaborative program, Arts Partners, participated in an ethnographic study designed to gather evidence that teaching artists stimulated various kinds of overt student behaviour signifying critical and/or creative thinking. This researcher studied the relationship between five teaching artists and their students' behaviour, looking for evidence that students were not simply acquiring skills and information, not simply following directions in the fashioning of art projects, but were defining aesthetic problems, asking good questions about what they were doing, and searching for the most workable options to help their work evolve into the kinds of objects that demonstrated critical and creative thinking. The following article summarizes some of that study's findings and focuses particularly on the work of two visual artists who served as teaching artists in the program.
We began by looking for behaviors akin to Schwartz and Perkin's critical thinking checklist: representing an idea, breaking a problem into smaller parts, seeing 'the other side of the case', speculating, analyzing, exploring, and defining problems. Teaching artists, working in cooperation with classroom teachers or school-based art specialists, developed a series of art-making encounters with children that resulted in an array of art objects and performance pieces. Most intuitively used techniques Wolf described and which are used by artists around the world. "Teaching, imitation, and influence...think of what Hans Hoffman taught a generation of abstract expressionists, the effects of Gauguin on Van Gogh, or the way artist of the Dada, Blaue Reiter, or Bauhaus schools built one another's works." (Wolf, 1988, p. 148)

In addition, we looked for what David Perkins, co-director of Harvard Project Zero, cited as two kinds of thinking processes associated with the arts: getting the ideas, and judging the work in progress and at completion. In each residency, we observed students engaged in these two activities. Three of our teaching artists spent a great deal of time encouraging students to consider various options as they determined the main ideas of their work. All five artists, some to a greater degree than others, encouraged their students to judge their work, critique it, and to determine whether it was "working". In a way, they risked students being discouraged by their own creative efforts. Nonetheless, as Perkins points out, "Failures of judgement deserve recognition all the more when we remember that judgement applies not only to close editing of the final product, but to decisions made much earlier in the course of creating...Failures of judgement in...early decisions therefore constitute just as much of a limit on a maker's creating as failures of judgement later on." (Perkins, 1981, p. 127-8).

**FINDINGS: ARTISTS' BEHAVIOURS**

"To understand creating is to understand how the originality and other qualities get into the product. We’ve seen the maker using moments of recognition that sometimes make for insight, the schemata that both limit and enable invention, problem finding and heuristics of problem solving, the patterns of search that lead the maker to a final product, critical judgment with its reasons that periodically often are not reasoned out." (Perkins, 1981, p. 275).

The researcher saw how some teaching artists were more effective that others in stimulating or sustaining critical thinking processes in their workshops. For example, Sally and Jerry were particularly adept at evoking critical and creative thinking skills.
SALLY - PAINTING AND SCULPTURE

Sally conceived a creative project for her bilingual second graders involving the creation of masks from paintings. After consulting with her partner teacher, she decided to capitalize on the Caribbean and Latin American backgrounds of most of the children and presented them with a mask making project based on their understanding of the masks of the Dominican Republic, Mexico, and other Latin American countries. Sally gave directions, modeled processes, and provided room for individual choices. She gave the children opportunities to evaluate their own and each other's work at crucial points in the artmaking process. When the students completed their work, Sally created a gallery of finished work for the whole school community to see and comment upon.

The children worked at varied paces, going on to the next step when they were ready rather than waiting for everyone to finish. They had a complete sense of what they were doing, having learned from Sally how each step would naturally lead to the next, which in turn would result in a finished mask.

While Sally's work looked on the surface to be simply a matter of following her directions, the researcher observed children thinking out loud, considering various options for elaborating their masks, choosing different colours and shapes, and deciding where to place various ornamental features on the clay mask.

JERRY - SCULPTURE AND MIXED MEDIA

Jerry designed a series of group lessons around projects that his eight grade students conceived and constructed. During the first of ten sessions, Jerry gave a slide talk about different versions of beauty through the ages. He then modeled various techniques used by sculptors showing how familiar materials could be used in new ways. After this experience, the students selected ideas for individual and group sculptures from their view of life as lived or life as studied. Jerry gave the students many chances to reflect on their work, and he frequently related their work to that of professional artists. He introduced unusual materials and tools with which the students joyfully experimented.

Each of these two artists fostered critical thinking in his or her own particular way and with varying degrees of intensity and effectiveness. Most frequently used techniques were:

1. thinking out loud while demonstrating a technique or approach
2. asking questions that forced children to predict, infer, analyze, or synthesize.
3. asking students to see relationships between parts and wholes, comparing various examples of artworks
4. modelling a technique or process
5. facilitating discussions about problem solving processes.

Basic Processes of critical thinking include the following transactions: (Presseisen, p. 45)

1. Causation - establishing cause and effect, assessment
2. Transformations - relating known to unknown characteristics
3. Relationships - detecting regular operations
4. Classification - determining common qualities
5. Qualifications - finding unique characteristics

Complex Processes entail use of basic thinking processes in various combinations in order to accomplish the following:

Critical Thinking: to analyze arguments and generate insight into particular meanings and interpretations
Problem Solving: to resolve a known or defined difficulty
Decision Making: to choose a best response among several options.
Creative Thinking: to develop or invent novel, aesthetic, constructive ideas or products, related to percepts as well as concepts, and stressing the in-
tuitive aspects of thinking as much as the rational. Applying known information or material to generate the possible, to elaborate on the thinker's original perspective.

**ERECTING THE FRAMEWORK FOR A MODEL ARTS IN EDUCATION STRUCTURE**

The framework rests almost exclusively on instructor behaviour although we recognize that the role of the administrator influences some factors more than others. The characteristics of the model look very much like a synthesis of Dewey, Perkins, and Hunter, and include:

- artistic expertise
- effective instructional strategies
- clear thinking skills goals
- challenge
- choice
- structure
- time for planning and doing
- enthusiasm

Below are descriptions of some of those characteristics readily observable which seemed to encourage critical thinking and problem solving in the Arts Partners classes.

**ARTISTIC EXPERTISE**

The first essential element of this framework for an Arts in Education Model is a require-
Students were aware that learning how to think critically was part of the rationale for artmaking; even students on the 5th grade level linked thinking processes with artmaking. Younger students could not nor would they be expected to articulate the relationship between thinking and making, but in fact they demonstrated thoughtful processes as they made choices of materials, determined the elaboration and ornamentation of their projects, revised and improved their final versions of their art objects or scenes. In this model, the instructor must aim to teach about thinking as one teaches children to think through their art making effort.

**CHALLENGE**

Where thoughtful behaviour was most evident, the artmaking assignment (process leading to product) was challenging and meaningful to the students. The assignment required students to stretch. They could not submit work that was simply a rehash of past assignments. They were required to thoughtfully select an idea or ideas, determine the best way to represent the ideas using new materials, and they were asked to reflect upon their work at various stages of production. All worked with a defined set of "problems" that were either self generated or generated by the artist; artists provided models or frames of problem solving and critical thinking.

**CHOICE**

In order to think on a complex plane, one has to do more than follow directions, although following directions requires some thought. The researcher found that in those classes where students exhibited higher level thinking skills behaviour, artists had provided real choices for students to make. This required weighing alternatives, generating additional alternatives, and finally, committing to a course of action. In Sally's case, students had to choose the shape of their mask, the kinds of ornaments, the colour scheme, and best choice of all, the message that their mask was to convey.

Sculpture students had to choose not only the ideas to convey in three dimensions, they also had to choose their materials, colours, shapes and textures. Then, when it came time to install the works, they had to choose which pieces complemented each other, which provided good contrasts.

**STRUCTURE**

*(Scope and Sequence of Lessons)*

The most successful Arts Partners teaching artists enacted a carefully structured sequence of activities combining modelling, improvisation and experimentation, and critique. They provided a structure within which students defined their choices, avoiding a situation where children were asked merely to create something out of nothing! Artmaking techniques were introduced to help students master new materials and communicate explicit ideas. One-on-one and small group guidance were offered throughout the residencies, giving students both encouragement and criticism within the framework of the project.

As students finished one phase of their project, their artist mentors were ready to offer suggestions, responses, and prompts for next steps. Students were not observed flailing around, waiting to be told what to do "next".

**TIME FOR PLANNING FOR DOING**

Teachers and artists spent time revising and enhancing their original workplans. Students were given and therefore used, time to revise, edit, and in other ways polish their artwork before considering it "finished". Time was provided for students to reflect periodically upon the work in process.

**ENTHUSIASM**

The teaching artists were each visibly enthusiastic about the work at hand and the opportunity to work with students. When they praised student work, it was with relish. Moreover, they were specific about what they praised.
Enthusiasm for the subject was marked by animated conversations, for example, between Jerry and his students on what is beautiful, discussion included what is the point of being "ahead of the pack" and what does it mean to be "at the cutting edge". Sally’s enthusiastic presentation of masks made by artists in Latin America encouraged her 2nd graders to value their own artwork.

Jerry enthusiastically responded to the original sculptures and scenes created by their students. He was also very specific about what impressed them, thus giving students specific feedback about their achievements.

CONCLUSIONS

Although some artists were more effective than others in stimulating higher level thinking skills behaviour, all the artists were effective at various time with different elements. Some artists consistently elicited behaviour that reflected higher level thinking skills, particularly critical thinking and problem solving, and there was a marked pattern of features that characterized their workshops.

Making art, it would appear, can stimulate all kinds of mental operations categorized as higher level thinking. With the presence of those conditions described above, art classes can incubate the kind of thinking that businesses and government exhortationists have been pleading for. Our challenge is to create and sustain those conditions by looking more closely at what we do as instructors, administrators, and trainers of teachers. As the young son of New York City's Mayor Rudy Giuliani chanted (in another context to be sure!), "It can be done; it can be done."

REFERENCES


Dr. Carol Fineberg is a consultant in curriculum and staff development to school districts and arts organizations, and is an adjunct associate professor at Pratt Institute where she trains student teachers.
I remember one of my art history instructors at the University of Calgary, John Stocking, defining art as "The realization in media, through existential operators, of ideas which are ultimately connected to the human spirit". I quote him here, with apologies, as closely as I can recall. He had incorporated some Irwin Panofsky, some Wilhem Warrenger, and the concept of "existential operator" which I still find very interesting although I now face that daily Art 9 class which keeps me solidly in the reality of "what are we doing today, sir?" I also remember him railing away about bad art as "paint splattering" and containing no empathy, no connection to the universals of human condition. Today, after a few years of teaching art to teenagers, I still carry a deep belief in that special quality of expressing our humanity of which art is capable.

It is probably safe to say that as art teachers who promote creativity as a most meaningful and necessary aspect of a student's education, we have always been interested in the process of discovery and invention inherent in personal expression. Good art to us involves a student effectively making a particularly personal statement. Consequently, our visual arts courses include opportunities for students to develop individual imagery. The study of historical implication, elements and principles of design, media and techniques, and reasoned criticism are important components also, they broaden the scope of experience, but individual imagery is the creative area where personal connections are realized and invention occurs. Studying those other components thoroughly can be hard work and may not interest all students, but when it includes investigating connections to personal experience, the discoveries can be very energizing for the student. They are spontaneous personal developments as the result of honest hard work, which is the essence of creativity.

For many students, these expressions of unique, personal viewpoints often happen subtly or even unknowingly through a natural, naive and honest interpretation. However, we also spend a good deal of time and effort concerned with helping students who seem to be blocked from discovering those creative capacities within themselves and struggle to find those unique realizations. At George Elliot Secondary School, we have developed an approach to this problem which involves emphasizing exploration of media, themes, and creative strategies and their connections to personal attributes.

There are many excellent publications which show us numerous ways to enhance the creative process. Approaches involving problem-solving and brainstorming techniques can help improve creative thinking skills. Most educators know of Edward DeBono's theories on developing thinking skills and many teachers use Robin Fogarty's books on promoting creative thinking. Resource materials on processes and materials can assist us in making our classroom presentation of media uses more effective for a variety of learners. Publications on creativity in the visual arts specifically include Betty Edward's drawing...
textbooks, Nicholas Rouke's books on synectics, Lawrence Halprin and Robert McKim's studies on visual thinking, Mary Johnson's "visual Workouts", Robert Kaupelis' "Experimental Drawing", Richard and Judith Wilde's visual problem solving books, and many others.

The key to using these materials effectively for us at George Elliot Secondary School is in providing some framework for students to function within and which allows us to teach a broad, working approach to being creative. It has application to virtually all students and incorporates demystifying the process and celebrating the abilities that we all have to approach visual problems with an anticipation of personal discovery.

Our framework is based on the belief that good investigations can lead to personal developments and each is an equally valuable part of the process. Tom Hudson demonstrates this approach successfully in his teaching on the Material and Form telecourses from Emily Carr College of Art. His students are very capable and self-directed, but we find that encouraging investigations is the best first step towards putting any student into a discovery mode and exposes the best source for personal developments - individualized explorations. Every solution then springs from independent study.

There is, no-doubt, not much new to many art teachers but the concept of personal exploration needs to be restated since today's students seem to be less involved in personal explorations generally. So much is presented to them, through mass media et al, that is already very completely developed. They are relatively inexperienced as explorers. We found them still to be eager investigators when that process is valued and especially when they are encouraged to make it a personal process from defining the problem to discovering a solution.
It is typical for art teachers to develop units and assignments around topics which emphasize great themes, contemporary issues or media developments. Their intention is to inspire good works. We feel the teacher should indeed often create limits which challenge students but yet also allow them latitude for their investigations to take them in distinctly new directions. The presenting of a good project/problem is best served by including the students in the decision about what form the problem itself takes. Ultimately, students could find and define their own problems, either individually or in groups by carrying out a self search, an investigation into their own beliefs, attitudes, memories, observations and imaginations. These are such natural sources. They should be a factor in shaping the nature of the problem to being with. For any class, this would be an excellent first step in personalizing a teacher assigned project.

Once the problem is formulated we focus investigations into the three areas of media, themes and strategies. It is possible that some aspects of any one of these may be predetermined limits of the problem but in any case, personal investigations into each area is crucial to achieving creative developments. For example, if an assignment were limited to a particular theme, the students would first examine the theme with an intent to personalize the concept, then they would investigate potential media possibilities and potential creative strategy approaches. Multiple possibilities would be explored and documents in a notebook/sketchbook and be evaluated for variety, breadth, focus, fluency and flexibility. Other assignments might limit more than one component if the group needs more control or an individual who needs to have choices more restricted. But in any case, all three components would be subjected to personal explorations, documentation and evaluation.

INVESTIGATIONS INTO MEDIA
Media are explored in random and organized ways, test limits, combinations, supports, techniques, processes...
- existing techniques are considered
- all results are valued
- all results are documented
- new connections are risked
- new media skills are learned

INVESTIGATIONS INTO THEMES
Themes are explored in random and organized ways - mapping, webbing, brainstorming, defining, analogies, predicting,
are fortunate in art to have this as our domain, and it certainly is one of the main reasons the arts are so important in a student’s general education.

The operative concept is: SOME POSSIBILITIES ARE...

The documentation of possibilities in a notebook/sketchbook or research journal is important so that students can maintain reference points and the process can be presented to others for discussion, exhibition and evaluation. Measuring personal artistic growth is the ultimate goal of evaluation and a readable documentation of a student’s individual creative developments is a good way to keep this necessary part of teaching/learning fair and equitable. Process should be valued equally with product.

The second major part of the framework, personal developments, is the product component, the "art part". Personal developments are resolutions of the investigative process which come about as natural extensions of the interrelatedness of media, theme, and strategy explorations. It is no surprise that an intense, even though sometimes brief, series of investigations conceive very original artworks. The interplay of media, theme and strategy is usually a rich, complex, multiple series of possibilities. Students get very excited about the personal nature of their discoveries and of course the quality of their work is positively affected also. Final decisions about composition, design, form and content which are difficult for many students in an unsupported, one-off attempt are better served by a well developed, personalized knowledge of media, theme and strategy possibilities. Investigations themselves can easily become developments because when the process is valued to this extent they are often wonderfully executed as simultaneous connections of media, theme and strategy. We teach that students should include developments of all three components in any artwork.
The primary result of this approach is that virtually all students can achieve some creative results. Flexibility and fluency are celebrated and the resulting artworks are rich in personal connections and tension. They are genuine developments in which true creativity has been allowed to happen by serendipity and hard work. We ask for four commitments from our students:

TO STRIVE TO BE CREATIVE - everyone is capable of personalizing, finding original connections between media, theme, and strategy.

TO BE EXPERIMENTAL - investigate possibilities, take risks, try new approaches.

TO BE PRODUCTIVE - document your explorations, produce many possibilities and complete personal developments in your best work.

TO BE A GOOD COLLEAGUE - to be a sharing contributor.

It is very rewarding to see students discover the joys of working intuitively and developing a variety of real interpretations, accessing their "existential operations" and making real connections to visual phenomenon.

REFERENCES


Rick Davidson teaches art at George Elliot Secondary School in Winfield, B.C.
CRITICAL THINKING IN THE ARTS
by Dr. Sharon Bailin

There is frequent reference made in the area of arts education to the idea that the arts involve critical thinking and that critical thinking can be promoted by work in the arts. Indeed, that idea is present in all four drafts of the arts curriculum documents. And it is an idea that I would certainly concur with and support. The problem is that it is usually not spelled out very clearly exactly what critical thinking is or elaborated in any detail what it means to think critically in the arts in general or in specific areas of the arts. What I would like to do is first to outline the conception of critical thinking, and then to look at an example of how it is applicable in the arts.

CONCEPTION OF CRITICAL THINKING

What is critical thinking? The definition that we have employed is that critical thinking involves:

- thinking through problematic situations
- about what to believe or how to act
- where the thinker makes reasoned judgements
- that embody the attributes of quality thinking.

There are several aspects to note in this conception. First, critical thinking is not viewed as a generic skill that can be learned in isolation and then applied in a variety of areas. Rather, critical thinking is seen as highly contextual, taking place in response to problematic situations. Second, knowledge is central to critical thinking. Third, critical thinking is distinguishable not by the processes it employs, but rather by the quality of thinking.

This conception of critical thinking involves three dimensions:

a) critical challenges: the tasks, questions or problems that provide the impetus and context for critical thinking
b) intellectual resources: the background knowledge and critical attributes that are drawn upon when responding to particular challenges, and
c) critically thoughtful responses: responses which embody the appropriate resources evidenced in response to particular challenges.

A) CRITICAL CHALLENGES

Critical thinking does not take place in a vacuum but is always in response to a particular task, question, problematic-
ic situation or challenge. These include solving problems, resolving dilemmas, evaluating theories, making life decisions, but they also include creating and interpreting works of art and improving artistic performances. What makes a challenge a critical challenge is that the task requires reasoned judgement and assessment. Examples of critical challenges in the arts might be creating a dance to convey a specific mood, deciding on and justifying an interpretation of a play, improving the performance of an piece of music, or creating a painting in a particular style.

B) INTELLECTUAL RESOURCES

Critical thinking does not involve a set of generic skills or processes which can be learned and then applied across subject areas. Rather critical thinking involves drawing on a complex array of intellectual resources, many of which will be specific to the particular area. The particular resources needed for any challenge will depend on the specific context. These intellectual resources are of two types: background knowledge and critical attributes.

i) Background Knowledge

Critical thinking cannot be separated from knowledge. Background knowledge in the relevant areas is essential for critical thinking to take place. For example, if students are responding to a challenge to develop a dramatic presentation based on a particular era in theatre history, then knowledge about the theatre of that era is essential.

ii) Critical Attributes

There are 4 attributes which are intellectual resources for a challenge.

1) Knowledge of the principles of quality thinking

Also necessary for critical thinking to take place is a knowledge of the principles which govern quality thinking and judgement in the particular area, for example, an understanding of the standards that govern the interpretation of written, oral and visual communication (e.g. that the interpretation fits the textual evidence); or an understanding of the standards for assessing a dramatic performance.

2) Knowledge of critical concepts

There are many concepts that facilitate thinking and judgement in particular areas, concepts which mark certain distinctions or pick out certain aspects which are central to the area. In the arts, such concepts include balance, pace, mood, focus, unity, culture, to name just a few. An understanding of such concepts is important for thinking critically in the arts.

3) Repertoire of strategies or heuristics

There may be certain strategies or heuristics which are useful for guiding performance in certain tasks, and may have some applicability in the arts, for example, dividing a complex task into smaller units or making use of models, metaphors or symbols.

4) Attitudes or habits of mind

Knowledge of standards and concepts is insufficient for critical thinking without accompanying habits, commitments and sensitivities. Some of the attitudes or habits of mind which are important in the arts are a respect for high quality products and performances, an inquiring attitude, commitment to the task at hand, and willingness to consider the views of others.

Critical thinking does not take place in a vacuum but is always in response to a particular task, question, problematic situation or challenge.
C) CRITICALLY THOUGHTFUL RESPONSES

What distinguishes critical from uncritical thinking is the quality of the thinking, and this can only be seen by assessing the quality of the response to the critical challenge. A response may take many forms. It may be an answer to a question, or it may be a painting or a dramatic performance. A critically thoughtful response should indicate that the appropriate intellectual resources have been brought to bear in dealing with the challenge at hand.

To summarize, then, critical thinking is contextual and always takes place in response to certain challenges. The thinker must draw on a range of intellectual resources in order to respond to these challenges, including knowledge, strategies, and habits of mind. Assessing critical thinking involves evaluating the quality of the response to the challenge.

EXAMPLES OF CRITICAL THINKING IN THE ARTS

I think that the best way to demonstrate the applicability of this way of looking at critical thinking is to flesh out an example from the arts. I shall draw my example from drama, which is my own area of expertise.

1. Critical Challenge
The challenge I have chosen is the creation of a choral dramatization. This involves having the students read a particular passage and then prepare a presentation of the passage which includes:
   a) an oral reading of the passage using a variety of combinations of individual and group voices and making use of vocal effects such as repetition, echoing and overlapping; and
   b) an expression of the passage through movement using techniques such as slow motion and tableaux.
This task requires the students to solve various problems of dramatic expression, and to make aesthetic judgements which draw in their intellectual resources in order to create a dramatic product.

2. Intellectual Resources
This challenge would draw on numerous resources, too numerous to give an exhaustive list. But let me list a few. The students would need to have an understanding of various dramatic forms of expression, for example tableaux and slow motion movement. They would need to draw on knowledge of choral speaking, for example the use of individual, group and unison voices. They would require knowledge of oral interpretation of text.

   Numerous principles which govern dramatic judgement would come into play, for example the principles regarding dramatic focus or the idea that vocal variety is generally dramatically effective.

   There are numerous concepts an understanding of which is required to deal with this challenge, for example pace, rhythm, pitch, tempo, focus, contrast, tension, dramatic unity.

   There are certain strategies which might be helpful (though not absolutely necessary) in dealing with the challenge, for example dividing up the overall task into its components.

   Finally, there are certain commitments which would be useful or necessary for dealing with the challenge, for example respect for a high quality presentation and willingness to work toward this end, a serious commitment to the task...
we must ensure that the curriculum in question provides opportunities for critical challenges which will prompt students to think critically, that it provides meaningful contexts which engage students’ thinking, and call upon their resources.

in the form of maintaining belief in the drama, and a willingness to consider the views of others in the process of developing the work.

3) Critically Thoughtful Response

The characteristics which one would be seeking in the response would be those which demonstrate the use of the appropriate intellectual resources. Thus one would be looking for a presentation in which the vocal interpretation was appropriate to the text, which used tableaux and slow-motion movement effectively in conveying the meaning and mood of the piece, which was dramatically effective in terms of pace, rhythm, tempo, focus, which demonstrated visual and vocal variety and contrast, which displayed some originality in how the elements were used, which demonstrated effort, commitment, and belief.

This examples was drawn from the realm of creating, but the conception is equally applicable to other aspects of the arts such as perceiving and responding, or understanding the social and historical context of art. Thus, as another example, one could construct a critical challenge involving having student analyze a visual image from advertising. The background knowledge required would include knowledge about visual composition, about the connotation of various images in our culture, about stereotypes, about the connection between advertising and economic interests. Relevant concepts would include symbol, stereotype, focus and contrast. Some of the principles of quality thinking which would be called upon would be that an analysis should accord with all the visual evidence and that it should also accord with what is known about the circumstances of production of the image (e.g. that ads take a great deal of time and cost a great deal to make and it is thus likely that nothing that appears there is gratuitous). One useful strategy might be to begin by brainstorming the associations that the ad calls up. Finally, the response should demonstrate that the appropriate intellectual resources have been used.

CONCLUSION

Let me conclude by talking a bit about what we need to look for in the curricula if we are serious about developing critical thinking in the arts. First, we must ensure that the curriculum in question provides opportunities for critical challenges which will prompt students to think critically, that it provides meaningful contexts which engage students’ thinking, and call upon their resources.

Second, we must ensure that the curriculum provides for the development of the intellectual resources which are required for thinking critically in the relevant areas, that it fosters the development of the knowledge, concepts and commitments which are central to critical thinking in the arts and does not leave the acquisition of these to chance.

Finally, there must be provision for the assessment of the responses that students make to the challenges. Without taking a task to completion through developing a response and without an evaluation of the response, we cannot say that critical thinking has taken place.

It is in the last two areas that I believe that past curricula, in at least some of the arts areas, has tended to fall short, and where we need to pay particular attention.

Dr. Sharon Bailin instructs in the Drama department at Simon Fraser University.
PROBLEM SOLVING AND DRAWING: A PRIMARY LESSON

by Helen Robertson

Art activities do develop thinking skills, however, higher level thinking in problem solving requires good problems to start with. This is a challenge for art educators.

The following lesson gives an example of a problem solving drawing lesson planned for primary students which does require higher level thinking.

OBJECTIVE

This drawing problem was designed to allow the students to:

1. represent their patterning skills
2. enhance their unit on Space
3. represent their understanding of profiles and frontal, head-on view and creatively combine the two
4. break stereotypes of representing suns

MATERIALS

paper and pencils
examples of Picasso’s works

TIME

Approximately one hour.

DEVELOPMENT

We had previously discussed profile and frontal head-on views with the art project of self portraits. These concepts were reviewed for this drawing lesson. We brainstormed for the various ways we could make a sun and a moon as profiles and with frontal, head-on views. Some examples were modelled on the board. I then showed some examples of Picasso’s work, pointing out his combined profile and frontal, head-on views. I mentioned that the artist had the freedom to represent faces any way desired, and that the artist had the freedom to make choices with his representations.

The drawing problem was presented to the students in this way:

- Make a sun/moon picture.
- One must be a profile view and the other must be a frontal, head-on view.
- They must be combined in such a way that they are touching each other.
- You must show some evidence of your understanding of pattern making somewhere in your picture.

RESPONDING TO THE ART WORK

The children walked around the class at about 15 minutes into their drawing time, observing each other’s work. They then volunteered to hold up their work and explain their patterning. After some additional drawing time, when the drawings had progressed, we compared them to previously drawn suns and moons to determine which representations were liked more and why. In most cases, the children liked the combination drawing because they were more unusual, interesting, and extraordinary.

The nature of this drawing lesson required the students to think, to plan, assess, adjust, in order to meet the challenge set to them. In addition to the benefit of an art activity facilitating the development of thinking skills, the resulting art works were unique and imaginative.

Helen Robertson teaches at Hawthorne Elementary School in the Delta School District.
INDEPENDENT STUDY
PACKETS FOR COGNITIVE LEARNING IN ART

by Dr. Cecilia Johnson

As I developed curriculum for my Advanced Art class, I was dedicated to helping the students to develop research skills in preparation for college and to be life-long learners. I also wanted the students to apply the knowledge they gained from completing independent study packets to purposeful products, striving to reach their potential by using higher thinking skills.

In addition, I needed materials which the students could use independently as I was teaching another course at the same time during various periods in the day.

CURRICULUM RATIONALE

Other important curriculum rationale were:

- To allow the student to pursue an interest in art in a more in-depth manner.
- To broaden the student's awareness of cultural influences in the world of art.
- To help the student refine his/her skills in the areas of Art History, Art Criticism, Aesthetics, and Art Production.
- To acquaint the student with the role of the artist as a self-motivating, independent, intellectual worker.

ART HISTORY

The study of art history need not be limited to high art. Fine art needs to be studied for its aesthetic value, but also as one of many cultural expressions. In the support of democracy, one needs to have a knowledge base of art forms from many cultures to make an informed choice of what is good art. A balance of fine art with the art of a particular culture can be enhanced by viewing local museums and art exhibits. An understanding of the influences that a culture has on the local art (ie. its local color) can be enlightening as one strives to blend art history with art being currently produced by local artists. Understanding not only the "what" of art history, but also the "how" and "why" of art history, helps the student to integrate understanding of art history in their own art production.

AESTHETICS

Artistic literacy focuses on how one responds to works of art rather than the character and quality of the objects themselves. Aesthetics involves a
personal interaction with a work of art and its inherit quality. Allowing the student to share his/her thoughts, feelings, and attitudes towards a given art object, gives him/her an opportunity to develop personal judgements based on that interaction. Developing an aesthetic awareness allows the student to understand his/her perceptions about art forms and enhances his/her ability to relate art to his/her being and the society as a whole.

**ART CRITICISM**

Art criticism helps to develop an aesthetic awareness. Criticism involves description, analysis, interpretation, and judgement which leads to aesthetic judgements. Describing what one sees in an objective manner is a way to examine the facts and inherit quality contained in a work of art.

Analysis occurs in the discovery of the basic visual symbols such as elements of design that an artist uses in a work of art. The elements of design help to organize a work of art. These consist of line, texture, shape and form (geometric - square, circle, triangle, etc., or organic - irregular in outline), color, value (light and dark), and space. The art elements are used by the artist to achieve unity.

The principles of design are essential components in the art products as they supplement the elements that the artist has incorporated in a work of art. They are discovered in the analysis step of art criticism. The students learn what they are and how to use them during art criticism.

As one interprets a work of art, he/she is trying to explain the meaning. This is based upon the discoveries made concerning the description and analysis steps, as well as feelings and personal observations from life.

In the judgements step, students share their thoughts and feelings about their art products. They are making an aesthetic statement about their interaction with their art products.

The development of aesthetic awareness, from a philosophical perspective, is woven throughout the curriculum, as the students continue to inquire and question. All of the components described in art criticism are important in developing aesthetic judgement of art works.

Evaluation is incorporated in art criticism. Teacher generated rating scales are one way to help the student to self evaluate. The scales are based on the principles and elements of design. The student’s perception of aesthetics is also a part of the evaluation of one’s art product, as the student develops skills in aesthetic awareness. Self evaluation (as well as peer and teacher evaluation) helps the student to gain proficiency in his/her personal understanding of artistic expression.

**ART PRODUCTION**

Artists express themselves by the medium chosen and level of skill in manipulation of the materials. Style is one or more distinctive characteristic contained in the works of art of one person. A combination of these allows the artist to make a personal statement as he/she strives to express his/her feelings and emotions.

**THE INDEPENDENT STUDY AND THE STUDENT’S NEEDS**

Artistry requires one to use the mind. Art objects are the concrete expression of thoughts and feelings. Art helps the student to develop intellectual potential. Art helps the student to process information and synthesis knowledge using higher thinking skills, as well as his/her creative thinking skills.

Bloom’s Taxonomy of Cognitive Learning is a method of organizing activities which allows the student to operate in the higher thinking mode. Activities can be categorized into six levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. For his/her independent study, the student will already have basic knowledge, such as color theory, and the principles and
elements of design. The student will, therefore, concentrate his/her learning in the higher thinking levels of application, synthesis, and evaluation.

The student will apply the knowledge to his/her art product. Synthesis occurs when one takes a concept and creates something new based on that concept, such as designing an outdoor sculpture using the knowledge gained about existing outdoor sculptures. The thinking skill of evaluation is incorporated in the critique of the art product.

In dealing with the needs of the students in this independent study class, enrichment activities and experiential learning will allow the student to expand his/her intellectual potential and creative skills. By consciously using several senses during this class, the student will be able to maximize learning, retention, and enjoyment.

Art lends itself well to interdisciplinary studies which can help strengthen and enhance the student's ability to interact with and gain understanding about the world. The student will experience a feeling of universality by combining art with various other subjects and looking at the interrelationships. Art reflects historical events and the social and political issues of a culture. The student will learn to see a broad-based purpose of art for the society as a whole.

The multi-cultural world view also benefits from this growth by the contribution to the enhancement of its collective existence. This is, as students more consciously reflect on their own expression and that of others, they should grow in ability to accept works that reflect individual, cultural and gender differences.

GOALS

The student will develop his/her cognitive and creative potential, allowing for him/her to become an independent producer of original and successful products that will contribute to his/her own culture, satisfying individual and societal needs.

The student will utilize information management, logical thinking, problem solving, and decision making skills to seek solutions to teacher and self directed purposeful projects.

The student will acquire personal adaptability and sensitivity to change, as he/she develops an appreciation for diverse viewpoints of others, understanding both the society in which he/she lives and other cultures.

OBJECTIVES

- To sensitively and insightfully describe, analyze and interpret works of art, those derived from European and non-European traditions.
- To develop an understanding of the arts through interdisciplinary application.
- To understand and make decisions regarding art criticism and aesthetics.
- To develop self confidence in creative, personal expression through various art media.

METHODOLOGY

I developed independent study packets based on an independent study guide (see below). Each packet starts with a directions page which includes the topic to be researched, suggested materials, and a description of the forms in the packet and the information needed for the research and culminating product.

Each packet is modified based on the students' interests, needs, and the resources available. For example, the first packet I developed was on Sculpture in the Community. The student researched outdoor sculptures in the community and then designed an outdoor sculpture for a designated purpose and location.

Once my forms were designed, I could modify them for each particular topic. In addition to the Sculpture in the Community packet, I have developed packets on: Fibre Arts, The Faces of Jesus, Social and Political Concerns Portrayed in Twentieth Century
Art, American Crafts, and Women Artists and Their Contributions to the Arts.

The independent study packets usually require four weeks to complete. Students also work on weekly sketches and portfolio items. Group and individual critiques are done with the teacher once a week, and the teacher checks progress on the various projects. Final evaluations are done once the packet is completed (see forms below).

The teacher component in this curriculum includes lectures, guided discussions, slide/video presentations, demonstrations of media use and technical methods, and group and individual critiques. The teacher also is a facilitator of reference and resource materials.

INDEPENDENT STUDY GUIDE

Step 1: Student selects an art topic that is issue-oriented.

Step 2: Student makes a timeline for project with teacher approval.

Step 3: Student makes a survey of reference materials and sources of date.

Step 4: Student redefines topic based on materials/data available with teacher approval.

Step 5: Student develop 5+ questions to direct the research.

Step 6: Student finds and select reference materials and sources of date.

Step 7: Student collects data and takes notes.

Step 8: Student develops final objectives.

Step 9: Student completes research.

Step 10: Student and teacher conference.

Step 11: Student makes a new product to show new ideas.

Step 12: Student shares product with class and an expert (ie. artist, art critic, art professor).

Step 13: Student self-evaluates, peer evaluates, and teacher evaluates project.

SELF EVALUATION

Did you meet the goals which you set for yourself? Describe how you met or failed to meet these goals?

________________________________________________________________________

________________________________________________________________________

How did this project compare with other projects which you have undertaken in the past?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What would you do differently next time?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What did you like best about what you did?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Make some general comments about independent study?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
## PROJECT EVALUATION

Name ____________________________ Date ____________________________

Product Title ____________________________

Media/Description ____________________________

Rate each of the items according to the following scale:
1 Developing  2 Adequate  3 Competent
4 Exceptional  5 Unique (this is equivalent to a masterpiece)

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What do you like best about your project?

What do you think could be improved about your project?

My aesthetic judgement (personal feelings) about my project is:

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**STUDENT ARTIST STATEMENTS:**

**AMERICAN PIE**

"When our country was industrialized the American dream was born. The blue-collar workers of this nation were promised a piece of "The Pie". With that initiative in mind, American workers, both men and women, supported our nation through two world wars. This art piece reflects how the nation's blue collar society has suffered and lost. Their dream was shattered."
THE BIRTH OF A NATION

"Since the very birth of our nation, we have oppressed all that have not had white skin, spoken English, or went along with our terms. In the last fifty years, we have had a new culture born. And once again, "America the Beautiful, Land of the Free" has turned into a land where almost any one can go, and oppress whomever they want. I feel and try to express in my art work that once again American will have a civil war. A war of faces, creeds, and color."

N.W.O

"You have assumed your great power
You have become your reign
The nations have raged in anger
But then came your day of wrath
And the moment to judge the dead
The time to reward your servants the prophets
And the Holy ones who revere you
The great and small alike
The time to destroy those who lay the earth waste."

"The quote above is from the book of Revelation. Contained in this book are many quotes about the end of the world. In my sculpture, I am trying, by using the color silver on the tree, to symbolize how we kill our planet. The "Silver Tree" on the black earth is showing how we praise the death of our planet, and almost place it upon a pedestal, mainly through pollution and industry."
CHRIST THE MAN

"God so loved the world that he gave his only begotten son."
John 3:16

"The common portrayal of Jesus Christ is not shown with hair on his body. In my piece, I chose to portray Christ as the "Real" Saviour. One with human faults, weaknesses, and characteristics. I chose to put hair on His body to show, as many artists don’t, that He was a man as well as our Saviour."

CONCLUSION

By developing research skills through independent study, students' abilities to be life long thinkers and learners will be enhanced. Students will also gain cultural awareness, visual arts knowledge, and further develop their artistic potential. Independent study packets can be developed on a wide variety of topics based on individual interests and needs to fulfil these goals.

REFERENCES


Dr. Cecilia Johnson is an art teacher at Central Catholic High School in Lafayette, Indiana.
TO THINK OR NOT TO THINK

by Sharon McCoubrey

While in conversation recently, an art education colleague said, "I'm not so sure we can claim that students develop thinking skills when they do art." I was taken aback! This statement was made by a wise and accomplished educator who serves as a mentor to some of us who have not been in the field of art education for very long.

His comment set me thinking. Could I have been wrong all these years in my belief that one of the fundamental benefits for students who are in art education is that they are given the kind of experiences that allow them to develop creative and critical thinking skills? There have been countless times when I have made that claim emphatically to teachers at in-service sessions, to student teachers in my art education classes, and even to parents at interviews or meetings. Have I been misleading all these people?

In our ongoing need to promote art education, to justify its existence in public education, it has always been helpful to be able to make reference to that specific outcome of art education, that it does help students develop thinking skills. That is such an important educational goal. Which parent, administrator, or teacher would question the value of art education if that was one of the outcomes? Yes, many of the other beneficial learning outcomes of art education are fine to mention as well, self-expression, cultural identity, visual communication skills, etc., but the benefit that educators could really sink their teeth into was the development of thinking skills. To further explain that these creative and critical thinking skills would be used when doing work in other areas and could enhance the learning done in the academic subjects gave even greater weight to this important outcome of art education.

To disclaim this beneficial outcome was to crumble a portion of the foundation on which much of my work in art education was based. It was not surprising then that my colleague's comment took me by surprise, I could not get it out of my mind. I needed to reaffirm my basic belief about art and thinking skills, so took a look at much of the reports and writings that have been done on this topic, reflected on my years of experience working with students in art, and gave some logical thought to what happens in art education.

Any effort to verify that thinking skills are developed through art education should start with a clarification of what thinking skills are, thereby setting a basis for this discussion.

What Are Thinking Skills?

In order to have validity in this discussion, thinking skills will be considered as used in the broad realm of education as opposed to only art education.

To think is to use the mind. It involves the cognitive domain. Metacognition is to think about thinking. We use various types of thinking, such as creative thinking, critical thinking, convergent thinking, or divergent thinking.

Creative thinking is to generate something new, to be original, to form new combinations of ideas.
Critical thinking is to evaluative when considering something, to reflect, to analyze, to see other points of view, to reach a conclusion.

Convergent thinking brings together concepts, a synthesis process. Usually dealing with typical perceptions, leading to the right answer.

Divergent thinking considers different possibilities, deals with atypical conclusions, comes up with a range of options or solutions, uses different approaches.

Fortunately, most school districts in B.C. experienced a promotion of thinking skills during the early 1980's. Many teachers attended in-service sessions to learn that Creative Thinking consists of fluency, flexibility, originality, and elaboration, that Critical Thinking consists of synthesis, analysis, and judgement.

Marzano (1988, p.4) lists 5 dimensions of thinking: 1. Metacognition, 2. Critical and creative thinking, 3. Thinking processes, 4. Core thinking skills, 5. The relationship of content areas knowledge to thinking. To took a closer look at several of these dimensions extends the definition of thinking skills.

The 8 thinking processes as listed by Marzano (1988, p.32) are: concept formation, principle formation, comprehension, problem solving, decision making, research (scientific inquiry), composition, and oral discourse.

Core thinking skills (Marzano, 1988, p.66) include:

Focusing Skills: defining problems, setting goals

Information Gathering Skills: observing, formulating questions

Remembering: encoding, recalling

Organizing Skills: comparing, classifying, ordering, representing

Analyzing Skills: identifying attributes and components, identifying main ideas, identifying relationships and patterns, identifying errors.

Generating Skills: inferring, predicting, elaborating

Integrating Skills: summarizing, restructuring

Evaluating Skills: establishing criteria, verifying.

The B.C. Ministry of Education (1991) published two documents on Thinking in the Classroom, in which a definition of thoughtful learners is given (page 20, 21) as those who:

- reflect, pause, and think about what they are doing;
- take risks, offer questions, responses, view or develop projects in ways that truly represent their ideas although they are aware that these may not always be well-received by their classmates or the teacher;
- recognize the gist of an experience or activity, sort through details and elaborations to get to the key idea or concept;
- understand and enjoy the nature of hypothetical thinking, create and explore hypotheses, and enjoy the ambiguity of not knowing the answer.
- enjoy problem solving, see challenges both in and out of the classroom;
- make connections with their previous experience and knowledge, as well as among the parts and whole of new activities, to personalize their learning;
- demonstrate curiosity, bring an investigative approach to learning and a desire to find out about their questions;
- persevere, work toward difficulty or long-term goals in the face of adversity;
- verbalize their own thinking and learning strategies;
- behave in caring and principled ways, demonstrate concerned, empathic behaviour, actively see to improve their world;
- take pride in the representation and presentation of their ideas, care about the quality of the end products of their thinking.

Even with this brief look at a definition or explanation of thinking, it is clear that we do not go through a simple or singular process when we think. Reference to particular
thinking processes will be helpful as the question of a possible link between art and thinking skills is further investigated.

Is There a Connection?

Yes, art activities do provide for the development of thinking skills. On what basis can I make such a statement?

Various art educators who have worked in the field for many years; who have spent much time watching children involved in art activities; who have pondered and investigated many aspects of art and learning, have convincing statements to make regarding this connection.

Lowenfeld and Brittain make the statement "...the arts are far more important than previously realized because they promote creative thinking." (1987, p. 98).

Elliot Eisner has frequently given reference to this connection, "...work in the arts develops unique and important mental skills...The exercise of judgement in the making of artistic images or in their appreciation depends upon the ability to cope what ambiguity, to experience nuance, and to weigh the trade-offs among alternative courses of action. These skills represent not only the mind operating in its finest hour, but are precisely the skills that characterize our most complex adult life task." (Eisner, 1993, p. 6,8)

Many studies, (Davis, 1969, MacGregor, 1967, Gowan, 1981), have been done to show that creative behaviour and thinking skills, measured in a number of different ways, are enhanced by work in art. Without giving details of the nature of these studies, reference is given here to a number of them.

On-going experience with art convinces one that it is impossible to produce or respond to works of art without using some of the thinking processes as listed earlier. "In working with materials in the context of an art problem, the child must do several other things that require sophisticated modes of thinking. Because such cognitive tasks are demanding, they foster the child's ability to think about such matters and other related ones. Children have a wonderful way of learning to do what they are given an opportunity to do." (Eisner, 1987, p.16).

Taking a closer look at the production and responding aspects of working with art will further illuminate the connection between art and thinking skills.

Thinking Skills by Producing Art

When students are given an opportunity to create a work of art, a process, such as painting may be selected, a variety of tools, such as brushes and sponges, may be available, and a particular topic, such as sports may be the focus of the image.

There is still no art work. The student must think about the subject, decide on an image, consider composition, decide how to use the paint and tools, check during the painting process to determine if the results are effective, alter and change as needed to complete the image. A great deal of thinking, planning, checking and adjusting must be done on the part of the student in order to complete the creation.

"The making of visual art provides opportunities not only to experience the pleasures and frustration of creation, but also to practice and develop a valuable array of our most complex cognitive skills." (Eisner, 1987, p. 17).

When producing art, the thinking needs to be done in two main realms. The physical handling of the materials and tools can pose challenges and a great number of options which must be considered and selected from or adapted in some way. Many art works are not completed without much problem solving in the physical logistics of the process. For example, when creating a sculpture, making parts stick together or preventing parts from collapsing could be very problematic and require thinking of possible solutions, then experimenting with them in order successfully complete the art work.

The second realm of the art work requiring thinking is the visual image. The creator needs to decide what the picture or sculpture will look like, what aspect of the subject to include,
what style of imagery to use, what composition to form, which element of principle of design to emphasize. These considerations need to be dealt with along with the handling of the tools and materials in order to produce the final product.

Thinking Skills by Responding to Art

Looking at art of various kinds is an important part of art education and provides additional opportunities for the development of thinking skills. Reference to the responding processes of describing, interpreting and judging as listed in the 1985 B.C. Art Curriculum, or to Feldman's steps of responding to art, immediately reveals the thought processes which are used.

Responding to art is much more than viewing art then deciding on personal preferences. Much of the learning involved in responding to art happens as the students analyze the visual properties of the image, make inferences of the intent of the artist or the effectiveness of a particular approach.

In his recent book, The Intelligent Eye: Learning to Think by Looking at Art, (1993), David Perkins refers to how thoughtfully looking at art exercises the mind by developing critical thinking skills. He refers to looking at art requiring thinking because art must be "thought through". "I would suggest that looking at art provides a context especially well suited for cultivating thinking dispositions. A disposition is a felt tendency, commitment, and enthusiasm. Dispositions more than strategies arguably are the key to helping learners mobilize their mental powers. Art helps in a natural way. Looking at art invites, rewards, and encourages a thoughtful disposition, because works of art demand thoughtful attention to discover what they have to show and say." (Perkins, 1993).

When Art Does Not Develop Thinking Skills

Unfortunately, there may be times when one could accurately say that art does not result in the development of thinking skills. "Sometimes the way art is taught may negate creativity." (Lowenfeld, Brittain, 1987, p. 92). Two specific types of art activities can be identified which will not enable the students to use thinking processes.

An art activity which involves the students colouring a pre-drawn picture, or constructing an art work by tracing patterns and assembling parts as directed, will not require the students to think. Referring to several of the thinking processes listed above reminds us of the required thinking a student must do in order to create an image, such as: defining a problem, considering options, comparing, predicting, verifying. These thinking processes are not required of the student when he completes a project that has already been "figured out" by someone else.

Unfortunately, some educators believe that this type of pre-drawn art activity is necessary for young children because they do not yet have the technical skills or ability or create original art. Sadly, those students will never be able to create their own original images unless they are given the opportunity to do so. "It is important to develop creativity at a young age. It may be that the attitude of being creative - finding the unknown challenging, coming up with many thoughts and ideas, looking for differences and similarities, having unique and original thoughts - is established early in life." (Lowenfeld, Brittain, 1987, p. 91.)

"Probably the best preparation for creating is the act of creation itself. Stopping children from creating until they know enough about the subject to act intelligently may inhibit action rather than promote it. Giving children opportunities to create constantly with current knowledge is the best preparation for future creative action and thinking." (Lowenfeld, Brittain, 1987, p. 75).

Another type of art activity may require the student to create his own image, but may
have such a strong focus on a technical skill of art, such as accurately drawing an observed subject, that the opportunity to take different approaches and ingest the final image with the student's personal expression is eliminated.

Another consideration when planning an art activity is to decide the type of challenge presented to the student in order to stimulate their imagination and to force their creativity. I have found that students will sometimes be innovative and original in their production of art when the challenge set for them has some established parameters. For example, students could be asked to paint an acrylic painting of the human figure, or the students could be asked to paint an acrylic painting of the human figure in motion using the design principle of contrast and suggesting a mood of dispondency. The latter project will challenge the students’ thinking to a greater extent.

When we realize the tremendous potential there is in art education to help children develop thinking skills, it is important not to remove that potential by taking the wrong approach in our lessons.

Conclusion

Art activities, both producing and responding, provide the kind of experiences that require and develop thinking skills through the use of many different thought processes. Where other school subjects may also be handled in a way that would also develop thinking skills, art is particularly suited for this goal because, by its nature, it requires, in addition to the transfer of knowledge, originality and creation.

It is exciting to know that by providing art activities for our students, we are enabling them to reach a high priority educational goal, the development of thinking skills.

REFERENCES


Sharon McCoubrey teaches Art Education in the Bachelor Education Program at Okanagan University College.
Josie Davidson, Grade 12, George Elliot Secondary School
THE INTEGRATION OF FEMINIST DISCOURSE IN BUILT ENVIRONMENT EDUCATION

by Dr. Hinda Hanrietta Avery

"Feminism" encompasses a range of discourses and practices committed to the political, economic and social equality of women and to a doctrine of social transformation which aspires to establish a world for women beyond rudimentary equality." (Humm, 1992).

What are the problems and possibilities for feminist pedagogy in built environment education? This paper presents a visionary scenario which explores the collaborative effort of feminist art teachers, architects, planners, and community women in designing and developing a feminist-based program.

Since most art teachers have not had the opportunity to study architecture and planning, they may lack both confidence and professional skills in these areas (Adams, 1990). Therefore, to develop a feminist-based program, feminist architects, planners, and community women in designing and developing a feminist-based program.

In designing a feminist program within art education, one of the many major hurdles this team will have to face is the incorporation of socio-political content. The main focus of art education is still predominantly on the traditional formal fine and studio arts: drawing, painting, printmaking, sculpture, and art history. If the built environment is included, it is usually dealt with from a representational, expressive, or design aspect, and the focus is primarily on the aesthetic dimension. Street scapes are painted, clay houses are moulded, and models of imagined future environments are planned and constructed.

Introducing a socio-political context means that, before designing a building, street, neighbourhood, or city, students will need to question the relationship between design and the needs of a diverse population. Key points that are pivotal to changing the urban fabric are: a) human differences must be honoured; special attention should be given to the needs of women, children, the elderly, minorities, and the disabled; b) spatial and structural arrangements have a dramatic effect on everyone; they influence not only the way people interact with others, but with whom they interact, and how they experience themselves; c) powerful political and economic interests dominate the development of the built environment and contribute to physical, social and economic deprivation; and d) women architects and planners are seriously under-represented in their professions, a fact which suggests that women's ideas and approaches are not being incorporated in the built environment. What specific issues need to be addressed regarding a coalition of feminist art teachers, architects, planners, and community women who will undertake to develop an education program which is based on the above key points?
The Role of Feminist Art Teachers

A number of deterrents within the school structure itself present a challenge to art teachers whose interest is the implementation of a feminist built environment program. For example: a) Schools are continually asked to accommodate new studies and programs, and the demands made on them far outstrip the limited services they were initially designed to deliver; b) at the junior and senior secondary levels the timetable (usually made up of one-hour blocks) is not conducive to field experience; c) the limited budgets of most schools may not provide transportation costs to sites, or other required expenses; and d) classrooms may lack appropriate space for large scale drawing, model building and displays.

Another major problem in instituting such a program is the greater demand on teachers' time and energy. For instance, workshops will need to explain why such a program is an essential component of the education system and concerted action will need to be taken to convince those in decision-making positions to incorporate it in the curriculum. Since schools do not usually encourage the assistance of outside facilitators, extra effort will have to be made to involve feminist architects, planners and community women.

Thus, before attempting to implement a feminist-based program the following challenges will need to be considered: a) collaborative working relationships with a diverse group of feminist architects, planners and community women; b) a strong, realistic, well organized program-outline that has an evaluative and disseminative component, and that meets budget guidelines; c) support from administrators, teachers, and parents; d) flexible time structuring in school; e) acceptance of movement and activity in and out of the school and within the community, and f) adequate space in the school building for model-making and model displays.

The Role of Feminist Architects and Planners

A collaboration with feminist architects and planners will enable teachers to embark on new progressive ground. Knowledge of environments which feminist architects and planners possess can provide teachers and students with a new vocabulary to describe their experiences within urban setting. This type of articulation could allow a better understanding of the complex sets of relationships among spaces, structures and people, giving students and teachers the ability to understand, analyze and judge built form and space, and to deal positively with change (Adams, 1990).

By introducing the literature that focuses on women and the built environment, feminist architects and planners can inspire and motivate female students to participate in the future planning, design and management of their surroundings. Sharing their own history and position in the current status quo could help demystify the image, practices and jargon of their professions. Those who work with local governments know the political and bureaucratic decision-making process and have insights into its strengths and weaknesses. Revealing this information to students could help them to understand how the decision-making works, assist them in formulating opinions and encourage them to question solutions. It may also reveal potential future areas for advancement. Since they bring a feminist perspective to issues, feminist architects and planners can also serve as role models for female students.
A collaboration with feminist architects and planners will enable teachers to embark on new progressive ground.

The Role of Feminist Community Women

The input of feminists from diverse grass-roots organizations would be essential to a curriculum grounded in women's experience. Their involvement would help promote a link between schools and the multi-cultural communities they serve. Feminist community women could supply a list of local women's groups that need a task accomplished and encourage students to become involved at some level. Instruction in the community is consistent with general principles of education, such as the importance of engaging the learner in an active manner with the subject material (Shepherd & Ragan, 1982). This gives students opportunities for public participation, cooperative working relationships and problem-solving using real-life situations. Publications of community groups such as newsletters and reports could be used as teaching material. Thus the involvement of community women could provide alternative sources of information that relate to women's lives. Community-based, women-centered initiatives offer models for new progressive curriculum.

There are difficulties which should be acknowledged in developing a feminist issue-based approach. The demands of organization and preparation are such that there are increased risks inherent with such a strategy. There is also a danger of looking at women's spatial and structural needs as small isolated units, rather than as part of a larger problem, and of choosing a series of isolated projects which will not bring about significant community change. Problems could also arise from an inter-professional/grass-roots collaboration. Feminist teachers, architects, planners, and community women may not be compatible in approach, teaching style, or in their philosophical, social, political, and aesthetic viewpoints. Feminists, given their diversity, may not share basic principles. However, it can be argued that the benefits that may arise out of a feminist coalition greatly outweigh the risks and problems of implementation. As Adams (1990) suggests, attitudinal change in educational practice often comes not from within a system, but from external pressure. Architects, planners and community women are the best equipped to exert pressure for change in built environment education. The design and development of a feminist-based program is a much needed, constructive and, in a more progressive climate, realizable probability. A four-way flow of information among the organizers, each an important resource for the other, could evolve into a working relationship that unites experience and results in a broad-based program.

REFERENCES


Dr. Hinda Avery is an Art Educator and teaches women's studies courses at Okanagan University College.
Josie Davidson, Grade 12, George Elliot Secondary School
The Intelligent Eye:
Learning to Think by Looking at Art

by David Perkins

David Perkins has written a great deal about thinking in art, and now offers his latest book on this topic. The Intelligent Eye: Learning to Think by Looking at Art refers to how thoughtfully looking at art plays an important role in general education; it exercises our minds and provides an excellent setting for the development of better critical thinking skills.

Dr. David Perkins, co-director of Project Zero at the Harvard Graduate School of Education, offers insights to cultivating essential visual and verbal perceptions through understanding works of art. Discussions of the book's 15 illustrations guide the reader through broad and organized observations, vital tools the arts provide for improving and strengthening critical thinking skills.

In the pages of his book, Perkins models the kind of thoughtful, reflective looking at art that all of us want for ourselves and our children. It is clear that the arts are not peripheral in his life. In these same pages, Perkins offers the reasoned arguments of a skilled cognitive researcher for the benefits of using art as a means of cultivating thinking dispositions.

This book, having just been released through the Getty Center for Arts in Education, is a current and valuable resource or any art educator.

Published By The Getty Centre For Education in the Arts
©1993
paperback, $10.00

Review by Harriet Walker
Getty Center for Arts in Education
Thinking in Art:  
A Philosophical Approach to Art Education

by Charles M. Dorn

Published by: National Art Education Association  
Reston, VA. 1994  

This NAEA book offers a great deal of information about the basis of thinking in art, giving a review of different approaches and provoking one to identify one's own approach.

The book is divided into two sections, the first, Chapters 1 - 4, examines the various bodies of thought about art, the approaches and paradigms that have been held through the decades. It looks at various philosopher's and aesthetician's views on issues such as: 1) the relationship between thinking about art and thinking about making art, 2) the role of thinking in both the planning and execution of art, and 3) the use of thought when thinking about art in general. The second section of the book, Chapter 5 deals with topics to put theory into practice.

More specifically, Chapter 1 gives a brief review of 18 and 19th century philosophical thought in order for teachers to identify those philosophical systems closest to their own belief, and therefore, offering the most guidance in selecting art teaching goals. Chapter 2 further explores these concepts as interpreted by 20th century aestheticians, art historians, critics, and artists addressing concerns specifically in thinking about and making art. Chapter 3 examine three paradigms for artists' conceptions, and Chapter 4 identifies how these paradigms now function in the art curricula of schools.

Chapter 5 covers aspects of curriculum development including planning, content, organization and implementation. Selecting experiences and evaluation are also referred to.

The practical aspects of the second section of this book will be helpful to an art educator, but the greatest value of this book is in the reminder it provides of the many different approaches taken to art and art education, and the hopeful result of the reader will re-assess or confirm his/her own thoughts and approach to art education.

Review by Sharon McCoubrey
Penny Nightingale, George Elliot Secondary School

Spiro Vouladakis, George Elliot Secondary School
British Columbia Art Teachers Association
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